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Adults with low literacy and numeracy skills: A literature review on policy intervention

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ADULTS WITH LOW LITERACY AND NUMERACY SKILLS
A LITERATURE REVIEW ON POLICY INTERVENTIONS

By Hendrickje Catriona Windisch, OECD

OECD Education Working Paper No.123

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ABSTRACT

Identifying effective policy interventions for adults with low literacy and numeracy skills has become increasingly important. The PIAAC Survey of Adult Skills has revealed that a considerable number of adults in OECD countries possess only limited literacy and numeracy skills, and governments now recognise the need to up-skill low-skilled adults in order to maintain national prosperity, especially in the context of structural changes and projected population ageing.

Against this background, this literature review examines the current evidence on policy interventions for adults with low literacy and numeracy skills to clarify which targeted policy levers could best enhance socio-economic returns. Despite progress in measuring adult skills and extensive literature describing practices used in adult literacy and numeracy programmes, there is little analysis of the effects of different interventions on learners. This literature review therefore attempts to bring together the analytical insights from research and practice to provide a broad picture of what has so far proven to motivate low-skilled adults to join and persist in literacy and numeracy learning.

The paper shows that low basic skills levels of adults are a complex policy problem that has neither straightforward causes nor straightforward solutions and successful interventions are relatively uncommon. Tackling serious literacy and numeracy weaknesses is challenging because the group of low-skilled adults is diverse and requires different, well-targeted interventions. But there is now an emerging body of evidence on the approaches to teaching and learning that can make life-changing differences to adults in need. The paper identifies formative assessment, e-learning, and contextualisation and embedding (especially in the workplace and family context) as effective approaches to basic skills teaching. The central challenge is to put the evidence to work.

RÉSUMÉ

Le recensement des interventions efficaces des pouvoirs publics auprès des adultes possédant de faibles compétences en littératie et en numératie est devenu de plus en plus important. Le Programme pour l'évaluation internationale des compétences des adultes (PIAAC) a en effet mis en évidence qu'un nombre considérable d'adultes dans les pays de l'OCDE ne possédaient que des compétences limitées en lecture, écriture et mathématiques, et les pouvoirs publics reconnaissent désormais la nécessité de renforcer les compétences des adultes peu qualifiés dans le but de maintenir la prospérité nationale, notamment dans le contexte des changements structurels et des prévisions de vieillissement de la population.

Dans ce contexte, la présente analyse des travaux antérieurs examine les données disponibles sur les interventions des pouvoirs publics auprès des adultes possédant de faibles compétences en littératie et en numératie dans le but de déterminer quels moyens d'action ciblés pourraient optimiser les retombées socioéconomiques. Malgré les progrès accomplis dans l'évaluation des compétences des adultes et les nombreux travaux décrivant les pratiques utilisées dans les programmes de formation des adultes en littératie et numératie, il existe peu d'analyses des effets des différentes interventions sur les apprenants. Le but de cet examen des travaux antérieurs est par conséquent de rassembler les données analytiques issues de la recherche et de la pratique pour donner un aperçu des éléments qui ont jusqu'à présent prouvé leur efficacité pour inciter les adultes peu qualifiés à suivre jusqu'au bout des programmes de perfectionnement à l'écrit et en mathématiques.

Le présent document montre que le faible niveau de compétences élémentaires des adultes est un problème complexe pour l'action des pouvoirs publics, n'ayant ni causes directes ni solutions évidentes, et que les interventions réussies dans ce domaine sont relativement peu fréquentes. Il est difficile de combler des lacunes importantes en littératie et en numératie parce que le groupe des adultes peu qualifiés se compose d'individus très divers et exige des interventions différentes et bien ciblées. Mais on dispose désormais de nouvelles séries de données sur les approches de l'enseignement et de l'apprentissage qui peuvent changer la vie des adultes ayant besoin d'améliorer leurs compétences. Le présent document désigne l'évaluation formative, l'apprentissage en ligne, mais aussi la contextualisation et l'intégration de l'apprentissage (notamment sur le lieu de travail et dans le contexte familial) comme étant des approches efficaces de l'acquisition des compétences de base. Le principal enjeu consiste à traduire ces données en action.

TABLE OF CONTENTS

ACKNOWLEDGMENTS 3
ABSTRACT 3
RÉSUMÉ 4
EXECUTIVE SUMMARY 8
Overview 8
Setting the context of literacy and numeracy education 8
Identifying the benefits, and building motivation 9
Delivering and sustaining programmes for adults 11
Using proven approaches to basic skills teaching 12
Make the most of learning contexts: family and workplace programmes 14
1. INTRODUCTION 16
1.1. Introduction 16
1.2. The objective of the literature review 17
1.3. Structure of the paper 17
2. METHODOLOGY AND LIMITATIONS OF THE LITERATURE REVIEW 18
2.1. Methodology 18
2.2. Limitations of the literature review 18
2.3. Research gaps can have serious implications for policy development and policy borrowing 19
3. TERMS EXPLAINED 20
3.1. Literacy and numeracy 20
3.2. Low-skilled adults 20
3.3. The low-skilled adult population 21
3.4. Low proficiency in literacy and numeracy skills 21
3.5. Literacy and numeracy interventions for low-skilled adults 21
4. SETTING THE CONTEXT OF ADULT LITERACY AND NUMERACY EDUCATION 24
4.1. The growing importance of literacy and numeracy skills 24
4.2. Living with low literacy and numeracy skills 25
4.3. Government action to address low adult literacy and numeracy skills 26
5. IDENTIFYING THE BENEFITS AND BUILDING MOTIVATION 35
5.1. Benefits of literacy and numeracy programmes 35
5.2. Motivations of low-skilled adults to engage in learning 37
5.3. Barriers to learning 40
5.4. Outreach strategies motivating adults to join literacy and numeracy programmes 44
6. DELIVERING AND SUSTAINING BASIC SKILLS PROGRAMMES FOR ADULTS 52
6.1. Learning in adulthood 52
6.2. Factors contributing to learner persistence 53

6.3. Challenges of literacy and numeracy teaching 60

7. USING PROVEN APPROACHES TO BASIC SKILLS TEACHING 68

7.1. Effective literacy and numeracy teaching 68
7.2. Formative assessment 70
7.3. Literacy and numeracy learning with ICT outside of the classroom 71
7.4. Contextualised and embedded literacy and numeracy provision 74

8. MAKING THE MOST OF LEARNING CONTEXTS 81

8.1. Family literacy programmes 81
8.2. Literacy and numeracy provision in the workplace 85

9. ANNEX: EXAMPLES OF POLICY INTERVENTIONS FOR LOW-SKILLED ADULTS 96

Australia's mandatory Literacy and Numeracy Training programme for Jobseekers 96
Finland's Noste programme to forestall a projected skilled labour shortage 96
Helping experienced but low-skilled workers to gain diplomas in the Netherlands 97
Saakshar Bharat Mission in India 97
Guidance and mentoring for vulnerable adults in Ireland 98
Essential skills certificate for vulnerable adults in Ireland 99
Turkey's Functional Adult Literacy Programme (FALP) 99
Three types of literacy programmes in the United States 100

Tables

Table 3.1 Delivering literacy and numeracy skills in adult education and training 22
Table 5.1. Types of barriers to lifelong learning 41

Boxes

Box 1.1. OECD Study *Country Reviews of Adult Skills* 16
Box 3.1. Fusion between employment and adult literacy programmes in the United States 23
Box 3.2. Fusion between social and human capital aims in England's adult basic education 23
Box 4.1. England's *Skills for Life* Strategy 27
Box 4.2. Australia's National Foundation Skills Strategy for Adults 29
Box 4.3. Indonesia's AKRAB (Literacy Creates Power) programme 30
Box 4.4. France's National Agency for the Fight against Illiteracy 32
Box 4.5. Germany's National Strategy for Literacy and Basic Education of Adults 33
Box 4.6. Adult education in the Nordic countries 34
Box 5.1. Literacy and Language Classes in Community Centres in Osaka prefecture, Japan 42
Box 5.2. Effects of financial incentives on attendance in adult literacy classes 43
Box 5.3. Targeting Turkey's largest group of illiterates: women 45
Box 5.4. Recognising and talking to adults with low basic skills 46
Box 5.5. Community Learning Centres Programme in Gansu province, China 49
Box 5.6. Screening and initial assessment in a family literacy programme 50
Box 5.7. Incentivising the unemployed to join the Swedish Adult Education Initiative 51
Box 6.1. The duration of basic skills programmes in European countries 54
Box 6.2. Reducing the risk of poverty for adult basic education participants in Germany 55
Box 6.3. Assessment and evaluation in India's Saakshar Bharat literacy scheme 56
Box 6.4. Examples of learner engagement in the development of learning materials 59

Box 6.5. The *Adult Learners' Lives* project in England 60
Box 6.6. Characteristics of adult basic education teachers in the United States.....63
Box 6.7. Examples of volunteer instructors in adult basic education 64
Box 6.8. Professionalisation of the adult basic education profession in Germany 65
Box 6.9. Country examples of coordination of literacy programmes 66
Box 7.1. E-learning offers for adults with low basic skills in Germany 72
Box 7.2. Open and distance learning through *Learndirect* in the United Kingdom 74
Box 7.3. Integrated Basic Education and Skills Training (I-BEST) in Washington State.....75
Box 7.4. The Accelerating Opportunity initiative in the United States 77
Box 7.5. Team-teaching approaches in the Accelerated Opportunity initiative 80
Box 8.1. The Family Literacy Project in Hamburg.....82
Box 8.2. The Family Literacy Demonstration Programmes in the United Kingdom 83
Box 8.3. New Zealand experience of family literacy.....84
Box 8.4. The Basic Competence in Working Life Programme (BKA) in Norway 85
Box 8.5. Australia's Workplace English Language and Literacy Programme 86
Box 8.6. Mobile learning in Denmark 87

EXECUTIVE SUMMARY

Overview

This literature review discusses successful and unsuccessful adult literacy and numeracy initiatives with a view to clarify which policy levers may work for low-skilled adults. This focus seems necessary because despite empirical progress in measuring literacy and numeracy skills of adults, analysis of the effects of different interventions on learners is less evident in the research literature. Much of the literature has advocated the benefits of adult learning rather than analysed what works. For programmes delivering basic skills to adults to be successful, they need to motivate adults to take part, convey basic skills effectively, encourage adults to persist in the programme; and the basic skills acquired need to be sustained through use, and put to good use in good jobs.

Low basic skills levels of adults are a complex policy problem that has neither straightforward causes nor straightforward solutions. Tackling serious literacy and numeracy weaknesses among adults is challenging because there is no 'one-size-fits-all' solution. Low-skilled adults are a diverse group and didactical and methodological approaches have to address the specific learning needs of each adult learner, be this a low-skilled worker trapped in a low-skill job, a young school dropout, an unemployed person or a parent who has been inactive in the labour market. Often those concerned will have done badly at school and have a negative perception of education; they may lack awareness of their deficiencies, and even if aware, are embarrassed to admit it. Initial motivation is therefore a serious obstacle. Even for those interested in tackling their weaknesses, it may be difficult to translate that interest into action. For adults with busy working and family lives it is often hard to find space for learning and drop-out rates of programmes are usually high. Although the employment benefits of basic skills acquired in early life are clear, the returns from mid-life learning are much less certain. Most evidence suggests that it is hard for adults to improve their career trajectories by learning basic skills in mid-life, and in the absence of job enhancement, newly acquired literacy and numeracy skills may rapidly decay through lack of use.

The review finds that successful interventions are relatively uncommon and often the evaluation evidence is weak. The provision of targeted interventions, including tailor-made participation incentives and programme designs, and a well-trained teaching workforce pose particular challenges. But there is now an emerging body of evidence on the approaches to teaching and learning that can make life-changing differences to adults in need. A number of OECD countries have concluded that substantial programmes designed to address weak basic skills among adults are a key part of their broader education and training strategy. The central challenge is therefore to put the evidence to work.

Setting the context of literacy and numeracy education

In the context of structural changes, labour shortage and projected population ageing, the issue of adults with low literacy and numeracy skills has gained policy attention. Low-skilled individuals are likely to be left behind. Not only are they more likely to be unemployed or in low-pay employment and have poorer levels of health and civic engagement, but they are also less likely to improve their skills through adult education and training (OECD, 2013a). The relationship between skills and prosperity also applies to countries: per capita incomes are higher in countries with large proportions of adults who reach the highest levels of literacy and numeracy proficiency. Countries with lower skill levels risk losing competitiveness as the world economy becomes more dependent on skills (OECD 2013b).

Governments around the world are increasingly focusing on literacy and numeracy measures[1] for low-skilled adults. They recognise the need to up-skill low-skilled adults in order to maintain national prosperity and enhance social cohesion. Their interest in basic skills education for adults has increased, not least because the results of the Survey of Adult Skills (PIAAC – Programme for the International Assessment of Adult Competencies) showed that a considerable number of adults in OECD countries possesses only limited literacy and numeracy skills, a fact that raises questions regarding the effectiveness of existing education systems and educational initiatives targeting low-skilled adults (OECD, 2014a).

Identifying the benefits, and building motivation

Research in many countries has found that often low-skilled individuals either do not see the need to improve their numeracy and literacy skills or lack the motivation to engage in basic skills learning because they have low expectations of the benefits, perceive various barriers to participation or drop out because of inadequate programme design. Typically it is argued that motivation of low-skilled adults to engage in literacy and numeracy programmes can be helped by advertising the benefits of course participation.

What are the benefits of adult literacy and numeracy programmes?

The multiple benefits of strong basic skills to the individual, inside and outside the workplace, are well established. But these skills are normally developed in early life and initial schooling, so the potential for mid-life remedial interventions to be effective remains uncertain. Describing the benefits of participation in adult basic skills programme in terms of proficiency gains and economic returns (productivity, employment, and earnings) is difficult because of methodological problems of much research: most analyses of programmes do not compare the proficiency gains and economic returns of programme participants with gains made by comparable groups of non-participants or programme drop-outs. This makes it difficult to assess the impact of programme participation compared to non-participation. In most of these studies, the follow-up intervals are too short to evaluate the long-term benefits of programmes for participants' lives (Reder, 2012). The little existing methodologically robust evidence shows benefits from participation by adults in literacy and numeracy programmes in terms of proficiency gains and social returns, but there is much less evidence regarding economic returns (see the following paragraphs).

Proficiency gains

Evidence shows a strong connection between participation in literacy and numeracy programmes and changes in literacy and numeracy practices that can in turn lead to increased proficiency levels over time. The Longitudinal Study of Adult Learning (LSAL) in Oregon, United States, illustrates this stepwise impact of programme participation on proficiency levels, first changing literacy and numeracy *practices* of programme participants and leading over five to six years to *greater proficiency* (Reder, 2012).

Social returns

Similar to the positive effects of adult learning in general on social outcomes, such as health and crime rate, evidence shows that participation in literacy and numeracy programmes and the higher basic skills levels that follow positively influence confidence, self-esteem, attitudes towards learning, parenting capacity, and civic engagement (Benseman, 2012; Vorhaus et al., 2011). Virtuous cycles seem to apply, whereby improved skills strengthen confidence which can lead to social returns over time.

1. Adult basic education and literacy and numeracy education will be used interchangeably hereafter as the first term is frequently used in the academic literature (see also Section 3: Terms explained).

Economic returns

Despite solid evidence for the economic returns of strong basic skills (Thorn, 2009; Green and Riddell, 2001), there is a lack of clear evidence on whether and how midlife interventions through adult literacy and numeracy provision can contribute to these returns (BIS, 2011). There is only limited evidence of the capacity of adult literacy and numeracy initiatives to produce meaningful gains in terms of productivity, employment, and earnings. Most research has examined changes in adult basic skills in a single context and only over relatively short periods of time (Reder, 2012).

How can low-skilled adults be motivated to learn?

Motivation needs to be developed, partly by raising awareness

The literature shows that understanding the various motivations of low-skilled adults as well as their barriers to learning is crucial for the design of outreach strategies that motivate adults to engage and persist in learning. Evidence shows that adults are often unable or unwilling to recognise their own basic skills weaknesses (Bynner and Parsons, 2006). Even when adults recognise their own weaknesses, they may face obstacles to engaging in learning, or want to avoid the classroom settings where they experienced failure in the past. Building awareness of the implications of weak basic skills is therefore important both for the adults directly concerned, and their immediate contacts including employers, family and friends. This calls for an approach which goes beyond simply responding to expressed demand, but emphasizes the need to reach out to those who may have weak skills, to raise awareness of the issues and the scope for individuals to improve their skills, and to provide information and guidance about learning opportunities. This will require working through the bodies that have direct contact with the adults concerned, including employers and schools. Such activation of latent demand is challenging, but will be substantially assisted by greater public awareness and discussion.

Measures to build awareness of low skills and their implications

Direct awareness-raising initiatives range from campaigns promoting all types of adult learning (such as adult education weeks in Denmark and Finland) to those aimed more directly at the low-skilled (such as national literacy and numeracy campaigns in France, India, Indonesia, Luxembourg) (European Commission/ECEA/Eurydice, 2015a; UNESCO, 2014j, 2014k). Typically, it is argued that motivation can be helped by advertising the benefits of course participation in terms of proficiency gains and social returns (Benseman, 2012; Reder 2012; Wolf and Evans, 2011).

Social networking, through instructors and former participants spreading the news of adult basic education can be helpful. Findings from the United States show that people living in communities where education is seen as a means of advancement are more likely to participate in formal learning (Hamilton and Wilson, 2005; Strawn, 2005). Moreover, many potential learners prefer more informal learning venues, such as community centres, parish buildings and private homes, over school settings (Kastner, n.d.; Merton, 2001). Evidence from Canada, England, New Zealand, and the US highlight the importance of labour unions, employers, managers and colleagues in motivating low-skilled workers to take up basic skills education (Bélanger and Robitaille, 2008; Benseman, 2012; Heathrose Research, 2012; Ofsted, 2008; Parker, 2007).

Useful information and guidance can support motivation. Only a few countries have a structural guidance service that is specifically geared towards adults with low literacy and numeracy skills, such as Austria's central level institution that delivers guidance services related to basic skills and Germany's telephone guidance service for those facing literacy problems (European Commission/EACEA/Eurydice, 2015a). Sensitive and tactful screening and initial assessment is crucial because otherwise potential

learners can easily become demoralised and give up at these first hurdles (Department for Education and Skills, 2005).

Delivering and sustaining programmes for adults

There is no 'one-size-fits-all' solution in terms of didactical and methodological approaches of literacy and numeracy interventions for low-skilled adults given the different learning needs of the heterogeneous group of low-skilled adults. The provision of targeted interventions, including tailor-made participation incentives and programme designs appropriate for each sub-group, and a well-trained teaching workforce pose particular challenges for adult basic skills interventions.

How do adults learn?

Adult learning is simple and ongoing in the sense that learning is part of everyday life in contexts such as school, family, work, the local community, and it happens with particular tools (including ICT) (Jarvis, 1992; Merriam, 2011). Yet at the same time, a substantial body of research on adult learning reflects a growing understanding of its complexity (Merriam, 2011).

Engaging low-skilled adults requires sensitivity to the different ways in which they might be motivated and how they might want to learn. Some adult learners are highly dependent on teachers for structure and guidance, while others prefer to manage their own learning (Knowles, 1980). Some may be motivated to learn because of some specific objective like helping their children with homework, others may want to learn out of curiosity (Merriam, 2011). Adults typically prefer to learn what is meaningful to them, so that, for example, if low-skilled adults are obliged to take up basic education in order to receive unemployment benefits and do not see the benefit of such programmes, they typically only learn the programme content partially and what is learned is easily forgotten (Illeris, 2011).

Skills acquisition, retention and loss follow a typical 'life course' trend (Reder and Bynner, 2009). Numeracy and literacy skills commonly increase in early adulthood, then plateau before declining again later in life (Rashid and Brooks, 2010; Reder 2009). Skills are better sustained if used at work (Bynner and Parsons, 2000). Although certain occupations and workplace training can help adults retain and develop these skills, those starting working life with low basic skills are least likely to find jobs that stimulate their literacy and numeracy competencies. Compared to those in employment, the unemployed or those inactive in the labour market are more likely to lose their skills, in particular their numeracy skills. Research therefore suggests keeping people active, in the sense of enabling them to use their basic skills on a daily basis.

Evidence also shows that skills loss is especially strong for those who left school with poor numeracy and literacy skills (Bynner and Parsons, 2000). By reaching a certain threshold level of literacy or numeracy skills, an individual becomes less vulnerable to skills loss when those skills are used less (for example during a period of unemployment). So attaining that threshold in initial education or later on is vital.

What can help adult learners to persist in learning?

Everywhere, drop-out is a serious challenge in adult learning programmes. Often, this reflects problems in the quality of students' learning experience, including advice and guidance services, the teacher-student relationship, and the learning context (Lopez et al., 2007; Tusting and Barton, 2003). To increase participation and persistence in basic skills programmes, adult learning programmes need to be consistent with other demands on the lives of adults (OECD, 2005). Evidence shows that assistance with childcare, transport, access to social services, and measures to avoid wage loss and unemployment during course participation can make a difference (Benseman, Sutton and Lander, 2005). Evidence underlines

both the importance of induction at the start of a programme when learners are most likely to withdraw and continued guidance throughout the programme (Quigley 2000; Taylor et al., 2011; Vorhaus et al., 2011). If inexperienced learners receive sufficient support to develop a learning identity and/or to obtain a first qualification, this can help put them on the path to lifelong learning (Porter, Cuban and Coming, 2005; St. Claire, 2006). Encouraging learners to establish a learning goal, measuring their progress towards this goal through assessment, and linking basic skills learning with earning occupational credentials have proven beneficial to learner persistence (Comings, Parrella, and Soricone, 1999) (see also the section on formative assessment below). While some low-skilled learners may benefit from a classroom context (Metcalf et al., 2009), for many it can revive bad memories of their schooldays (Illeris, 2011) and they can better learn in practical contexts with contextualised and embedded teaching approaches. When adults break off from a course it is sometimes no more than a temporary response to life pressures. Training providers therefore need to remain in touch with such individuals, seek to support them through a break, perhaps with distance learning and entice them back to complete the programme (Vorhaus et al., 2011; Carpentieri, 2008).

Teachers of basic skills: professionalism and volunteering

Good quality research on effective practice in adult literacy and numeracy teaching is still limited (BIS, 2011; Binder et al., 2011). What research has identified to be beneficial to adult literacy and numeracy learning (see next section on using proven approaches to basic skills teaching) is not yet widely practiced in class (see also Dumont, Istance and Benavides, 2010). Teaching still often resorts to methods from child instruction which are unlikely to work for adult learners (BMBF, 2012; Greenberg et al., 1997, 2002; MacArthur et al., 2010). One factor contributing to this situation is the limited professional training of most of the basic skills teaching workforce.

Some very specific challenges are faced by adult learners with low basic literacy and numeracy skills. Strong teachers are therefore needed to assist learners who often have a long history of struggling in school, but low pay is a common barrier (Besser et al. 2004; Kruidenier et al., 2010; EU High-Level Group of Experts on Literacy, 2012). Often, a specialist profession does not exist. In EU countries, few tutors have specific qualifications in adult literacy and numeracy pedagogy, although Austria and Germany have recently started to offer such qualifications (Eurydice, 2011). In the US, there is no nationally recognised certification for instruction in adult education and most adult teachers work part-time, with few benefits, such as paid professional development (Condelli et al., 2010).

The large role of volunteer staff in many countries is partly a response to the low pay and limited job security for adult basic educators which makes recruitment of professional staff difficult (EU High-Level Group of Experts on Literacy, 2012; Kruidenier et al., 2010; OECD, 2008; UNESCO, 2014b). In addition, countries such as Austria and Germany have only recently started to offer specific qualifications for adult basic skills teachers. In Ireland, trained volunteers account for more than 70% of the teaching workforce, though they teach only 20% of all learners because they focus on small student groups in rural areas (Bailey, 2007). While volunteers are often familiar with the life circumstances of course participants and try hard to help, they may lack the necessary pedagogical skills and require at least some training.

Using proven approaches to basic skills teaching

The knowledge about good practice in teaching of literacy and numeracy skills has improved and could inform development and research programmes. But few intervention studies have so far determined which teaching strategies are effectively raising adult learners' basic skills levels. This paper summarises what is currently known about good literacy and numeracy teaching: Effective teaching approaches to literacy have been shown to build on learners' experience, include oral reading, reciprocal teaching between learners, and link literacy exercises to the learners' everyday lives. Effective numeracy teaching

builds on the learners' prior knowledge, helps them overcome their fear of maths, exposes misconceptions, promotes problem solving, and makes use of ICT.

Effective adult literacy and numeracy provision is often characterised by a whole organisation approach, qualified teachers, sustainable funding and infrastructure, and adequate time for learners to acquire and consolidate their skills in class and possibly in the workplace. This paper identifies formative assessment, e-learning, and contextualisation and embedding as particularly promising teaching approaches.

Formative assessment – a key technique?

Formative assessment is a teaching approach whereby frequent assessment of learners' knowledge to establish needs and learning objectives is used to modify teaching activities, while tracking learning progress (Looney 2007; OECD, 2008). It is therefore assessment *for* learning in contrast to assessment *of* learning (Derrick and Ecclestone in OECD, 2008). Empirical studies have demonstrated that formative assessment can make a significant contribution to learning progress (Black and Wiliam, 1998, 2003), and there are reasons for thinking that it is particularly suited to the teaching of literacy and numeracy to low-skilled adults.

Among adults basic skills deficiencies often present a patchwork – so that an individual might be defeated by one simple task while having no problem with another more complex task. It is therefore much more difficult than with children to divide adults into well-defined skills levels (Wells, 2001), and instruction tailored to individual learners' needs is particularly helpful (Binder *et al.*, 2011; Comings *et al*., 2003; Comings, Garner and Smith, 2000; Dochy, Segers and Buehl, 1999; Strucker, Yamamoto and Kirsch, 2007; Thomas and Ward, 2009). Pursuing this approach in France, the *Atelier de Formation de Base* workshops in the Haute-Normandie region, the *Savoir pour Réussir* programme in Marseille for young people with low literacy skills, and an adult literacy programme in a prison in Lyon are all using the method apparently with success (Michel and Maroun, 2008).

E-learning outside the classroom– does it work for numeracy and literacy?

While there is a large evidence base on how information and communication technology (ICT) can support learning more generally, this is not yet the case in the basic skills sector (Association for Learning Technology and Technology Enhanced Learning, 2010). Some research suggests that learning technology is a cost-effective way of overcoming the obstacles to literacy and numeracy learning (e.g. Department for Business, Innovation and Skills, 2011; Davis et al. 2010; European Commission/EACEA/Eurydice, 2015a). Davis et al. (2010) and Mellar et al. (2007) also found that learning technology can even reach those 'hard-to-reach' learners and that learning with ICT tools can reinforce both ICT skills and basic skills.

But while some learners may be comfortable with on-line learning, for others, weak ICT literacy and limited ICT access are an obstacle. Face-to-face contact with teachers and peers can be a powerful motivating factor, and their absence felt keenly. For instance in the UK, many basic skills learners responded positively to e-learning (either in the classroom or by distance) provided by 26 literacy providers involved in *Skills for Life* programmes, but older men were more resistant. Other studies have shown that some learners, in the face of limited access to computers, can lose confidence and motivation (Hinman and Fletcher, 2008; Lopez et al., 2007). Not all learners have the self-discipline to benefit from distance e-learning (CAEL, 2006). Research has therefore concluded that ICT is not a replacement for personal contact with a teacher or tutor. Instead, online learning materials needs to be twinned with tutor input through face-to-face contact or via telephone or email (Davis et al., 2010; Lopez et al., 2007; Lotewski, Robbins and Noeth, 2004).

Contextualised and embedded literacy and numeracy provision – does it work?

Under a 'contextualised' approach, basic skills are learned in the context of the workplace, the family or the community setting. The embedded approach integrates basic skills learning in the curricula of an academic programme (Casey et al., 2006; Leach et al., 2010; Lesgold and Welch-Ross, 2012; National Centre of Literacy and Numeracy for Adults, 2015; Ryan et al., 2011; Salomon, 2009). It has been argued that both approaches have many advantages. First, they are more likely than other approaches to engage low-skilled adult learners who have negative feelings about classroom numeracy and literacy (e.g. Vorhaus et al., 2011; House of Commons, 2014). Second, they can help retain adult learners, positively change their attitudes towards further education and training, improve their self-confidence and parenting and employability skills, and achieve literacy and numeracy and/or vocational qualifications (Benseman et al., 2005; Brooks et al., 1996; Casey et al., 2006; Carpentieri, 2007; Coben et al., 2007; Ofsted, 2011a; Ryan et al., 2012; Vorhaus et al., 2011). Third, basic skills linked to an occupational skill are more likely to be sustained through use in the occupation. The same is true of basic skills linked to practical non-work requirements of everyday life, such as financial literacy. Many countries have therefore championed both approaches.

Various challenges of contextualised and embedded basic skills provision remain, including the need for more research to clarify which degree (partly, mostly or fully) of contextualisation and embedding is most beneficial (Carpentieri, 2007; Casey et al., 2006) and to determine whether concealing basic skills teaching in other educational offers helps to attract more participants (Benseman, Sutton and Lander, 2005; Atkin et al., 2005). Moreover, the linkage of basic skills teaching with authentic contexts presents organisational challenges: it requires a whole of organisation approach and necessitates team teaching in the classroom between the literacy and numeracy teachers and vocational instructors, which is more costly than single teacher classrooms (Casey et al., 2006).

Make the most of learning contexts: family and workplace programmes

The learning context matters. While some low-skilled learners may benefit from a classroom context, for many it can revive bad memories of their schooldays. Many learners prefer home-based, work-based, or e-learning approaches to improving their literacy and numeracy skills. This paper presents family literacy programmes and literacy and numeracy provision in the workplace as promising examples of contextualised basic skills learning that can reach people who are often not involved in further education.

Family literacy and numeracy learning – is it effective?

Family literacy and numeracy programmes address adults not only as learners in their own right, but also as a powerful influence on their children. They focus on literacy and numeracy development, and 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 (Benseman and Sutton, 2005). Well-designed programmes have been shown to promote child literacy and numeracy and adults' parenting capacity. Reviewing 29 family literacy, and numeracy programmes in the United Kingdom and elsewhere, Brooks et al. (2008b) 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. Many countries have developed family literacy programmes. For example *Actions éducatives familiales* in France have helped improve parents' engagement with their children's schoolwork since early 2013 (Carpentieri et al., 2011; Education.gouv.fr, 2015).

Despite evidence that these types of programmes benefit children's literacy, there is a lack of longitudinal research to demonstrate that the benefits are sustained. Likewise, 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 (Anderson et al., 2010).

Literacy and numeracy provision in the workplace – does it work?

Evidence shows that literacy and numeracy provision in the workplace potentially benefits both employees and employers. For employees who participate on a voluntarily basis and have the opportunity to use their (improved) skills in the workplace (Wolf, Evans and Bynner, 2009), basic skills training can lead to improved literacy, numeracy and confidence (Benseman, 2012), enhanced job performance (Bates and Holton, 2004), job retention (Campbell, 2003), and promotions (Askov, 2000). It can even reach those who are not normally involved in continuing education and training if the course is run in worktime and paid for (Benseman, 2012; Hollenbeck and Timmeney, 2008; Vorhaus et al., 2011). 18 workplace literacy programmes in New Zealand attracted even those not usually attending courses, including those with a Māori and Pasifika background and men (Bensemann, 2010; Department of Labour, 2010). Evidence shows that the basic skills courses can have a positive impact on workplace practices (e.g. teamwork, communication, documentation), but causality is often uncertain (Gray, 2006). Challenges arise if course participants lack the opportunity to transfer their newly acquired basic skills to the workplace (Benseman, 2012). Potential benefits to employers include reduced error rates, better safety records, increased employee retention and morale, and an improvement in the lifelong learning culture in the workplace (Bensemann, 2012). With respect to the impact of education interventions on the business productivity and on the return on investment, there is so far little evaluation because of the difficulty in isolating the effects of training alone on the business metrics and the need for expert assistance and/or special software (CAEL, 2006).

Many employers believe that tackling the issue of low basic skills must be a shared responsibility between the government, education authorities, and employers (Australian Industry Group, 2012). Government financial support can be very important, but it is not enough on its own (Campbell, 2003; Peterson, Ott and Wilson, 2002; Hollenbeck and Timmeney, 2009). For example workplace programmes in New Zealand and England which were not continued beyond an initial pilot phase because of lack of support at top and line management level (Benseman, 2012; Evans, Waite and Kersh, 2012; Finlay, Hodgson and Steer, 2007; Wolf and Evans, 2009, 2011). Research shows that learning programmes initiated and supported by employers through to supervisors are the ones that survive long-term (Wolf et al., 2008). Trade unions can also play a significant role in enrolling learners in work-based courses (Centre for Workplace Skills, 2011; House of Commons, 2014; Lloyed and Payne, 2006; Warner and Vorhaus, 2008).

1. INTRODUCTION

1.1. Introduction

This working paper is part of the OECD study *Country Reviews of Adult Skills* (see Box 1.1).

Box 1.1. OECD Study *Country Reviews of Adult Skills*

This working paper on policy interventions for adults with low literacy and numeracy skills contributes to the study *Country Reviews of Adult Skills*. The study is designed to make use of the Survey of Adult Skills (PIAAC – Programme for the International Assessment of Adult Competencies), alongside a range of other sources of evidence, to provide policy advice to countries. It involves a sequence of country reviews in countries participating in PIAAC. The study identifies key challenges, and develops policy recommendations to address those challenges, including those bearing on adults with weak basic literacy and numeracy skills. It offers the capacity to look strategically at the factors promoting or limiting basic skills, and what might be done through education, training or workplace measures to enhance basic skills and employability.

Source: See www.oecd.org/edu/skills-beyond-school/adult-learning-and-skills.htm and www.oecd.org/site/piaac/.

In the context of structural changes, labour shortage and projected population ageing, the issue of adults with low literacy and numeracy skills has gained policy attention. Low-skilled individuals are likely to be left behind. Not only are they more likely to be unemployed or in low-pay employment and have poorer levels of health and civic engagement, but they are also less likely to improve their skills through adult education and training (OECD, 2013a). Research shows that low-skilled individuals often either do not see the need to improve their low numeracy and literacy skills or lack the motivation to learn because they have low expectations of the benefits, perceive various barriers to participation, or drop out because of inadequate programme design (see for instance Bynner and Parsons, 2006). The relationship between skills and prosperity also applies to countries: per capita incomes are higher in countries with large proportions of adults who reach the highest levels of literacy and numeracy proficiency. Countries with lower skill levels risk losing competitiveness as the world economy becomes more dependent on skills (OECD 2013b).

Governments around the world are increasingly focusing on literacy and numeracy measures[2] for low-skilled adults. They recognise the need to up-skill low-skilled adults in order to maintain national prosperity and enhance social cohesion (OECD, 2014a). Their interest in basic skills education for adults has increased, not least because the results of international large-scale surveys, such as the International Adult Literacy Survey (1994-1998), the Adult Literacy and Life Skills Survey (2003-2007), and the Survey of Adult Skills (2011-2012) of the Programme for the International Assessment of Adult Competences (PIAAC)[3] showed that, despite universal basic education, significant proportions of the adult populations (aged 16-65) in participating countries possess only limited literacy and numeracy skills (OECD 2013a;

2. Adult basic education and literacy and numeracy education will be used interchangeably hereafter as the first term is frequently used in the academic literature (see also Section 3: Terms explained).

3. Around 166 000 adults aged 16-65 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.

OECD 2013c; Wolf et al., 2010). This fact raises questions regarding the effectiveness of existing education systems and educational initiatives targeting low-skilled adults.

1.2. The objective of the literature review

The objective of this literature review is to identify successful and unsuccessful adult literacy and numeracy initiatives in order to clarify which policy levers may work for low-skilled adults. Despite progress in measuring literacy and numeracy skills of adults, analysis of the effects of different interventions on learners is less evident in the research literature (Rubenson and Elfert, 2013). This literature review therefore attempts to bring together the analytical insights from research and practice to provide a broad picture of what has so far proven to motivate low-skilled adults to join and persist in literacy and numeracy learning.

Often those with weak literacy and numeracy skills not only face difficulties flowing directly from their low basic skills but also other life challenges. Increasing their basic skills may therefore not on its own be enough to improve life chances. An adult literacy and numeracy programme will only be fully successful when it motivates low-skilled individuals to participate, retains the learners, improves their literacy and numeracy skills, and when the learning enhances their prospect of (better) employment and other life chances.

1.3. Structure of the paper

Chapter 2 presents the methodology of this literature review and the limitations of the current state of research. Chapter 3 explains the most important terms used in the paper. Chapter 4 outlines the context of policy interventions for low-skilled adults, discussing the growing importance of sound literacy and numeracy skills, what living with low literacy and numeracy skills may imply, and what governments are doing to address the issue. Chapter 5 identifies the benefits of literacy and numeracy programmes, the learning motivations and learning barriers of low-skilled adults, and the outreach strategies that motivate adult learners to join basic skills courses. Chapter 6 looks at how basic skills programmes for adults are delivered and sustained, reviewing literature on learning in adulthood, factors contributing to learner persistence, and challenges of literacy and numeracy teaching. Chapter 7 identifies formative assessment, e-learning, and contextualisation and embedding as effective approaches to basic skills teaching. Chapter 8 highlights the importance of the learning context and focusses on family literacy programmes and literacy and numeracy provision in the workplace.

2. METHODOLOGY AND LIMITATIONS OF THE LITERATURE REVIEW

2.1. Methodology

To locate the relevant literature, this review relied on online searches in academic databases and on Google Scholar, reference searches for key articles, and existing OECD literature. To conduct the online search, keywords were used, including "adult literacy", "adult numeracy", "adult literacy and numeracy education/ programmes", "adult basic skills education/ programmes", "adult basic education/ programmes", "second chance education", "foundation skills education", "key skills education", and "key competences education" and their equivalents in French and German. The sources included in the review can be divided into two main types: empirical research on the effects of specific literacy and numeracy interventions on low-skilled adults, mostly found in academic journals; and policy papers describing existing initiatives.

This literature review is based on studies published in English, French, and German. Most of the empirical studies that assess the effects of adult literacy and numeracy initiatives on learners' lives have so far been conducted in Australia, Canada, New Zealand, the United Kingdom, and the United States, while the description of specific country initiatives covers a wider geographical scope.

2.2. Limitations of the literature review

There were important limitations to this literature review. At the international level, the Programme for the International Assessment of Adult Competences (PIAAC)[4] is so far the most ambitious assessment of the skills used by adults in their work, home and communities. In examining how well education and training systems foster relevant competencies, it foregrounds the link between skills and success, for both the individual and the state (OECD, 2013a). At the national level, there still often seems to be a mismatch between heavy investment in the assessment of the population's literacy and numeracy skills and limited knowledge of interventions that effectively improve adults' basic skills proficiencies (Rubenson and Elfert, 2013).

While there is much descriptive literature available on adult literacy and numeracy programmes, few studies have tested whether particular curricula or pedagogies result in better basic skills or include quantitative assessment of the learners' cognitive skills before and after programme participation (Lesgold and Welch-Ross, 2012). When there is analysis of outcomes, it is often short-term research that evaluates policies without a control group of non-participants and before educational interventions can reasonably prove their true value. A more useful, but more time-consuming and costly assessment would look at long-term benefits for participants' lives and compare them to the life chances of comparable groups of non-participants. Moreover, while educational studies have analysed how adult learning can be fostered under favourable circumstances, learning of low-skilled adults under less favourable circumstances, including fewer prospects of professional and personal development, has received less attention (Kyndt et al., 2013).

4. See footnote 3.

2.3. Research gaps can have serious implications for policy development and policy borrowing

The difficulty in finding analytical research investigating why particular programmes succeeded or failed indicates research gaps. They can have serious implications for policy development and policy borrowing because countries are less able to learn from each other's experiences. However, research gaps are just one challenge for those seeking to analyse the effectiveness of adult literacy and numeracy measures. The main challenge lies in the fact that low literacy and numeracy levels of adults are a complex policy problem that has neither straightforward causes nor straightforward solutions. Obviously a large part of the answer is better basic schooling but this does not help overcome the immediate challenge of upskilling today's low-skilled adults.

3. TERMS EXPLAINED

3.1. Literacy and numeracy

While there is no global consensus on the concept of literacy, the term is usually understood as the ability to read and write in order to interpret information, make decisions, and solve problems in personal, work, and community life (European Commission/EACEA/Eurydice, 2015a). Numeracy is defined here as the ability to access and use mathematical information in order to handle the numerical demands of a range of situations in adult life (OECD, 2013a) Literacy and numeracy are seen as social practices – they are not seen as a discrete set of technical skills for purely individual activities but are considered part of social activities in various contexts.

3.2. Low-skilled adults

The research literature often links low-skilled adults with low-educated adults, whose educational attainment is below lower secondary education (ISCED 0-2). They tend to be school drop-outs, come from socially deprived or segregated communities, and work in elementary occupations (9th ISCO88 occupational category) (Kureková, Haita, Beblavyý, 2013). Numerous studies have found that greater educational attainment is associated with higher levels of literacy and numeracy proficiency (Stine-Morrow and Parisi, 2011). For example, PIAAC shows that, on average, adults who have not attained upper secondary education score lower on the literacy scale than adults who have; and the latter group, in turn, scores lower than adults who have attained tertiary education (hereafter "high-educated" adults) (OECD, 2013a). However, schooling attainment is not a direct measure of adults' proficiency in literacy and numeracy (Tuijnman et al., 1997). Sometimes, the actual skills level differs from what data on educational attainment suggest (OECD, 2013b). The PIAAC survey shows that, within one country, adults with the same level of educational attainment can have very different proficiency levels in literacy and numeracy: while many low-educated adults also score poorly in literacy and numeracy skills in the PIAAC survey, some attain skills levels in the PIAAC survey that could be expected of high-educated people. At the same time, some formally high-educated adults only achieve low literacy and numeracy scores (OECD, 2013b; Green, 2013). The longer individuals are out of formal education, the weaker is the direct relationship between their formal education and proficiency in literacy and numeracy, and the greater is the role of other factors that may affect proficiency, such as work or the social environment. Adults may have acquired new literacy and numeracy skills since their attended formal education and/or may have lost skills that they did not use (OECD 2013b). For this reason, Kureková, Haita, Beblavý (2013, p. 247) suggest to go beyond educational attainment as primary measure of "low-skillness" to consider the actual use of skills. Literacy and numeracy skills deteriorate because of non-use, possibly due to long spells out of the labour market (e.g. long-term unemployment/parental leave/sickness) or due to low-skilled jobs and skills mismatch (e.g. overqualified workers settling for less). Low proficiency levels are the result of a complex set of interacting factors, of which the initial education system is only one element. The group of low-skilled adults is very heterogeneous, including older adults and migrants who did not have the chance to acquire basic skills earlier, young adults who dropped out of education, employed adults who are trapped in low-skilled jobs, and the long-term unemployed.

3.3. The low-skilled adult population

Most people in OECD countries have received at least lower secondary education (ISCED 2). Until the 1990s, schooling was generally believed to be congruent with basic proficiency in literacy and numeracy skills. This has changed since the first large-scale surveys, such as the International Adult Literacy Survey (IALS) (1994-1998) and the Adult Literacy and Life Skills Survey (ALL) (2003-2007), suggested that, despite universal basic education, sizeable proportions of the adult population (aged 16-65) in participating OECD countries had very low levels of literacy (OECD 2013c; Wolf et al., 2011). In most of the 23 countries participating in IALS, 14-23% of adults met only the lowest standards of literacy and numeracy proficiency (Level 1 of 6). The ALL survey found that in the six assessed countries and regions 30-60% of adult populations did not attain Level 3, the level considered the "suitable minimum" for meeting the demands of work and daily life (OECD and Statistics Canada, 2005). In late 2013, the first results of the OECD Survey of Adult Skills (2011-2012) of the Programme for the International Assessment of Adult Competences (PIAAC) showed that significant proportions of adults in the 24 countries involved in the study have only low levels of numeracy and literacy skills. Across the countries, 5-28% of adults are proficient at only the lowest levels in literacy, which means that they can at best, read short texts and understand basic vocabulary, and 8-32% are proficient at only the lowest levels in numeracy, that enable them, at best, to complete simple tasks like counting, adding and subtracting or understanding simple percentages (OECD, 2013a). The PIAAC survey revealed that the socio-academic background, including the educational level of parents, plays a disturbingly large role in determining adults' literacy and numeracy proficiency (OECD, 2013a). Some countries have used their initial education and training systems to make impressive progress in equipping more people with better skills. For example, while Korea's 55-64 year-olds are among the three lowest performing groups of this age across all participating countries, young Koreans are outperformed only by their Japanese counterparts. Conversely, young people in England and the United States have literacy and numeracy skills little better than their parents' generation (OECD, 2013b).

3.4. Low proficiency in literacy and numeracy skills

The definition of low proficiency in literacy and numeracy skills varies between countries and assessments. For instance, in the international Adult Literacy and Life Skills Survey (ALL) (2003-2007), Level 3 in literacy is considered the minimum of basic literacy skills necessary for meeting the demands of work and daily life in a knowledge-based economy (OECD and Statistics Canada, 2005). On the skills scale of the English *Skills for Life* strategy, the threshold of basic skills in numeracy and literacy is Level 1, which is equivalent to one GCSE at grade D-G or Level 1 on the national vocational qualification framework (NVQ) involving mostly routine work activities. In the PIAAC survey, adults scoring at Level 2 or above are considered possessing basic literacy and numeracy skills.[5] In light of these varying definitions of "low" literacy and numeracy levels, this literature review is guided by the definitions used in the reviewed interventions.

3.5. Literacy and numeracy interventions for low-skilled adults

It is important to note that educational provision for adults with low levels of literacy and numeracy skills is described with various terms, including "adult literacy and numeracy education", "adult basic skills education", "adult basic education", "second chance education", "foundation skills education", "key

5. Adults scoring below Level 2 can at the most complete simple forms, understand basic vocabulary, determine the meaning of sentences, and read continuous texts with a degree of fluency. Their numeracy skills allow them at the most to perform one-step or simple processes involving counting, sorting, basic arithmetic operations, understanding simple percentages, and locating and identifying elements of simple or common graphical or spatial representations (OECD, 2013a, pp. 67, 79).

skills education", and "key competences education". Of these various terms, "adult basic education" is most frequently used in the academic literature, most commonly understood[6] as provision that helps adults to acquire basic skills in reading, writing and calculating, equivalent to a proficiency level typically achieved by the end of lower secondary education. In the following chapters, "adult literacy and numeracy education" and "adult basic education" will be used interchangeably.

Literacy and numeracy skills can be integrated in education and training provision in a variety of ways. They can be the focus of dedicated programmes, which make explicit reference to improving these skills or they may be embedded in programmes that contribute to the same objective without specifically mentioning basic skills (see Table 3.1).

Table 3.1 Delivering literacy and numeracy skills in adult education and training

	Literacy and numeracy skills addressed explicitly	**Literacy and numeracy skills addressed implicitly**
Education and training institutions	Programmes designed as 'literacy', 'literacy and numeracy skills', 'basic skills', 'key competences', etc. delivered in education and training institutions	Programmes embedding literacy and numeracy skills in various ways delivered in education and training institutions (e.g. preparatory programmes for further studies) *Potentially any learning activity in education and training institutions*
Settings outside education and training institutions	Programmes designated as 'literacy', 'literacy and numeracy skills', 'basic skills', 'key competences', etc. delivered e.g. in workplace or community settings	Programmes embedding literacy and numeracy skills in various ways delivered e.g. in workplace or community settings *Potentially any learning activity outside settings devised for education and training*

Source: Eurydice in 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.

Adult basic education is offered in a range of contexts, from education and training institutions to workplace or community settings (European Commission/EACEA/Eurydice, 2015a). Some programmes are offered in the community context to reach the low-skilled who may be young school dropouts, elderly adults or immigrants or unemployed and/or unwilling to attend formal education institutions. Other programmes for low-skilled unemployed adults take place in job centres and may be contextualised learning combining basic skills training with vocational skills to improve employment prospects (see Table 3.1). Literacy and numeracy courses for low-skilled workers are increasingly offered in the workplace and often, the distinction between adult basic education and work-related adult education has become blurred (see Boxes 3.1 and 3.2 on the fusion between employment and adult literacy programmes in the United States and the fusion between social and human capital aims in adult basic education in England).

The courses can be delivered by teachers holding a specific or a general teaching qualification, by trained volunteers or by a combination of literacy and numeracy experts and vocational instructors (Tett and St. Clair, 2011). The mode of delivery can be on a full- or part-time basis and may or may not involve e-learning.

6. There are various definitions of the concept of "adult basic education" which differ in particular in whether they include or exclude language instruction for speakers of another language and/or ICT skills (European Commission/EACEA/Eurydice, 2015a).

Box 3.1. Fusion between employment and adult literacy programmes in the United States

In the U.S., the 1998 federal Workforce Investment Act (WIA) consolidated more than 50 literacy, employment and training schemes into three block grants that can be used by states for adult literacy provision (OECD, 2008). The WIA focuses on family literacy and on preparing individuals for employment. The policy encourages coordination between employment programmes and adult literacy programmes through the establishment of "one-stop" agencies within each state where learners can access a range of services, including adult literacy, job training, and employment assistance (Benseman and Comings, 2008). This suggests that the emphasis in the U.S. is on adult literacy as a tool for improving employment opportunities and that the pursuit of other objectives, such as learning for citizenship and personal development, are considered secondary objectives.

Source: Benseman, J. and J. Comings (2008), "Case Study: United States", in OECD (2008), *Teaching, Learning and Assessment for Adults: Improving Foundation Skills*, OECD Publishing, Paris, DOI: http://dx.doi.org/10.1787/172251338713.

Box 3.2. Fusion between social and human capital aims in England's adult basic education

In England, the *Skills for Life* Strategy (2001) argues that "[w]e must increase people's earning potential, and the country's wealth and productivity, by giving them the literacy and numeracy skills they need to participate in a global, knowledge-based economy (DfEE, 2001, p. 17). In other words, rather than rooted in a response to issues of social inclusion, the strategy rests on assumptions about the accelerating reach of the 'knowledge economy' (Hamilton and Pitt, 2011). The rationale is that even low-skilled occupations have "increasing literacy and numeracy requirements" (NAO, 2004, p. 17). At the 2008 '*Skills for Life* and Work Conference', the then junior minister for Skills argued that "for individual employers, the benefits of accessing *Skills for Life* are unambiguous. [...] *Skills for Life* is [...] critical to the overall strength and competitiveness of our workforce (Lammy, 2008, in Wolf et al., 2010, p. 387) (See Box 4.4 on the *Skills for Life* Strategy).

Source: DfEE (Department for Education and Employment) (2001), *Skills for Life strategy*, The Stationery Office, London; Hamin , M. and K. Pitt (2011), "Changing Policy Discourses: Constructing Literacy Inequalities", *International Journal of Educational Development*, Vol. 31, pp. 596-605; NAO (National Audit Office) (2004), "*Skills for Life*: improving adult literacy and numeracy", HC 20 Session 2004-2005, London; Wolf, A, L. Aspin, E. Waite and K. Ananiadou (2010), "The rise and fall of workplace basic skills programmes: lessons for policy and practice", *Oxford Review of Education,* Vol. 36, No. 4, pp. 385–405.

4. SETTING THE CONTEXT OF ADULT LITERACY AND NUMERACY EDUCATION

This chapter looks at the socio-economic context of adult literacy and numeracy. The first section explains the increasing importance of sound literacy and numeracy (4.1). The second and third sections describe what living with low basic skills can mean (4.2), and what governments are doing to tackle the challenge of low-skilled adults (4.3).

4.1. The growing importance of literacy and numeracy skills

Socio-economic changes have raised awareness for the need of up-skilling low-skilled adults

In most OECD countries, the development of a coherent sector of adult basic education is a relatively new idea (Tett and St. Clair, 2011). Until the 1990s, learning opportunities and professionalising measures for low-skilled adults, if they existed at all, tended to be piecemeal, were poorly funded and on the margins of policy (NALA, 2011). OECD economies have since increasingly relied on knowledge and information, increasing the importance of strong literacy and numeracy. The transition to knowledge-based economies has been accompanied by socio-economic changes, including changing demands on the labour market and technological change (in particular computerisation) with an increasing number of jobs requiring sound literacy and numeracy skills (OECD, 2014a). Labour shortages and projected population ageing have increased awareness of the need to up-skill the low-skilled workforce and integrating inactive or unemployed low-skilled adults into the labour market (Kureková, Haita, Beblavý, 2013).

There has been a shift towards more highly skilled jobs

In most OECD countries, there has been a shift towards more highly skilled jobs, while the trend for low- and medium-skilled jobs is less evident. The share of employment requiring the highest average levels of information-processing skills (literacy, numeracy and problem-solving in technology-rich environments), such as in the service sector, has grown fastest. Employment in occupations requiring the lowest average levels of information-processing skills has been relatively stable. Employment trends for medium-skilled jobs are more mixed, with some jobs being de-skilled, such as taxi-drivers who can now rely on GPS rather than on knowledge (OECD, 2013a).

There is some evidence of job polarisation towards high and low-skilled jobs in some countries

In certain, but not all OECD economies, there is some evidence of job polarisation towards high- and low-skilled jobs (Goos, Manning and Salomons, 2009; Oesch and Menes, 2010; Fernandez-Macias, 2012). In half of the OECD countries for which data are available, between 1998 and 2009, the loss of jobs associated with a medium level of education was greater than the loss of jobs associated with a low level of education (OECD, 2013a). On the one hand, skill polarisation towards high and low-skilled jobs means increasing employment opportunities for low-skilled adults. However, in many countries, it is accompanied by a process of displacement of the low-skilled by more educated workers who are pushed out from the declining medium level jobs (Autor and Dorn 2009; CEDEFOP 2012a). Often, these displaced low-skilled workers end up in unemployment (Kureková, Haita, Beblavyý, 2013).

Structural changes require most workers to acquire new skills during their career

The introduction of ICT into the workplace has changed the kinds and levels of skills required of workers, increasing the automation of operating processes and computer use even in lower-level jobs and requiring more written documentation (BMBF, 2012). A US study (Autor, Levy, and Murnane, 2003) suggests that technological change, particularly ICT, has increased the importance of problem solving and complex communication skills in the labour market. Good literacy and numeracy skills are necessary for the development of such skills (Levy and Murnane, 2004). While skills requirements vary between sectors, due to structural changes, most workers in OECD economies will need to acquire new skills during their career. Some skills may become obsolete and unmarketable, particularly affecting older workers (Kureková, Haita, Beblavyý, 2013). Autor, Levy and Murnane (2003), Brunello and Schlotter (2010), and Kureková et al. (2013) even suggest that skills requirements are rising in all occupational categories.

Literacy and numeracy skills are needed to learn new skills

Some non-routine low-skilled jobs, such as elderly care workers, may not be very affected by changes in the labour market (Levy and Murnane, 2004). However, many other low-skilled adults may precisely be the ones most at risk of job loss. Low-skilled workers may need to be able to switch jobs as certain routine and craft skills become obsolete due to replacement by computers and job opportunities may diminish (Smits, 2007). Low-skilled adults may need to acquire new skills in order to succeed in a changed working environment or new occupation. Yet, learning new skills is difficult without strong literacy and numeracy skills. For instance, a study of workplace literacy requirement in Central and Eastern Europe argues that most marketable competences are developed through basic skills closely tied to literacy (Köllő, 2006). In this context, the promotion of strong adult literacy and numeracy skills has gained importance on the policy agenda of many OECD countries (OECD, 2005).

4.2. Living with low literacy and numeracy skills

Low skilled adults are more likely to be unemployed or in low-pay jobs with fewer training opportunities

While the PIAAC results revealed that about half of the adults with low literacy and numeracy skills are employed, such adults are at greater risk than adults with higher proficiency levels of losing their job, being unemployed, and earning low wages[7] (OECD, 2013a; OECD, 2013b). Low-qualified employees are often confronted with what Burdett and Smith (2002) termed a 'low-skilled trap': their lower numeracy and literacy levels can cause a less favourable starting position in the labour market, which in turn may lead to unemployment or low-level positions in organisations with low salary and fewer development possibilities and career prospects (OECD, 2012a; Reder 2012). Their skills remain weak and/or deteriorate over time, making it even harder for low-skilled adults to participate in learning activities (OECD, 2013a). For example, in analysing the socio-economic circumstances of participants in two major longitudinal studies of the British population, Bynner and Parsons (2005, 2006, 2007) discovered that low numeracy skills are a strong predictor of long-term deprivation. They found that adults aged 16-34 with poor numeracy skills experienced three times more unemployment than those with good skills. Even when employed, those with poor maths skills were often trapped in insecure, poorly paid jobs, and were less likely to receive work-related training or promotion. Similarly, in a 2012 online survey about the attitude to maths and numeracy (i.e. maths use in everyday life) of 2000 adults in the United Kingdom by YouGov,[8]

7. Low-skilled occupations refer to elementary occupations (ISCO 9) (OECD, 2013a).

8. YouGov is an international online market research agency. The YouGov survey was commissioned by the British charity National Numeracy and included 2068 adults. Figures are weighted and representative of all adults (aged 18+) in the United Kingdom.

two in five people said that poor maths skills had held them back in their work and in job-hunting (National numeracy for everyone, for life, 2014b, 2014d.).

Workers in low-skill equilibria are the least likely to upskill

Research has shown that workers in low-skill equilibria are the least likely to invest in themselves and to receive employer support to develop their skills (Desjardins and Rubenson, 2013). Such low-skill equilibria can occur if in one region most employers pursue price-based competition that relies on low-quality and low-skill production that only requires a low-skilled workforce. Neither workers nor employers have an incentive to engage in or encourage adult basic education because employers neither require higher skill levels nor reward them. However, even in such balanced situations where low-skilled workers are matched in low-skill jobs, it could be desirable to boost the demand for higher skills in the face of stagnating sectors (OECD, 2013b).[9]

Low skilled individuals are more likely to have poorer levels of health and of civic engagement

The impact of low literacy and numeracy skills on life quality goes beyond employment and earnings. OECD data shows that in all countries, individuals with lower proficiencies in numeracy and literacy are more likely to report poor health, to believe that they have little impact on political processes, and not to participate in associative or volunteer activities (OECD, 2013b). According to Protheroe, Nutbeam, and Rowlands (2009), poor numeracy leads to poorer health and higher mortality because of limited participation in screening for diseases, lack of understanding of one's treatment plan, and difficulties in managing chronic conditions such as diabetes.

Low skilled adults are less likely to improve their skills through adult education and training

In most countries, adults with weak basic skills are less likely to improve their skills through adult education and training. Low-skilled adults risk getting trapped in a situation in which they rarely benefit from adult learning, and their skills remain weak or deteriorate over time (OECD 2013b).

Low-skilled individuals and countries are increasingly likely to be left behind.

The relationship between skills and prosperity does not just hold for individuals; it also applies to countries: per capita incomes are higher in countries with large proportions of adults who reach the highest levels of literacy and numeracy proficiency. Countries with lower skill levels risk losing competitiveness as the world economy becomes more dependent on skills (OECD 2013b).

4.3. Government action to address low adult literacy and numeracy skills

Governments recognise the importance of adult literacy and numeracy education

Helping low-skilled adults to escape from the "low-skilled trap" is a policy challenge (OECD 2013b, p. 17). Many governments offer subsidised adult literacy and numeracy programmes (Kyndt et al., 2013; OECD, 2013b; Tett and St. Clair, 2011). In a 2014 survey on low-skilled adults,[10] 17 responding countries

9. This requires efforts by the local government to support the creation of more high-skilled jobs and coordination between government, firms, and workers (see for examples OECD, 2010).

10. The OECD survey of programmes or initiatives for adults with low skills was carried out in May 2014 by the PIAAC Bureau of participating countries. The survey intended to gather information about various national activities such as education programmes, research, public awareness and support for organisations. Australia, Canada, the Czech Republic, Denmark, the United Kingdom, Estonia, Finland, Flanders

mentioned 71 programmes that specifically target adults with low levels of education (OECD, 2014f) (see Boxes 4.1, 4.2, 4.3, 4.4 and 4.5 on England, Australia, Indonesia, France and Germany for examples of governments recognising the urgency of improving basic education measures; See also the Annex for further examples of specific interventions).

Designing or improving existing adult literacy and numeracy measures is challenging

For example, despite England's extensive and well-resourced seven-year *Skills for Life* strategy, the results of the *Skills for Life* Survey 2011 showed that compared to the 2003 Survey the numeracy skills in England declined in the last eight years. The survey revealed that 17 million adults had at best the numeracy skills expected of children at primary school (BIS, 2012). Around 30% of the people in the *Skills for Life* Survey 2011 who rated their skills as "very good", performed poorly, which shows a sizable lack of awareness of the problem (National Numeracy for everyone, for life, 2014b) (see Box 4.1 on England's *Skills for Life* Strategy). This highlights the challenge of designing effective adult literacy and numeracy measures on a scale sufficient to make a measurable impact.

Box 4.1. England's *Skills for Life* Strategy

IALS in the 1990s revealed that seven million adults in England were functionally illiterate and that even more adults only had a numeracy level below GCSE[1] grade C. The 1999 Moser Report recommended rapid expansion and upgrading of numeracy and literacy provision for adults (Appleby and Bathmaker, 2006; BIS, 2012). The 9 billion-pound "*Skills for Life*" strategy was duly launched in 2001 to create a new infrastructure to support free adult basic skills learning opportunities over a seven-year period and improve the basic skills of adults has remained a government priority ever since. The extensive course offer that was put in place was promoted through a publicity campaign *Get rid of your gremlins* (National Numeracy for everyone, for life, 2014a).

The effectiveness of *Skills for Life* provision can be assessed by looking at the following key questions:

1. Did *Skills for Life* provisions improve learners' literacy, language, and numeracy skills?

2. Did participation in provision lead to increased employment rates and/or earnings?

1. Looking at the ability of *Skills for Life* provision to improve learners' skills, a longitudinal research project by Metcalf et al. (2009) followed adult literacy and numeracy learners over a period of three years, comparing their outcomes with a group of individuals who did not take literacy or numeracy courses. The study found that college-based adult literacy and numeracy courses had a range of positive effects including increased learner self-esteem, improved commitment to education, and beliefs by learners that their literacy and numeracy skills had improved and continued to improve. Evidence also suggested that literacy and numeracy provision was associated with improved health, increased independence, and a greater ability to conduct everyday activities.

With a view to assess whether *Skills for Life* had contributed to national skills gains, two surveys of national literacy and numeracy levels were carried out in 2003 and 2011 (DfES, 2003; BIS, 2012). The results show a mixed picture: while literacy skills improved, numeracy skills declined in the eight years from 2003. The findings revealed that 17 million adults in England were working at a level equivalent to that expected of children at primary school. The improved literacy outcomes seemed to be more the result of improved skills of those already relatively literate rather than a reduction of poor performers (Department for Business Innovation and Skills, 2012). The 2011 *Work, Society and Lifelong Literacy* report of the National Institute of Adult Continuing Education (NIACE, 2011a) argues that the *Skills for Life* programme was not wholly successful as it failed to reach those with severe literacy and numeracy deficiencies, with too many resources invested in people with few literacy problems (Times, 2011).

(Belgium), France, Germany, Italy, Japan, Korea, Norway, the Slovak Republic, Spain, and Sweden responded to the survey.

Box 4.1. England's *Skills for Life* Strategy (*continued*)

2. In their longitudinal research project, Metcalf et al. (2009) also sought to assess whether *Skills for Life* learners had benefited economically from their participation by looking at learners' earnings and return to employment. While their study found no evidence of improved earnings for *Skills for Life* participants after three years, this does not exclude a longer term improvement in participants' earning levels. Regarding return to employment, the study also did not find gains. However, the study found strong evidence of improved employability skills. Overall, the authors suggest that longer term studies are required to assess the effects of the intervention, particularly given the improved employability skills of *Skills for Life* participants (Metcalf et al., 2009).

Despite the *Skills for Life* initiative, the PIAAC results led the OECD to conclude "the talent pool of highly skilled adults in England and Northern Ireland is likely to shrink relative to that of other countries" (Department for Business Innovation and Skills, 2013). England's adult population is becoming less competitive and their skills are below the OECD average. While the United Kingdom's 55-65-year-olds rank 12th, British 16-24-year-olds rank 20th internationally. In 2013, the OECD Survey of Adult Skills (PIAAC) revealed that 16% of adults in England and Northern Ireland had low literacy skills and 24% low numeracy skills, evaluated at Level 1 (European Commission/EACEA/Eurydice, 2015b).

Source: Appleby, Y. and A. M.Bathmaker (2006), "The new skills agenda: increased lifelong learning or new sites of inequality?", *British Educational Research Journal*, Vol. 32(5), pp. 703-717; BIS (Department for Business, Innovation and Skill) (2013), "The International Survey of Adult Skills 2012: Adult literacy, numeracy, and problem-solving in England", *BIS Research Paper*, No. 139, www.gov.uk/government/publications/international-survey-of-adult-skills-2012 DfES (2003), "The *Skills for Life* survey: A national needs and impact survey of literacy, numeracy and ICT skills", *DfES Research Report* 490, www.education.gov.uk/publications/eOrderingDownload/RR490.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, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/179EN_CD.pdf; Metcalf, H., P. Meadows, H. Rolfe and A. Dhudwar (2009), *Evaluation of the impact of Skills for Life Learning: Longitudinal survey of adult learners on college-based literacy and numeracy courses, final report*, BIS, London; National Numeracy for everyone, for life (2014a), "Numeracy for adults", National Numeracy Charity, Lewes, www.nationalnumeracy.org.uk/numeracy-for-adults/index.html; Times Educational Supplement (2011), "Ten years and 9bn later and still 5 million can't read", No. 4959, pp.64-65.

1. The General Certificate of Secondary Education (GCSE) is an academic qualification awarded in a specified subject, generally taken in several subjects by pupils aged 14–16 in secondary education in England, Wales and Northern Ireland, grades go from A* to C.

Box 4.2. Australia's National Foundation Skills Strategy for Adults

The 2006 Adult Literacy and Lifeskills (ALL) survey revealed that 44% of Australia's working age population (aged 15-64 years), corresponding to ca. 6 million people, had literacy levels below Level 3, considered to be the level needed to meet the complex demands of work and life in modern economies. This equated to 40% of employed Australians, 60% of the unemployed, and 70% of those outside the labour force. Australia's National Skills Strategy for Adults states that "the ALLS survey results have serious implications for Australia's future productivity and lend weight to concerns about our ability to meet projected skills demands in coming years" (SCOTESE, 2012).

Building on previous research on human capital, models were created to estimate the effects of improved literacy and numeracy skills on the probability of labour market participation and on wages. The model calculations suggest that an improvement in literacy and numeracy skills from level 1 to level 3 (out of 5 levels), namely to move from the ability to read and understand only short texts and simple arithmetic problems to understanding lengthy texts and undertaking a number of steps to solve a mathematical problem, would increase the likelihood of labour force participation by 15 percentage points for women and 5 percentage points for men. It was also estimated that the same increase in basic skills would increase hourly wage rates by 25% for women and 30% for men (SCOTESE, 2012). Consequently, between 2011 and 2012 Australian governments worked together to develop the National Foundation Skills Strategy for Adults (the National Strategy), a 10-year strategy aiming to develop and maintain adults foundation skills. The general aim of the National Strategy launched in 2012 is to improve literacy levels of all working age Australians, with a particular focus on those with low foundational skills. Australian governments set as an aspirational target that by 2022, two-thirds of working age Australians will have literacy and numeracy skills at Level 3 or above, using as a benchmark the results of PIAAC (SCOTESE, 2012). In 2013, the OECD Survey of Adult Skills (PIAAC) revealed that 12.5% of adults in Australia had low literacy skills and 20% low numeracy skills, evaluated at Level 1 and below.

Source: Australian Industry Group (2012), "When words fail: National workforce literacy project final project report", Australian Industry Group, http://learningreps.org.nz/files/Evaluation%20of%20the%20Learning%20Representatives%20Programme.pdf; SCOTESE (Standing Council for Tertiary Education, Skills, Science and Research) (2012), *National Foundation Skills Strategy for Adults*, www.takingthelead.com.au/sites/default/files/resources/National_Foundation_Skills_Strategy_for_Adults.pdf

Box 4.3. Indonesia's AKRAB (Literacy Creates Power) programme

Indonesia has a population of over 234 million people, distributed between roughly 6 000 islands and with approximately 680 native languages. Compared to an estimated youth literacy rate of 99% (15-24 year-olds), the adult literacy rate of 93% (15+ years) is relatively low, and 12% of Indonesians live below the poverty line (latest data from 2011 in World Bank, 2015; UNESCO, 2014j). The Indonesian government has identified adult illiteracy as one of the major causes of this relatively high poverty prevalence. While coordinated efforts to address illiteracy in Indonesia began as far back as 1945, these efforts have been strengthened since 2000 in line with the UNESCO Literacy Initiative for Empowerment (LIFE).

In 2006, Indonesia's government announced the National Movement to Hasten Compulsory Nine-Year Basic Education Accomplishment and Fight Against Illiteracy (NMHFAI). AKRAB (*Aksara Agar Berdaya*, "literacy creates power") is the adult education component of this movement and comprises both basic and advanced literacy training in local languages and Bahasa Indonesia. AKRAB enables learners (with an emphasis on female participation) to develop their literacy alongside life skills in health and nutrition, agriculture, environment, entrepreneurship, national identity, religious tolerance, peace-building and prevention of destructive behaviour and human trafficking. Teaching approaches include a participatory approach (integrating relevant life skills), a mother tongue based approach (the local mother tongue is used to teach Bahasa Indonesia), and a transliteration approach (ability to read Qur'an and Arabic alphabets is transferred into the ability to read Latin letters). Classes last between six and ten months and cover five competency stages with a certificate of literacy (*Surat Keterangan Melek Aksara*, SUKMA) awarded upon completion.

One of the strengths of the AKRAB programme is its holistic approach to coordination and implementation which combines various stakeholders. While Indonesia's Ministry of Education and Culture is responsible for the design and coordination of the AKRAB programme, other ministries contribute to the programme design, and a range of non-governmental organisations (such as community learning centres), religious institutions and universities) are involved in the implementation of the programme (see Box 6.10 for more details about the implementation of the programme).

Every year, one person is selected from each municipality to become a tutor, who is paid a basic wage of Rp 10 500 per hour of teaching. Candidates must have at least Senior High School education, reside in the local area, demonstrate high levels of commitment, master the teaching-learning materials and be able to develop participatory learning methods. The teaching material is not only developed by tutors and non-formal education experts but also by learners themselves and used by other participants. All institutions and organisations involved in the delivery of AKRAB are assessed by the independent National Accreditation Board for Non-Formal and Informal Education, for their eligibility to participate in the AKRAB programme and to issue certificates of literacy. This assessment is based on the quality and standards of the curriculum, the teaching-learning process, the graduates' competences, personnel, facilities, governance and finance.

Impact

By institutionalising existing community learning centres and other non-formal educational networks, the programme has quickly achieved extensive coverage with 7 000 locations that serve over 75 000 villages. Between 2008 and 2012, the programme has achieved the following:

- More than 4 million people have participated in the literacy programme.
- More than 3 million people have been awarded the government literacy certificate (SUKMA)
- More than 1 million people have participated in the entrepreneurship programme.
- More than 3 500 tutors have been trained or increased their capacity of teaching adult literacy.
- More than 6 179 community reading gardens have been made available in public areas.
- More than 1 350 community learning centres have been institutionalised.
- The number of illiterate people has decreased from 11.2 million in 2007 to 6.73 million in 2011.
- The number of CLCs has increased by 30% between 2007 and 2012.
- Gender disparity has decreased from 4.3 in 2007 to 2.7 in 2011.

Box 4.3. Indonesia's AKRAB (Literacy Creates Power) programme (*continued*)

Challenges

- Some illiterate people are very difficult to reach. They are mostly those aged 45 years and above, the disabled, and people living in extremely remote areas. For many of them, a lack of motivation to learn, or a lack of recognition of the benefits of literacy are obstacles to programme participation.
- Many participants continue to experience difficulties with Bahasa Indonesia as learning new skills as an adult is more difficult than during childhood.
- Many newly-literate people become illiterate again due to a lack of use of their new skills. There is not enough funding for post-literacy programmes, aside from the provision of basic community reading gardens.
- The quality of learning facilities and teachers across the many implementing organisations varies.
- Some local authorities remain uninterested in the planning, implementation and evaluation of programmes, creating inequality in the opportunities which the programme affords between regions.

Source: UNESCO (2014j), "AKRAB (Literacy Creates Power) Programme in Indonesia", www.unesco.org/uil/litbase/?menu=4&programme=121; World Bank (2015), "Data", http://data.worldbank.org/indicator/SE.ADT.LITR.ZS.

Box 4.4. France's National Agency for the Fight against Illiteracy

In 2013, the OECD Survey of Adult Skills (PIAAC) revealed that 22% of adults in France had low literacy skills and 28% low numeracy skills, evaluated at Level 1 (European Commission/EACEA/Eurydice, 2015b). In the same year, the French government made the fight against illiteracy a policy priority and declared it a national priority (*Grande cause nationale*). This label gives non-profit organisations free air time on public radio and television to seek donations for their campaigns against illiteracy. For 2014, the National Institute of Statistics and Economic Studies (INSEE) estimated that ca. 2.5 million adults were illiterate with more than half in employment (ALNCI, 2014a).

Initiatives for adults with low literacy and numeracy skills already started earlier than in 2013, including the foundation of the National Agency for the fight against illiteracy (*Agence nationale de luttre contre l'illettrisme, ANLCI*) in 2000. The ANLCI created a national reference framework for adult basic education policies in 2003 and has since assumed a central role in the prevention and the fight against illiteracy, working on the harmonisation of indicators for the measurement of illiteracy and guiding the professionalisation of the basic education sector. In 2004, the ANLCI developed an online database (the *Forum permanent des pratiques*) which describes good practices and which has facilitated the production of teaching and learning material abreast of recent evidence. With a view to keeping the database up-to-date, the ANLCI together with adult teachers frequently evaluates basic education programmes and then organises workshops for other providers of basic skills training to share experience and good practices (ANLCI 2014b).

Adults who want to improve their level of basic skills can follow the programme "key competences" (*compétences clefs*) that has been developed with the support of the ANLCI and is coordinated by the ministry responsible for employment and mainly targets unemployed people. The programme is funded from national sources combined with European funding and is free for participants. It covers a set of key competences as defined by European policy[1] and comprises around 100 hours of tuition during six months (European Commission/EACEA/Eurydice, 2015b). In 2011, 50 100 people took part in the programme, of whom more than 90% were unemployed (DARES, 2013).

Source: ANLCI (2014a), "Agence Nationale de Lutte Contre l'Illettrisme: Pour l'accès de tous à la lecture, l'écriture et aux compétences de base", www.anlci.gouv.fr/; ANLCI (2014b), "Le forum permanent des pratiques", www.anlci.gouv.fr/L-ANLCI/Qui-sommes-nous/Le-Forum-permanent-des-Pratiques; DARES (Directions de l'Animation de la Recherche, des Études et des Statistiques) (2013), Dares Analyses, nº 44, http://travail-emploi.gouv.fr/IMG/pdf/2013-044.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, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/179EN_CD.pdf.

1. Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962/EC), OJ L 394, 30.12.2006.

Box 4.5. Germany's National Strategy for Literacy and Basic Education of Adults

The 2011 level-one survey (leo) conducted by Hamburg University provided the first national, reliable and differentiated data on literacy (understood as ability to deal with written text by reading and writing, and understanding and producing meaning). The survey revealed that of Germany's population about 2.3 million were illiterate, i.e. they can only read or write single words but not entire sentences, corresponding to over 4% of the working population (aged 18-64), and 7.5 million were functionally illiterate, i.e. they can read or write individual sentences but are not able to understand even short texts such as work instructions, corresponding to 14% of the working population (BMBF, 2014).

As a result, in 2012, the Federal Ministry for Education and Research (BMBF) together with the Conference of Ministers of Education and Cultural Affairs announced an Agreement for a Joint National Strategy for Literacy and Adult Basic Skills in Germany 2012-2016 (*Vereinbarung über eine gemeinsame nationale Strategie für Alphabetisierung und Grundbildung Erwachsener in Deutschland 2012-2016*) to create networks and regional adult education coordinators and encourage exchange of good practice between the 16 *Bundesländer*. It covers a wide range of measures, including the setting up of courses, guidance services and awareness-raising activities, as well as support for research in the field (European Commission/EACEA/Eurydice, 2015b). This builds on the work undertaken between 2007 and 2012 entitled "Research and Development for the Promotion of Literacy and Numeracy of Adults" (*Forschung und Entwicklung zur Alphabetisierung und Grundbildung Erwachsener*) which the BMBF had initiated on the occasion of the United Nations Literacy Decade 2003-2012. The work covered more than 100 individual projects which contributed to bringing the issue of adult literacy more to the attention of the German public, enhancing the research base, and facilitating the exchange of best practice. The final report (www.alphabund.de/1861.php) gives an overview of the most important research findings. Moreover, in 2012, the BMBF launched an initiative on workplace-oriented research and development in the area of literacy and basic education with funding of 20 million euros for 54 projects running between 2012 and 2015 in order to develop new approaches to literacy and basic education (BMBF, 2014).

While the provision of adult literacy and basic skills courses is mainly regulated by further education legislation in the *Länder*, some initiatives also take place at the federal level. At the level of the *Länder,* adults without a lower secondary school leaving certificate can follow courses at lower secondary evening schools (*Abendschulen*) which last between 1-2 years and lead to qualifications at ISCED level 2 equal to those in the initial education system (*Hauptschulabschluss* or *Realschulabschluss*). The main providers are non-profit adult education centres (e.g. *Volkshochschulen*). While courses are publicly subsidised, learners are generally expected to contribute to their tuition. In 2012/2013, 1 000 people followed *Abendhauptschulen* and 20 000 *Abendrealschulen* (Statistisches Bundesamt, 2013). In addition, various organisations provide literacy courses, with *Volkshochschulen* being the major providers, with 141 000 learners enrolled in courses for basic education, literacy and school leaving qualifications in 2013 (Huntemann and Reichert, 2014). At the federal level, the German Adult Education Association (DVV) has recently developed a framework for courses in writing, reading, basic numeracy, metal working, and basic geriatric care and offers guidelines to tutors for course delivery (European Commission/EACEA/Eurydice, 2015b).

In 2013, the OECD Survey of Adult Skills (PIAAC) revealed that 18% of adults in Germany had low literacy skills and 18% low numeracy skills, evaluated at Level 1 (European Commission/EACEA/Eurydice, 2015b). In 2014, more than half of the adults with literacy difficulties are in employment (BMBF, 2014).

Source: BMBF (German Federal Ministry for Education and Research) (2014), "National strategies for Literacy and Basic Education of Adults", www.bmbf.de/en/426.php; BMBF (2012), *Alphabetisierung und Grundbildung Erwachsener: Abschlussdokumentation des Förderschwerpunktes zur Forschung und Entwicklung 2007-2012,* www.alphabund.de/_1861.php 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; Statistisches Bundesamt (2013), *Fachserie 11, Reihe 1, Allgemeinbildende Schulen*, www.destatis.de/DE/Publikationen/Thematisch/BildungForschungKultur/Schulen/AllgemeinbildendeSchulen2110100137004.pdf?__blob=publicationFile; Huntemann, H. and E. Reichart (2014), *Volkshochschul-Statistik: 52. Folge, Arbeitsjahr 2013*, www.die-bonn.de/doks/2014-volkshochschule-statistik-01.pdf.

What public policy can contribute to an effective adult basic system

To be fully effective, public policy needs to remove participation barriers and incentivise individuals, social partners, and education providers to invest in adult basic education. The OECD's thematic review of adult learning undertaken between 1999 and 2004 argued that public policy would: *i)* create the structural preconditions for raising the benefits of basic skills learning; *ii)* share information on learning opportunities and benefits; *iii)* promote well-designed co-financing arrangements; *iv)* improve delivery and quality control; and *v)* ensure policy co-ordination and coherence by involving stakeholders such as the social partners, employers, labour unions, and education providers (OECD, 2005) (see Box 4.6 for an example of the welfare state's role in fostering participation in adult education). Low skilled individuals need to become aware of learning opportunities and motivated to learn. Workplaces must become 'learning workplaces' which engage their employees in skills development. For those who are unemployed or whose employers cannot provide basic education and training, other education providers need to step in (OECD, 2014e).

Box 4.6. Adult education in the Nordic countries

The comparatively high participation in adult education in the Nordic countries has attracted much interest. Empirical findings suggest that the major difference between the Nordic and non-Nordic countries are not the existence of participation barriers as the patterns of nonparticipation in both country groups are similar, with the low-skilled, men, the older, the unemployed, and the inactive least likely to participate. But the major difference lies in the conditions that allow a person to overcome these barriers (Payne, 2006; Dæhlen and Ure, 2009). Desjardins and Rubenson (2009) argue that a welfare state regime can affect a person's capability to participate as it can help to overcome learning barriers. The Nordic countries have a long history of fostering adult learning, targeting various participation barriers, and ensuring that disadvantaged groups have equal learning opportunities. Effective public policies include:

- Adult education policies have been closely integrated with active labour market policy.
- The Nordic countries feature a state-led social partnership approach to adult education which involves negotiations between the state, employers, and unions. The corporatist tradition has enabled trade unions to positively influence their members' learning opportunities (Green 2013).
- The Nordic countries have a strong record of public policy that comprehensively addresses participation constraints. Folk high schools and adult education associations may better respond to different collective and individual aspirations and needs than the formal educational system or education and training supplied by the employer (Desjardins and Rubenson, 2009; 2013).
- Nordic countries emphasise equity in their funding regimes. Tuijnman and Hellström (2001) found that public support has a crucial effect on the participation of those least likely to enrol. The policy emphasis is on subsidising participation for those who need it most (by eliminating fees, providing targeted study assistance, and financing outreach activities), guaranteeing student spaces, and reducing credit constraints (Desjardins and Rubenson, 2009). This strategy also compensates for a tendency by employers to offer little or no financial support to low-skilled employees.

Source: Dæhlen, M. and B. Ure (2009), "Low-skilled adults in formal continuing education: does their motivation differ from other learners", *International Journal of Lifelong Learning*, Vol. 28(5), pp. 661-674; Desjardins, R. and K. Rubenson (2009), "The Impact of Welfare State Regimes on Barriers to Participation in Adult Education: A Bounded Agency Model", *Adult Education Quarterly*, Vol. 59, pp. 187-207; Desjardins, R. and K. Rubenson (2013),"Participation patterns in Adult Education: the role of institutions and public policy frameworks", *European Journal of Education*, Vol. 48(2); Green, F. (2013), *Skills and Skilled Work: An Economic and Social Analysis*, Oxford University Press, Oxford.; Payne, J. (2006), "The Norwegian competence reform and the limits of lifelong learning", *Journal of Lifelong Education,* Vol. 25(5), pp. 477–506; Tuijnman, A. and Z. Hellström (eds.) (2001), *Curious Minds: Nordic Adult Education Compared*, Nordic Council, Copenhagen; Windisch, H. C. (forthcoming), Literature review on policy interventions for adults with low literacy and numeracy skills, OECD Publishing, Paris.

5. IDENTIFYING THE BENEFITS AND BUILDING MOTIVATION

Research in many countries has found that often low-skilled individuals either do not see the need to improve their numeracy and literacy skills (see for instance Ekinsmyth and Bynner, 1994 in Brooks et al., 2001a; Bynner and Parsons, 2006) or lack the motivation to engage in basic skills learning because they have low expectations of the benefits, perceive various barriers to participation or drop out because of inadequate programme design. Individual history, age, class, gender, ethnicity, and current context all affect readiness to engage in learning. Practical issues can make it difficult to take part in learning programmes, and community and workplace contexts shape motivators and "demotivators" for learning (Merrifield, 2012, p. 13). Motivation is a key determinant of learner enrolment, persistence, and success in basic skills courses (MacLeod and Straw, 2010). For example, research in New Zealand on the transfer of literacy, language, and numeracy skills from learning programmes into the workplace suggests that motivation is one of four key learner characteristics, along with having skills and knowledge to participate, perception that the training will be useful, and manageable life circumstances (Cameron et al., 2011). This chapter seeks thus to identify the benefits of course participation (5.1), the learning motivations (5.2), and the learning barriers of low-skilled adults (5.3) because of their importance for the design of outreach strategies (5.4) and programmes.

5.1. Benefits of literacy and numeracy programmes

In light of the magnitude of adults with low literacy and numeracy skills in OECD countries and the negative effects of low proficiency on the individual, the society, and the economy (see Section 4.2), policy interventions addressing adults with basic skills needs may bring significant benefits to the individual. The multiple benefits of strong basic skills, inside and outside the workplace, are well established. But as these skills are typically developed in early life and initial schooling, the potential of mid-life remedial interventions remains uncertain.

Describing the benefits of participation in adult basic skills programme in terms of proficiency gains and economic returns (productivity, employment, and earnings) is difficult because of methodological problems of much research: most analyses of programmes do not compare the proficiency gains and economic returns of programme participants with gains made by comparable groups of non-participants or programme drop-outs. This makes it difficult to understand persistence patterns and to assess the impact of programme participation compared to non-participation. In most of these studies, the follow-up intervals are too short to assess the long-term benefits of programmes for participants' lives (Reder, 2012) (see Section 2). The little existing methodologically robust evidence shows benefits from participation by adults in literacy and numeracy programmes in terms of proficiency gains and social returns, but there is much less evidence regarding economic returns (see the following paragraphs).

Regarding proficiency gains

Evidence shows a strong connection between *participation* in literacy and numeracy programmes and changes in literacy and numeracy *practices* that can in turn lead to increased *proficiency* levels over time (see e.g. Reder 2012; Reder and Bynner, 2009; Wolf and Evans, 2011). The Longitudinal Study of Adult

Learning (LSAL)[11] in the US state of Oregon illustrates this step-wise impact of programme participation on proficiency levels, first changing literacy and numeracy practices and then improving proficiency. LSAL followed 1 000 high school dropouts between 1998 and 2007 and found no direct relationship between participation in adult basic skills programmes and proficiency change. LSAL followed 1 000 high school dropouts between 1998 and 2007 and found no direct relationship between participation in adult basic skills programmes and proficiency change. This lack of direct impact may seem at odds with the small learning gains that programmes typically report for participants' scores on proficiency tests prior and post programme participation. However, most analyses of programme gains do not compare them with gains made by comparable groups of non-participants. LSAL did not only find overall small proficiency gains among programme participants, but also among comparable non-participants (Reder, 2009). In sharp contrast, the data exhibited a strong positive relationship between *programme participation* and changes in literacy and numeracy *practices*, such as reading books and using maths at home. This finding is consistent with previous research by Brooks et al., (2001a), Purcell-Gates (2000), Sheehan-Holt and Smith (2000), and Smith (2009). In line with practice engagement theory (Sheehan-Holt and Smith, 2000), LSAL showed that more frequent reading and writing *practices* lead over ca. 5-6 years to *greater proficiency*.

Regarding social returns

Similar to the positive effects of adult learning in general on social outcomes, such as health, social tolerance and crime rate, evidence shows that participation in literacy and numeracy programmes and the higher basic skills levels that follow positively influences confidence, self-esteem, attitudes towards learning, parenting capacity, and civic engagement (see e.g. Benseman, 2012; Vorhaus et al., 2011). Virtuous cycles seem to apply, whereby improved skills strengthen confidence which can lead to social returns over time.

In workplace literacy and numeracy programmes

Representative of many other findings, the Enhancing '*Skills for Life*' Project in the United Kingdom found that "the most marked benefits for individuals and organisations are in personal and/or work satisfaction. Workplace learning has the potential to change individuals' 'learning trajectories' and encourage them to rethink their ambitions and capabilities and continue with formal learning in later years" (Wolf, 2008, p. 1). Similarly, a study of eleven workplace literacy and essential skills programmes in Canada and the United Kingdom found that "there were significant gains" to individual workers, particularly in attitudes (Taylor, Evans and Mohamed, 2008, p. 6). Moreover, "workplace basic skills courses reach people who are not normally involved in continuing education or training, and learners who participate in these courses voluntarily and who actively use their literacy skills at work and in everyday life continue to improve their skills and are more likely to engage in [further learning]" (Vorhaus et al., 2011, p. 13).

11. The Longitudinal Study of Adult Learning (LSAL) was designed as a panel study on a target population for adult literacy education over nine years. The LSA offers a richer picture of adult literacy development than is typically captured through short-term and more narrowly focused pre-and post-comparisons among participants in basic skills programmes. Between 1998 and 2007, it followed an adult population not limited to programme participants, gathering information not limited to programme settings or short follow-up intervals. The study randomly sampled about 1 000 high school dropouts. Initially, they were on average 28, proficient but not necessarily native English speakers, and residents of the Portland, Oregon metropolitan area. The methodological advantage of using a local target population is that most individuals attended the same school systems and encountered the same labour market and educational options. These shared contexts highlight differences among individuals' literacy, family, education and work histories (Reder, 2012).

In family literacy and numeracy programmes

In line with other findings on family literacy programmes, Brooks et al. (2008b)[12] found that both parents and children benefitted from participation. However, evidence suggests that the programmes benefited the literacy, language and numeracy skills of the children more than those of their parents. Parents reported that they benefitted in terms of their ability to help their children in schoolwork, to rear their children, and in terms of employment and self-confidence.

Regarding economic returns

Despite solid evidence for the economic returns of strong basic skills (Thorn, 2009; Green and Riddell, 2001), there is a lack of clear evidence on whether and how midlife interventions through adult literacy and numeracy provision can contribute to these returns (BIS, 2011). There is only limited evidence of the capacity of adult literacy and numeracy initiatives to produce meaningful gains in terms of productivity, employment, and earnings. In most studies, the follow-up intervals are too short to observe meaningful changes in terms of productivity, employment and earnings (Reder, 2012).

In workplace literacy and numeracy programmes

While the Kirkpatrick model, the most popular approach to evaluation of workplace literacy programmes, covers four levels of evaluation including learner reaction to the training programme, knowledge acquisition, job performance, and impact on the business productivity, programme evaluations have tended to focus on the first two levels, with only some reporting on Level 3 and very little on Level 4 (Dunberry and Péchard, 2007; Gray and Sutton, 2007; Pye and Hattam, 2008). Regarding Level 3 (job performance) evidence shows that the basic skills courses can have a positive impact on workplace practices (e.g. teamwork, communication, documentation), but causality is often uncertain (Gray, 2006). Challenges arise if course participants lack the opportunity to transfer their newly acquired basic skills to the workplace (Benseman, 2012). Evaluation at Level 4 (business productivity) is challenging because of the difficulty in isolating the effects of workplace basic skills training on company performance, let alone on national productivity (Benseman, 2012; CAEL 2006).

5.2. Motivations of low-skilled adults to engage in learning

Research distinguishes between intrinsic and extrinsic (de)motivators for adult learning

A Norwegian study found that, compared to more highly skilled learners, low-skilled learners are motivated to engage in learning more by *extrinsic motivators* than by *intrinsic motivators* (Dæhlen and Ure, 2009). *Extrinsic motivators* relate to rewards such as career progression, better pay, unemployment benefits or external pressure, and might change with circumstances (Dæhlen and Ure, 2009; Merrifield, 2012). The Learner Study[13] in the United Kingdom found that learners' motivation to learn diminished when their promotion goals or their job changed (Warner and Vorhaus, 2008). In evaluating a Norwegian survey of adults in formal continuing education, Dæhlen and Ure (2009) found that many low-skilled

12. The meta-study reviewed 29 effective programmes in family literacy, language and numeracy in the United Kingdom and elsewhere.

13. The Learner Study by the National Research and Development Centre for adult literacy and numeracy took place between 2003 and 2006 with the objective to provide evidence for government to take the *Skills for Life* strategy forward. The study followed a cohort of approximately 1 500 teachers and trainers for a minimum of three years, who were working on a nationally representative sample of programmes and provided evidence in the form of statistical data and qualitative insight into how the *Skills for Life* strategy had impacted on learners.

adults participated because they had been obliged to do so. This finding is in line with Illeris' (2003) assertion that these learners often not interested in further or continuing education. *Extrinsic "demotivators"* for learning include a lack of reward for learning, lack of support and encouragement for learning, and lack of opportunities in the labour market: for example, older workers are likely to see few career rewards for training (Merrifield, 2012). On the other hand, *intrinsic motivators* relate to learning itself: people may want to complete something left incomplete at school, develop themselves through learning and/or fulfil personal aspirations (Merrifield, 2012). For example, the workplace *Skills for Life* study in the United Kingdom found that employees were motivated by a range of factors including curiosity, wanting to make up for missed educational opportunities, self-improvement and helping children with homework (Evans, Waite, Admasachew, 2009). *Intrinsic "demotivators"* relate to cultural, attitudinal and dispositional barriers that may discourage people from participating in adult learning (Keep, 2009). A Canadian study observed, for instance, that unskilled workers often saw formal learning and credentials as having only minor intrinsic value (Canadian Labour and Business Centre, 2005).

Research suggests five types of motivation to learn

According to a literature review by the British Department for Business Innovation and Skills (BIS, 2011) learner motivations to engage in adult literacy and numeracy education can be categorised into the following five broad groups: *i)* motivation by requirement: it is required to get a qualification to fulfil work criteria or to retain benefits; *ii)* work-related motivations: as an aid to gaining (better) employment; *iii)* educational motivations: to make educational progress, ranging from wanting to correct an educational trajectory to wanting to help children with homework; *iv)* motivation related to personal goals: learning to improve literacy and numeracy skills and to gain self-confidence; *v)* motivation for wider personal development: such as becoming more independent, successful, healthier, and becoming a better parent and a more active member of society.

Gender, age, citizenship and employment status have an effect on learner motivation

The European Adult Education Survey (AES) shows that there are several factors that determine participation levels, in particular, educational attainment, employment status, occupation and age (European Commission/ECEA/Eurydice, 2015a). For example, in their study drawing on findings from a Norwegian survey of adults in formal continuing education,[14] Dæhlen and Ure (2009) found that courses at the lowest educational levels tend to recruit adults who are either unemployed or immigrants. Braathen et al. (2007) found that men tend to participate less frequently both in formal and non-formal learning. Immigrants and unemployed people may enter an educational programme to qualify for a job, while people who already have a job more often attend courses to improve their qualifications (Dæhlen and Ure, 2009).

Motivations are multiple and complex

Adults often have multiple motivations to participate in basic skills programmes. For example, according to an analysis of adult literacy education in Canada, the United Kingdom and the United States (Sticht, 2001), the main reasons of adults to participate in basic skills improvement programmes were emotional (to feel better about themselves), practical (to be better at everyday tasks involving basic skills), to improve IT skills, to obtain a qualification, and because the course was near home. In a three-year project on the impact of policy on learning and inclusion in the skills sector,[15] Finlay *at al*. (2007) and

14. Of 753 respondents, 88 attended primary or lower secondary programmes. The remaining participants were in upper secondary, post-secondary/tertiary vocational education, or in Bachelor's or Master's degrees (Dæhlen and Ure, 2009).

15. The three-year project was part of the Teacher and Learning Research Programme (TLRP), the United Kingdom's largest ever educational research programme. TLRP coordinated 700 researchers in over 100

Wolf et al. (2009) found that learners in workplace learning expected primarily to learn new skills and to become more effective in their current job rather than to increase the chance of promotion and higher earnings.[16] Others participated because they wanted to help their children with schoolwork and/or to develop ICT skills (Finlay et al., 2007). Siebert (2003) found that most often those course participants who have two or more reasons to participate are less likely to drop out than those with just one motive.

Potential learners rarely articulate an explicit desire to acquire basic skills

An empirical study by CEDEFOP (2013b) on key competences in work-based learning shows that people rarely refer to the lack of basic skills, but express these areas in very different terms, which are likely to determine their motivation to participate in education and training: respondents often emphasised their lack of formal qualifications, especially basic school certificates or vocational qualifications, or lack of work experience, or lack of skills for specific jobs. Where they did talk about some more specific deficiencies, they tended to mention self-confidence, and the lack of 'job-seeking' skills needed to find work including CV writing, job applications and interview skills" (Ibid).

Motivations are not fixed but can change

Learners' priorities may shift over the course of a learning programme. Life-course changes may increase motivation to learn, or create new barriers: they may expose skills limitations, disrupt coping patterns or open new possibilities. Life-course changes may set in motion a "spiral of change" (Fingeret and Drennon, 1997, p. 67). For example, the Oregon Longitudinal Study of Adult Learning (LSAL) found that starting a job after being unemployed or having a child both had a positive effect on reading practices (Reder, 2012). Moreover, Siebert (2003) highlights that teachers can help to increase the learners' motivation.

It is not clear how a qualification goal affects motivation

There is some dispute in the literature about the importance of qualifications to motivate adult basic skills learning. Although the core of Indiana's 21st Century Workforce Skills Initiative was a certification system to certify proficiency levels in reading, mathematics, critical thinking, problem solving, and computer literacy, the opportunity to earn such a skill certificate was not a strong participation motivator. However, the option to earn college credits did motivate the learners in Indiana (Hollenbeck and Timmeney, 2009). In the United Kingdom, the NRDC's Effective Practice Study in Numeracy found that many interviewees needed a maths qualification for promotion or as an entrance requirement for a higher-level course (Coben et al., 2007). On the other hand, upon inquiry into adult numeracy learning, the British National Institute for Adult Continuing Education (NIACE) concluded that qualifications have value only to some numeracy learners; to others qualifications can discourage learning (NIACE, 2011b).

A broad view of both learner motivation and outcomes is needed

For instance in the United Kingdom, Hodgson et al. (2007) argue that the New Labour government policy focused too heavily on the economic benefits of learning and ignored the wider benefits, such as increased confidence and independence and better parenting skills, because these wider benefits cannot easily be measured and used to justify public spending (Hodgson et al., 2007). Hodgson et al. warn that this discrepancy between policy focus on quantifiable outcomes (such as qualification attainment) and

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investments with funding of GBP 43 million by the Economic and Social Research Council. The first projects began in 2000 and work on technology enhanced learning ended in 2012.

16. Upon completion of the workplace training, two-thirds of the sample reported that their confidence at work had increased as a result of learning.

low-skilled adults' focus on softer outcomes as main motivation for participation risks leaving disadvantaged learners behind because they are less likely to achieve the qualifications linked to funding or performance targets.

5.3. Barriers to learning

Designing effective literacy and numeracy provision starts with understanding the barriers that impede adult students from meeting their educational goals

According to many researchers, if community colleges in the US are to improve retention of adults with low literacy and numeracy skills, they must focus on the many barriers to persistence that these adult students face (Bailey and Alfonso, 2005). Adult students often have a family to support, face financial and personal challenges, work in low-wage jobs with nonstandard working hours, lack supportive relationships, and have little career awareness and information on possible education programmes (McDonnell, Soricone, Sheen 2014).

There are various barriers to participation in adult education

Research has identified the five broad types of barriers to lifelong learning, which also apply to low-skilled adults (Desjardins and Rubenson 2009, 2013; Litster, 2007; NALA, 1998; OECD, 2005, 2011b) (see Table 5.1): *i)* Situational barriers: arising from one's situation, such as lack of time because of work and family, undependable transportation etc.; *ii)* Institutional barriers: such as lack of appropriate provision, participation fees, entrance requirements; *iii)* Dispositional/psychological barriers: such as negative attitudes to learning because of negative schooling experience; *iv)* Informational barriers: such lack of appropriate information on learning offers and benefits; *v)* Financial constraints. According to Thorn (2014), the OECD surveys of adult skills (PIAAC) generally show little unmet demand for training among low-skilled adults which means that lack of supply is seldom an obstacle to participation.

They are structural and personal participation barriers

Desjardins and Rubenson (2013) suggest to further divide the five above-mentioned types of participation barriers according to whether they are structural or personal/individual constraints (see Table 5.1). Information and financial constraints are both individual and structural. Information barriers are individual because of a person's insufficient knowledge about adult education offers, and they are structural because of limited data on the benefits of participation in adult education, and of a potential mismatch between individual needs and the existing provision of adult education. Financial barriers are individual to the extent that the individual has no financial resources and they are structural if credit institutions fail the individual's financial demands. Situational and institutional constraints are structural as they depend on structural relationships between the State, the family, and work. Dispositional barriers are individual because they relate to the individual's agency.

Table 5.1. Types of barriers to lifelong learning

Individual barriers	Structural barriers
Informational barriers	
Financial constraints	
Dispositional/psychological barriers	Situational barriers (e.g., family, job)
	Institutional barriers

Source: Desjardins, R. and K. Rubenson (2013), "Participation patterns in adult education: the role of institutions and public policy frameworks in resolving coordination problems", *European Journal of Education*, Vol. 48(2).

For adult education in general, dispositional and informational barriers are the greatest

Several studies on adult education in general indicate that the greatest deterrents to participation are dispositional barriers (such as not feeling the need for organised education, concerns about one's ability to succeed, belief that one is too old to study, negative learning experiences) and informational barriers (such as the belief that little is to be gained from participation) (CEDEFOP, 2003; European Commission/EACEA/Eurydice, 2015a; OECD 2011b; Rubenson, 2011a). For example, in the 2011 Adult Education Survey,[17] more than 80% of those surveyed across EU countries who did not participate in adult education during the 12 preceding months stated that they were not interested. In most countries (Ireland was the only exception), the lack of interest was more perceptible among adults with an educational attainment level below higher education (European Commission/ECEA/Eurydice, 2015a). This shows that especially among low skilled adults the lack of interest is a common reason for non-participation, possibly reflecting a lack of information and incentives (CEDEFOP, 2003; European Commission/ECEA/Eurydice, 2015a; Pont, 2004).

For those interested in participation, lack of time is the most prominent barrier

For those interested in adult education in general, the most common barriers to participation appear to be situational (such as time constraints due to family obligations), followed by institutional barriers (such as lack of appropriate classes and inflexible course schedule). An Australian study looking at how workers in low-paid occupations juggled work, home and learning (Pocock et al., 2011) found that the biggest challenges for participation were cost (where training had fees or required travel, books, etc.) and time (where training was not integrated into the working day). The 2003 CEDEFOP survey on lifelong learning also found that reasons for non-participation in adult education were most often time constraints, followed by financial constraints. Insufficient employer support and course availability were of lesser significance (CEDEFOP, 2003). The CEDEFOP data suggests that under-investment in adult learning is more due to demand-side reasons than to supply constraints (OECD, 2005). The recent PIAAC surveys confirm these earlier observations (Thorn, 2014).

17. The Adult Education Survey is a household survey which is part of the EU Statistics on lifelong learning. People living in private households are interviewed about their participation in education and training activities. The target population of the survey are persons aged 25 to 64. The survey takes place every five years (2007, 2011, 2016 planned) and the microdata can be used in research to study participation in lifelong learning (analyses using socio-demographic characteristics such as country of residence, individual and household characteristics, work context, etc.) (Eurostat, 2015).

Communities may provide support through peers or may discourage learning

Beyond the home and family, communities affect participation in learning in complex ways. Communities may provide support through peers and friends, or may discourage learning. Research shows how community values shape aspirations, career choices, and attitudes towards education and training (Keep, 2009). For example, in Osaka, Japan, adult literacy classes have helped increase the adult literacy rate among Buraku people, which in turn has empowered their movement against socio-economic discrimination (UNESCO, 2014i) (see Box 5.1). In China, the Community Learning Centres Programme in Gansu Province has helped to engender a culture of learning within the community and many parents are now more inclined to support the education of their children than before the beginning of the programme in 1998 (UNESCO, 2014h) (see Box 5.5). Research has found that perspectives on literacy are connected to culture. Many adults with literacy difficulties live in places which are homogeneous in terms of class or ethnicity and with a high proportion of adults with restricted literacies (Fingeret, 1982). Contrary to dominant beliefs that literacy learning is universally positive, in such contexts, "[t]he development of literacy skills may disrupt social relationships and risk losing one's place in the fabric of social life" (Fingeret, 1982, p. 2).

Box 5.1. Literacy and Language Classes in Community Centres in Osaka prefecture, Japan

The creation of literacy classes for the marginalised Buraku communities in Osaka prefecture, Japan, in the 1960s provides an example of the empowering effect of adult literacy education on socially disadvantaged groups. The Burakumin's former status as an outcast community under the ancient Japanese caste system had a lasting imprint on their social status leading to their socio-economic marginalisation and high illiteracy rates. Collaboration in Osaka between teachers, volunteers and learners created a network of organisations and individuals active in the field of adult literacy, leading to the 'Osaka Liaison Association' in 1989, the first of its kind in Japan. In 1993, the association convinced Osaka city to draw up the first guidelines for the promotion of literacy in public policy and has since repeatedly stressed the necessity for the Japanese government to implement policies regarding adult education. In 2002, upon the association's recommendation, Japan's first public centre of adult literacy and Japanese as a second language (CALL-JSL, Osaka) was created in Osaka, which now offers multiple services, promoting interaction between different literacy classes; giving information and advice to learners; developing teaching materials and literacy education programmes, and training staff for the programmes. The Buraku people movement against discrimination has been propelled by their increasing literacy rate; most literacy classes are now held in public facilities and have gained greater public and political recognition.

The literacy programmes target adults with low literacy and numeracy skills. The majority of the students are women and half of them are foreign nationals learning Japanese as a second language. Classes take place in evening high schools or community centres and are typically held in the evening once a week for two hours. They cover basic literacy and numeracy skills, other practical skills (such as knitting) and values of democratic citizenship. Literacy instructors can be teachers from primary and junior high schools but also volunteers, who are provided with lectures and workshops to acquire basic skills in literacy teaching. In the absence of a common curriculum in Japanese adult literacy education and no formal assessment or evaluation scheme, tutors are required to carefully assess learners' needs before and during teaching. An annual exchange meeting is held where around 700 literacy tutors share their teaching experience and self-made learning material.

As the programme is mainly volunteer-led, the programme's survival depends on support from local teachers, the recognition of local governments, and public funding. Despite continuing demand for learning opportunities and support from different minority groups, recent budget cuts have put many classes on the verge of closing down.

Source: UNESCO (2014i), "Literacy and Language Classes in Community Centres in Japan", www.unesco.org/uil/litbase/?menu=4&programme=131.

External incentives to attend education programmes do not seem to work

Literature on participation in adult basic education motivated by financial incentives or requirement for benefits claims shows that external incentives are often perceived as controlling, do not lead to full engagement, and can even provoke increased resistance to subsequent training (Frey and Jegen, 2001; O'Grady and Atkin, 2006). For example, in their qualitative study in England, O'Grady and Atkin (2006) found only passive participation by those who followed training as a requirement of their benefits claim, or because they were in prison. Many of those obliged to participate either disputed their need for training or could not see how the programme would improve their skills (see also Box 5.2 on the effects of financial incentives on class attendance).

Box 5.2. Effects of financial incentives on attendance in adult literacy classes

Brooks et al. (2008a) carried out a randomised control trial in England to evaluate the effect of financial incentives on attendance in adult literacy classes and literacy scores. They found that contrary to expectations, the incentives resulted in a decline in attendance in the incentive group compared with the no-incentive group, and it had no effect on attainment. The incentive, a total of GBP70 (10 classes at GBP5 plus the GBP20 for completing the pre- and post-tests), was paid in a lump sum based on the tutor's attendance register after a post-test. Although the effect on attendance observed in this study seems counter-intuitive, previous empirical and theoretical work has investigated this phenomenon, known variously as *'over-justification hypothesis'* (Lepper et al., 1973), *'corruption effect'* (Deci, 1975), *'the hidden cost of reward'* (Lepper & Greene, 1978), and *'cognitive evaluation theory'* (Deci et al., 1999; Frey and Jegen, 2001). Frey and Jegen (2001, p. 594), drawing on economic theory and in reviewing the literature, call it the 'crowding-out effect' and conclude that "external interventions *crowd out* intrinsic motivation if they are perceived as *controlling".* In that case, both self-determination and self-esteem suffer, and the individuals react by reducing their intrinsic motivation in the activity controlled. According to Brooks et al. (2008a), this would seem a plausible explanation for the effect found in their study. The researchers call, however, for caution arguing for a replication of the trial, ideally with a larger incentive, before their reasoning could be widely used by policy makers.

Source: Brooks, G., M. Burton, P. Cole, J. Miles, C. Torgerson and D. Torgerson (2008a), "Randomised control trial of incentives to improve attendance at adult literacy classes", *Oxford Review of Education*, Vol. 34(5): pp. 493-504; Deci, E. L. (1975), *Intrinsic motivation,* Plenum Press, New York; Deci, E. L., R. Koestner and R. M. Ryan (1999), A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation, *Psychological Bulletin,* Vol. 125, pp. 627–668; Frey, B. S. and R. Jegen (2001), "Motivation crowding theory", *Journal of Economic Effects*, Vol. 15(5), pp. 589–611; Lepper, M. P. and D. Greene (eds.) (1978), *The hidden cost of reward: new perspectives on psychology of human motivation,* Erlbaum, Hillsdale; Lepper, M. P., D. Greene and R. E. Nisbett (1973), "Undermining children's intrinsic interest with extrinsic reward: a test of the 'overjustification' hypothesis", *Journal of Personality and Social Psychology,* Vol. 28, pp. 129–137.

There are various reasons for dropping out

Reasons reported for dropping out of adult education include family problems, the pace of instruction (either too fast or too slow), health issues, dislike of classwork, and inconvenient class location or schedule (Lesgold and Welch-Ross, 2012). A substantial body of evidence shows that the most often cited reasons for dropping out are situational and financial barriers, such as lack of childcare and money to cover the travel costs (Barton et al., 2006, Kambouri and Francis, 1994; Tomoana and Heinrich, 2004). Evidence from the United States shows that younger adult education students who have low reading scores when entering adult basic education and GED[18] programmes are more likely to drop out than older, higher skilled students (Dirkx and Jha, 1994; Flugman, Perin and Spiegal, 2003; Sabatini et al., 2011). Reluctant

18. The General Education Development Tests (GED) is a set of five tests that measure writing skills, social studies, science, interpretation of literature and the arts, and maths. It is the most common alternative way to earn a high school credential in the United States and Canada. To pass the test, an adult must achieve a minimum total score and a minimum score on each of the five subject tests (General Education Development Testing Service, 2014).

learners in a study of 37 adult learners from Pittsburgh, United States, that aimed at improving retention in adult basic education (ABE) were consistently younger than the persistent learners. The 17 reluctant learners reported to have quit the classes because of a perceived lack of attention from teachers and a lack of academic challenge. The author of the study concludes that teachers must be aware that students exhibiting a resistant attitude will need more attention and that the ABE curriculum needs to be academically challenging (Quigley, 1995).

5.4. Outreach strategies motivating adults to join literacy and numeracy programmes

Motivation needs to be developed, partly by building awareness

Research shows that those with weak basic skills (as objectively measured on standardised tests) are often unable or unwilling to recognise their own basic skills weaknesses and, therefore, see no need to improve them (Bynner and Parsons, 2006). For example, the British National Institute of Adult Continuing Education (NIACE) reports that the hardest group to reach are those at Entry Level,[19] "it is the hardest group to motivate, and they are the people who are most skilled at getting round the fact that they have poor literacy and numeracy. There is a really big challenge about that level" (NIACE quoted in House of Commons, 2014, pp. 9-10). Much investment from the United Kingdom's Department for Business, Innovation and Skills goes into people who have already relatively good literacy and numeracy levels and misses an important number of low-skilled people. As only a fraction of people with poor literacy and numeracy skills report that they have problems with reading, writing or calculating, there is a need to build awareness of the implications of weak basic skills both for the adults directly concerned, and their immediate contacts including employers, family and friends. This calls for an approach which goes beyond simply responding to expressed demand, but emphasizes the need to reach out to those who may have weak skills, to raise awareness of the issues and the scope for individuals to improve their skills, and to provide information and guidance about learning opportunities. This will require working through the bodies that have direct contact with the adults concerned, including employers and schools. Such activation of latent demand is challenging, but will be substantially assisted by greater public awareness and discussion. To this end, much can be gained by disseminating information and promoting public discussion, stimulating interest and building consensus about the need to invest in skills.

Targeted measures are needed to reach low-skilled adults

The Adult Education Survey by the European Commission found that in all European countries, people with a lower level of educational attainment are less likely to search for information about learning opportunities than people with higher education attainment (European Commission/ECEA/Eurydice, 2015a). For instance, in England, audio and written evidence from learners highlight the fact that not enough low-skilled adults know that there is free provision for English and maths training, up to and including GCSE level (House of Commons, 2014). Weak literacy and numeracy skills are associated with stigma and, compared to more highly skilled people, low-skilled people with low confidence in their ability to learn are less likely to take up training offers, but if they do, they progress as fast as more self-confident learners (Wolf et al., 2008). This illustrates how crucial outreach measures are that target those adults who would otherwise not engage in literacy and numeracy provision (see Box 5.3 on targeting in Turkey).

19. Entry Level is the lowest level in the National Qualifications Framework in England, Wales and Northern Ireland, followed by Level 1, which includes GCSE grades D-G. Qualifications at this level recognise basic skills and the ability to apply learning in everyday situations under direct supervision.

Box 5.3. Targeting Turkey's largest group of illiterates: women

While literacy rates in Turkey are 91% and 98% for female and male adults respectively, there are still those on the fringes of society. According to UNESCO, in Turkey 3.8 million adults older than 15 have no elementary school education, of whom 70% are women. Overall about three million adults, again mostly women, cannot read or write. Against this background, the Functional Adult Literacy Programme (FALP) (1995-ongoing) was created by the Turkish non-governmental Mother & Child Education Foundation (AÇEV) as an alternative to official adult literacy courses offered by the Directorate of Lifelong Learning of the Ministry of National Education (MoNE) to target Turkey's largest group of non-literates: girls and women. The FALP programme aims to develop dimensions of literacy (word recognition, listening and reading comprehension, writing), arithmetic skills, cognitive skills (critical thinking), and functional skills (performing everyday tasks) of women older than 15 with limited literacy skills (Lesgold and Welch-Ross 2012; UNESCO, 2014a). The programme also includes a unique Women's Support Component of 25 topics which encourage women to engage in discussions on issues such as family in order to increase awareness for human rights and to promote the confidence and empowerment of women in society. Raising awareness on literacy and mobilising support is a significant part of FALP activities. Posters, brochures, radio and TV have been used to recruit beneficiaries, volunteer instructors, and galvanise communities to support literacy programmes. Moreover, community briefings and information sessions are held periodically to promote awareness for the programme among local stakeholders and leaders (UNESCO 2014a) (see also the Annex for more details on the FALP programme).

Source: Lesgold, A. and M. Welch-Ross (eds.) (2012), *Improving adult literacy instruction: Options for practice and research*, Washington DC, National Academies Press, www.nap.edu/catalog.php?record_id=13242; UNESCO (2014a), *Functional Adult Literacy and Women's Support Programme. Country Profile: Turkey*, UNESCO Institute for Lifelong Learning, www.unesco.org/uil/litbase/?menu=4&programme=141. For more examples on effective literacy practice described by the UNESCO Institute for Lifelong Learning see also www.unesco.org/uil/litbase/?menu=4.

Countries try to raise awareness about weak literacy and numeracy skills

Direct awareness-raising initiatives range from campaigns promoting all types of adult learning (such as adult education weeks in Denmark and Finland) to those aimed more directly at the low-skilled and/or low-qualified adults (European Commission/ECEA/Eurydice, 2015a). Many countries have engaged in campaigns to specifically raise awareness of weak literacy and numeracy skills and training offers and free advice over the phone (UNESCO, 2012). For example, Luxembourg conducted a national campaign focusing on literacy, numeracy and ICT that included the distribution of postcards, the introduction of a free number to call to get advice and information about course offers and the launch of a website (European Commission/ECEA/Eurydice, 2015a). In France, the Prime Minister declared the fight against illiteracy a national priority (*Grande cause nationale*) in 2013. Activities during that year included a media campaign (radio, press, TV) to raise awareness and mobilise different stakeholders and were repeated in September 2014 during a one-week information campaign by the French National Agency for the Fight against Illiteracy (*Agence nationale de lutte contre l'illettrisme*) (Ibid). In India, there has been a nation-wide drive to publicise the centrally sponsored nation-wide literacy scheme Saakshar Bharat by means of radio and TV, most notably in a recent promotional video which features national celebrities performing a Bollywood-style song about the programme (www.youtube.com/watch?v=k7AOXQY9iLM) (UNESCO, 2014k; see also see the Annex for more details on the programme). In Korea, the *"National Basic Adult Literacy Education Association"* was formed in 1999 by more than 30 organisations working in adult literacy education to work in partnership with one another to develop adult literacy education and promote awareness for it in the Korean society (UNESCO, 2014l). In Germany, as part of the funding priority 2007-2012 on research and development for the promotion of adult literacy and numeracy, Germany's Federal Ministry of Education and Research (BMBF, 2011) published a factsheet with pointers and recommendations on how to recognise and address adults with low basic skills based on recent research findings (see Box 5.4).

Box 5.4. Recognising and talking to adults with low basic skills

This factsheet on how to recognise and address adults with low basic skills is based on German research findings and was developed for teachers and colleagues of adults with low literacy and numeracy skills.

Hints in the curriculum vitae

- No or a poor school leaving certificate.
- Frequent changes of school.
- Breaks in personal or professional biography are unexplainable.

Typical behaviour

- Frequent excuses when required to read or fill in forms (e.g. "I injured my hand/forgot my reading glasses").
- Further education offers are declined.
- Clumsy handwriting, immediate signing of papers without reading them first.
- Forgetting appointments.
- Not reacting to written communication (e.g. circulars, flyers).
- Insufficient text comprehension.

Further characteristics

- Only the proper name can be written.
- Certain letters and words can be recognised and written.
- Short sentences but not whole texts can be read and written.

When addressing adults with low literacy and numeracy skills

- Sympathy: The reasons for (functional) illiteracy are often not the individual him/herself but the social and cultural environment.
- Empathy: A chat in private may be necessary as most adults are ashamed of their literacy and numeracy difficulties.
- Openness: The situation and possible solutions should be discussed with an open mind.
- Patience: Many people are not used to being asked about their (learning) goals and might need time to formulate them clearly.
- Differentiated approach: Each case is unique. An approach that considers the individual's learning and life story is a prerequisite for any successful intervention.

Source: BMBF (German Federal Ministry of Education and Research) (2011), "Alphabetisierung und Grundbildung in Deutschland: Beschäftigte fördern", Alphabund, Bonn, http://grundbildung.trier.de/File/Alpha-Sheet-Beschaeftigte-bf-pdf/.

Measuring the effectiveness of awareness-raising and outreach activities is difficult

According to Eurydice[20] data, most European countries state that they do not evaluate the impact of awareness-raising and outreach activities on the participation of specific groups. Among countries that do report having carried out impact evaluations, Portugal states that despite the campaigns that accompanied the New Opportunities Initiative (*Iniciativa Novas Oportunidades*),[21] the most vulnerable groups, such as

20. The Eurydice network by the European Commission provides those responsible for education systems and policies in Europe with analyses and information in the form of detailed descriptions and overviews of national educational systems, comparative thematic reports, and a series of facts and figures related to education in order to assist in their decision making.

21. Launched in December 2005 and implemented from 2006 to 2010, the New Opportunities Initiative includes the recognition, validation and certification of competencies and the provision of adult education and training courses. Between 2007 and June 2009, while the number of employed adults enrolled in New Opportunities Centres was twice (457 000) that of the unemployed (218 000), the participation by unemployed adults was nonetheless considerable (Broek, Buiskool and Hake, 2010).

those without qualifications and older workers, did not fully benefit from the opportunities offered by the scheme (European Commission/ECEA/Eurydice, 2015a).

Three successful marketing methods to motivate participation

Powell, Smith and Reakes (2004) found documented success for three marketing methods for literacy and numeracy provision:

- *Word of mouth* with instructors and former participants spreading the news of adult basic education offers (e.g. Benseman, 2012, UNESCO, 2014h, 2014k).

- *The media*: Evidence from Australia, Canada, England, Finland, India, New Zealand, Scotland, Sweden, and the United States suggests that media campaigns are particularly important for attracting more disadvantaged participants, with television proving more successful in reaching people with low skills than print media (NALA, 2011; UNESCO, 2014k).

- *Community outreach programmes* that provide information for prospective learners in the community (e.g. UNESCO, 2014h).

Using successful learners can help increase demand for provision

Evidence from New Zealand and the United Kingdom suggests that a particularly effective approach to increasing the demand for provision is the use of successful learners in the promotion, recruitment, and support of new learners (Benseman, 2012; NAO, 2004). Benseman (2012)[22] observed in New Zealand that once a company had run a course for the first time, graduates were deliberately used as recruiters for successive courses. In the companies, there was not only widespread understanding of what the courses were about, but also a realisation that attending the courses did not have the negative stigma that some managers had thought it might involve. The courses simply became part of the company's training programmes – in some cases, for example, they were showcased through company graduation ceremonies for the participants. A report about the impact of the British Train to Gain[23] initiative (Ofsted, 2008) equally highlights that employees, who successfully participated in training, can play an important role in motivating colleagues to take up learning opportunities.

Employers can encourage their employees to take up basic skills education

Promoting a learning culture in the workplace seems to influence both employer and employee decisions to invest in skills development (UKCES, 2009b). The evaluation of the Learning Representatives

22. The data derived from evaluations of 18 literacy and numeracy courses set up on-site in 15 companies around New Zealand under the 2006-2009 Upskilling Partnership Programme of the Department of Labour. The programme aimed to answer two broad questions: What impact do LLN workplace programmes achieve for the learners and the companies they work for? and What is the most effective way to organise and run workplace LLN programmes? The programmes were diverse in terms of the industries involved, company size, geographical location, programme formats, duration, and types of learners. The companies and programme providers running these courses agreed to be part of a comprehensive evaluation programme (Ministry of Business, Innovation and Employment, 2014). 491 course participants were interviewed and assessed pre-course and 343 (70%) of these participants were also interviewed and assessed post-course (Benseman, 2012). The total numbers involved and low attrition rates in this study are notable compared with international studies (Gray, 2006).

23. Train to Gain was a UK government funded initiative (2006-2011) to deliver vocational training and literacy and numeracy education to employed individuals (older than 25 years and without a Level 2 qualification) via the Skills Funding Agency.

Programme delivered by the New Zealand Council of Trade Unions (NZCTU) highlights the importance of managers and employers in motivating their low-skilled employees to take up basic skills education (Heathrose Research, 2011). Similarly, in his analysis of 18 literacy and numeracy courses in 15 companies in New Zealand, Benseman (2012) found that the best results of publicising and recruiting were achieved when managers, supervisors or key people in the office proactively shoulder-tapped potential participants. However, Benseman also observed problems regarding publicity and recruitment, such as that workers were given inadequate notice of the course, received poor explanation of what the course involved (especially its basic skills component), and that managers over-promised of what could be offered to individual participants (Benseman, 2012).

Employer partnerships with unions are important drivers of workplace basic education programmes

A report surveying a range of effective workplace literacy programmes in the United States identified "strong connections to organized labour" as an important element promoting success (Parker, 2007, pp. 4-6). Unions can act as advocates or champions to promote training programmes within enterprises and sectors. Unions can also support both employers and workers with funds and negotiate collective agreements that make provisions for training (Bélanger and Robitaille, 2008; Folinsbee, 2007; Gray, 2006). The Canadian Union of Public Employees, the country's largest union, has played an important role in promoting and supporting workplace education for the less-skilled in the public sector. Similarly, the New York State and Civil Service Employees Association (CSEA) Partnership for Education and Training, a collaboration between labour and management, provides programmes and services to 77 000 CSEA-member employees in over 1 000 agency facilities and worksites (Salomon 2009). In the United Kingdom, union involvement in basic skills training was institutionalised through the *Skills for Life* Strategy and Union Learning Representatives and Unionlearn (set up in 2006) work to "promote lifelong learning, increase workers' life chances and strengthen their voice at the workplace through high quality union learning" (Merrifield 2007, p. 21).

Hard-to-reach groups are more easily reached in the community context

Some evidence shows that hard-to-reach groups can be engaged through providers working in the community (Hamilton and Wilson, 2005). In reviewing evidence from the British Basic Skills Agency, McIntosh (2004) found that one of the most effective methods of convincing learners to join basic skills courses is through a one-on-one approach. Moreover, offering basic skills courses in accessible locations, such as community centres or the workplace, also helps recruit learners (see also section 8.2 on literacy and numeracy provision in the workplace). In her findings from the United States, Strawn (2005) argues that when people live in communities where education is seen as a means of advancement they are more likely to participate in formal learning themselves (see also Box 5.5 on integrated basic skills learning in a community in Gansu province, China).

Box 5.5. Community Learning Centres Programme in Gansu province, China

The Gansu Provincial Institute of Educational Sciences (SCPIES) initiated the Community Learning Centres (CLCs) programmes in 1998 as an extensive, integrated and community-based literacy and life skills training programme of non-formal education which primarily targets illiterate and semi-literate out-of-school youths and adults (aged 15 to 45) living in the socio-economically underdeveloped counties of Gansu province, China. Since its inception, the programme has helped improve agricultural productivity and social empowerment through the creation of a more literate environment in Shibaxian Village. Since 1998, the illiteracy rate in Shibaxian Village has dropped from 23% to 3%. Most programme graduates are now able to read and write about 2 000 basic Chinese characters and the programme has engendered a culture of learning within the community so that many parents are now more inclined to support the education of their children.

The programme integrates basic literacy teaching into training of life skills, such as farming techniques, animal husbandry, honey production, gender and health awareness, and environmental management. The integrated curriculum aims to boost programme attendance and to cater to the participants' diverse learning needs. In order to ensure a sustainable implementation of the programme, the Shibaxian Rural Community Centre was built as the site of programme activities; learners have been mobilised through community-based sensitisation programmes; and functional relations with donor agents, local schools and specialised institutes have been established. The specialised institutions not only provide SCPIES with technical advice for the curriculum design but also second their professionals to teach CLC programme participants. Given that most of the teachers are not trained in non-formal education and lack practical experience, SCPIES trains them in non-formal educational practices. Once trained, accredited professionals can teach both literacy and livelihood and are paid a daily stipend of about Yuan 1 500. SCPIES both encourages the use of material provided by its institutional partners and has itself developed a variety of teaching and learning material.

Despite its success, the programme faces practical challenges. Community members find it often difficult to balance class participation with daily family and livelihood activities, leading to irregular course participation and drop-out. Moreover, the programme lacks adequate funding since it has only one funding partner (Oxfam, Hong Kong) and financial constraints have forced the programme to maintain a low intake rate and to reduce the number of centre-based activities.

Source: UNESCO (2014h), "Community Learning Centres (CLC) Programme in China", www.unesco.org/uil/litbase/?menu=9&programme=113.

Informal venues and group settings can motivate learning

Too frequently, formal adult basic education programmes that are delivered in formal settings do not reach the low-skilled (Pont, 2004). For example, two studies, one aimed at reforming adult literacy education in the United Kingdom, the United States and Canada (Sticht, 2001) and the second one a NIACE/National Youth Agency investigation of the low take-up rate of basic skills provision among young adults in England and Wales (Merton, 2001) found that potential learners preferred more informal learning venues, such as community centres, parish buildings, homes for elderly, and private homes, over school settings. Also, Kastner (n.d.) found in Austria that multipurpose buildings can help lower the threshold for course participation. Adults may have attended, for instance, a presentation about a travel adventure in the same building and, for that reason, feel more comfortable attending an adult basic education course there. For instance, in Osaka prefecture, Japan, literacy classes are often offered in community centres and typically in the evening (UNESCO, 2014i; see Box 5.1).

Few European countries have guidance services specifically targeted at low-skilled adults

Useful information and guidance can support motivation. But in most European countries, the provision of publicly subsidised guidance services for adults outside public employment services (which are often restricted to unemployed jobseekers) is limited (Eurydice data collection cited in European Commission/EACEA/Eurydice, 2015a). Only a few countries have a structural guidance service that is

specifically geared towards adults with low literacy and numeracy skills, such as Austria's central level institution that delivers guidance services related to basic skills and literacy (*Zentrale Beratungsstelle für Basisbildung und Alphabetisierung*) and Germany's telephone guidance service for those facing literacy problems. Other countries have created guidance services open to all, such as Luxembourg's guidance centre (*Maison de l'orientation*), or Portugal's network of Qualification and Vocational Training Centres (*Centros para a Qualificação e o EnsinoProfissional),* or the ICT tools by the British National Careers Service (European Commission/EACEA/Eurydice, 2015a).

Sensitive screening and initial assessment is crucial so as not to demoralise potential learners

According to the *Skills for Life* Strategy Unit, sensitive screening and initial assessment is crucial because otherwise, potential learners can become demoralised and give up at these first hurdles of their learning progress (Department for Education and Skills, 2005). In this context in 2005, the *Skills for Life* Strategy Unit developed a guidebook that is based on best practice in screening and initial assessment. Screening and initial assessment assess whether an individual has a need for literacy, language or numeracy training and help to place learners in appropriate learning programmes. In best practice, they include the following three elements: *i)* an initial informal one-to-one interview to put learners at their ease and to gather background information about them; *ii)* provision of information about the range of possible programmes; and *iii)* a detailed diagnostic assessment comprising a short series of tasks to establish literacy, language or numeracy needs (Department for Education and Skills, 2005)[24] (see Box 5.6 for an example of screening and initial assessment in a family literacy programme) (see also the Annex on guidance and mentoring for vulnerable adults in Ireland).

Box 5.6. Screening and initial assessment in a family literacy programme

Parents and children of rural communities in England are recruited to family literacy, language and numeracy (FLLN) courses by FLLN co-ordinators, working in conjunction with teachers in schools and kindergardens and with the Schools' Advisory Service. All FLLN courses are introduced at parents' meetings which are usually arranged by the school. During these meetings, senior members of the family learning team present the course content and explain why it will start with an initial assessment. At the close of the meetings, parents are offered the opportunity to sign up for the course. In FLLN courses, it is always difficult to get parents to see themselves as learners – helping their children is their prime motivation. In the first session, as part of the diagnostic assessment, all learners complete a piece of free writing, usually about their children, to allow learners to think about what their children can do and the point they are at when they start the course. At the end of the course this piece of writing is given back to the parents so that they can see the advances their children have made and the improvements in their own written work. In the following sessions, the teacher (a subject specialist) interviews the parents, undertakes an initial assessment using an assessment tool specifically designed for FLLN programmes, and assesses their learning style. It is the combination of these four elements – free writing, family-themed initial assessment, interview and learning style assessment – that forms the basis of a full diagnostic assessment and subsequent compilation of the learner's individual learning plan.

Source: 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, London, Department for Education and Skills, *Skills for Life* Strategy Unit.

24. A number of assessment tools were produced as part of the Assessment Tools Project for the *Skills for Life* initiative. See for a list of tools, including those for screening Learning and Skills Improvement Service (LSIS) (2014), "Resources to download", http://archive.excellencegateway.org.uk/page.aspx?o=skillsforliferesources

Basic skills teaching can be integrated into other types of education provision

Integrating basic skills provision into other learning activities (see Section 7.4 on contextualised and embedded learning and Chapter 8 on making the most of learning contexts) can make courses more attractive. 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, relevant to managing finances, and when it is work-related learning. Examples of contextualised approaches include the Community Learner Centres Programme in Gansu province, China, contextualising basic literacy teaching with the acquisition of livelihood or in-come generating skills training such as farming techniques and honey production (UNESCO, 2014h; see Box 5.5). In Norway's Basic Skills programme, Sørlie (2010) found that the name of courses, such as reading and writing, can put people off and that classes are sometimes better promoted under another name, such as "communication skills".

Targeted funding can encourage participation

All European countries provide public subsidies to support adults who wish to return to formal or non-formal education and training, but only four European countries or regions (Flemish Community of Belgium, Denmark, Spain and Sweden) report the existence of financial schemes at national or central level which specifically aim at supporting low-qualified adults' engagement in education (European Commission/EACEA/Eurydice, 2015a). Findings from Denmark and Sweden suggest that the funding targeted at those who need it most may partly explain the comparatively high participation in adult education by unemployed individuals, immigrants, older adults, less educated workers, and low-skilled adults (Desjardins and Rubenson, 2009). For example in Sweden, there is a long-established grant and loan system for any adult who intends to return to the education system. While this scheme is universal, there is preferential treatment for learners studying up to upper secondary level enabling them to receive a share of 73% of the total support whereas for the other learners the share maximum is 31% (Ibid) (see also Box 5.7 on incentivising the unemployed to join the Swedish Adult Education Initiative; see also the Annex on Australia's mandatory Literacy and Numeracy Training programme for Jobseekers).

Box 5.7. Incentivising the unemployed to join the Swedish Adult Education Initiative

The Swedish Adult Education Initiative was implemented in all municipalities in 1997 and ran until 2002 when it became the basis for a municipal adult education and training reform. The programme focused on providing general basic skills, such as Swedish, English and mathematics, at upper secondary level. More than 10% of the overall labour force participated in this programme between 1997 and 2000. Participation in courses provided by the initiative was free of charge. Unemployed participants received supplementary "special education support", equivalent to unemployment insurance payments, for a maximum of one year. Some studies found that young men participating in this initiative had better chances of returning to the labour market compared to those who did not take part in the programme.

Source: Albrecht, J., G. van den Berg and S. Vroman (2004), "The Knowledge Lift: The Swedish Adult Education Program that Aimed to Eliminate Low Worker Skill Level", *Working Paper 2004:17*, The Institute for Labour Market Policy Evaluation (IFAU). www.ifau.se/Upload/pdf/se/2004/wp04-17.pdf; Ericson, T. (2005), "Trends in the Pattern of Lifelong Learning in Sweden: Towards a Decentralized Economy", Goteborg University, https://gupea.ub.gu.se/bitstream/2077/2735/1/gunwpe0188.pdf.

6. DELIVERING AND SUSTAINING BASIC SKILLS PROGRAMMES FOR ADULTS

This chapter looks at how basic skills programmes for adults are delivered and sustained. Section 6.1 briefly reviews literature on learning in adulthood. Section 6.2 looks at factors that contribute to learner persistence and Section 6.3 describes challenges of literacy and numeracy teaching.

6.1. Learning in adulthood

Adult learning is both deceptively simple and enormously complex

Adult learning is simple in the sense that learning "is of the essence of everyday living […], it is the process of transforming experience into knowledge, skills, attitudes, values, and beliefs" (Jarvis, 1992, p. 11). Adults learn in various contexts, such as school, family, work, the local community, and with particular tools (including ICT) (Merriam, 2011). Yet at the same time, adult learning is also complex. A substantial body of research on adult learning reflects a growing understanding of its complexity, but it is unlikely that there will ever be a single theory that encompasses all that is known about how adults learn, why adults learn, or how best to facilitate their learning process (Merriam, 2011).

Adult learning can be seen as a continuum ranging from teacher-directed to student-directed learning

Adult learners are very diverse. Some are highly dependent on teachers for structure and guidance, while others prefer to manage their own learning (Knowles, 1980). Some may be motivated to learn because of some specific objective like helping their children with homework, others may want to learn out of curiosity (Merriam, 2011). Very often, adults prefer to learn what is meaningful to them (Illeris, 2011). For example, if low-skilled adults are obliged to take up basic education in order to receive unemployment benefits and do not see the benefit of such programmes, they typically only learn the programme content partially and what is learned is easily forgotten (Illeris, 2011). These insights on how adults learn have consequences for the programme design and teaching methods that are most suitable for adult literacy and numeracy teaching (see Chapter 7 on using the best teaching techniques).

Literacy and numeracy skills change throughout life

Skills acquisition, retention and loss follow a typical life course trend (Reder and Bynner, 2009). Numeracy and literacy skills commonly increase in early adulthood, then plateau before declining again later in life (Rashid and Brooks, 2010; Reder 2009). According to Bynner and Parsons (2000), the maxim 'use it or lose it' seems to apply to literacy and especially to numeracy skills. Skills are better sustained if used at work. Although certain occupations and workplace training can help adults retain and develop these skills, those starting working life with low basic skills are least likely to find jobs that stimulate their literacy and numeracy competencies. Compared to those in employment, the unemployed or those inactive in the labour market are more likely to lose their skills, in particular their numeracy skills. The decline in numeracy skills for unemployed men seems to be greater than among unemployed women, perhaps because women are more likely to use basic maths on a daily basis (Ibid). Research therefore suggests keeping people active, in the sense of enabling them to use their basic skills on a daily basis.

Evidence also shows that skills loss is especially strong for those who left school with poor numeracy and literacy skills (Bynner and Parsons, 2000). By reaching a certain threshold level of literacy or numeracy skills, an individual becomes less vulnerable to skills loss when those skills are used less (for example during a period of unemployment). So attaining that threshold in initial education or later on is vital.

6.2. Factors contributing to learner persistence

Supporting learner persistence means assisting learning during and beyond formal education

Persistence is a learner-centred concept focusing on how and through what mechanisms learners are supported throughout their learning trajectory (Carpentieri, 2008). Adult basic skills learning extends beyond participation in a specific programme because adults' job- and/or family-related responsibilities compete for their time and energy. The research review by Vorhaus et al. (2011) found that breaking off from programmes is not always a programme failure but may be a more "rational and positive response to changing circumstances". What matters is that those low-skilled adults not attending basic skills programmes are supported by distance and blended learning, so that they do not find the door to learning closed on them. Supporting learner persistence means therefore encouraging and assisting adult learners to continue their learning both in formal education and in self-study (BIS, 2011). In the Longitudinal Study of Adult Learning (LSAL) in the United States, about half of the 1 000 high school dropouts participated in a basic skills programme during the nine-year study, with a significant fraction "stepping out" and restarting later. Over half of those in the study's target population who had never attended a class had self-studied to improve their basic skills (Reder, 2012).

It is important to recognise the diversity of participation patterns and soft learning outcomes

The MRDC/NCSALL persistence project on literacy programmes offered in libraries in the United States (Porter, Cuban and Comings, 2005)[25] identified the following five learning pathways of its programme participants: *i)* long-term learning pathway: extended period of self-study and class participation; *ii)* mandatory learning pathway: required attendance; *iii)* try-out learning pathway: short-term participation; *iv)* intermittent learning pathway: several breaks in participation; *v)* short-term learning pathway: brief participation to accomplish a specific goal. Porter, Cuban and Comings (2005) and Eldred et al. (2006) suggest that the challenge for education providers is to value the learning outcomes that are reasonable for each learning pathway. For instance, while someone who engages in a long-term learning pathway is very likely to improve literacy skills, a short-term participant might not achieve any measurable proficiency gains.

The time needed to achieve quantifiable proficiency gains remains contentious

Although most academic literature (e.g. Vorhaus et al., 2011; European Commission/EACEA/Eurydice, 2015a) suggests that substantial learning progression in basic skills requires at least 100 hours of tuition, the number of learning hours needed to achieve quantifiable proficiency gains in literacy and numeracy remains contentious because of the ways in which the

25. Between 2000 and 2003, MDRC/NCSALL carried out a multi-phase Literacy in Libraries Across America (LILAA) initiative designed to help library-based literacy programmes increase the persistence of adult learners. Participating libraries were granted resources to develop and implement persistence strategies that included improved instruction, more varied and more extensive social supports, and technology upgrades. The study followed a set of adult literacy students in five libraries to understand the factors that influenced their participation in formal programmes and their self-directed efforts to improve their basic skills or prepare for the GED (see footnote 19) tests. It revealed persistence levels and patterns and achievement trends.

researchers describe gain. While in the United States, 100 hours of teaching is associated with 'measurable gain', described as improving a level or gaining a GED,[26] studies in New Zealand and the United Kingdom found that significant gain was made in 35–39 hours. Short courses are generally considered appropriate for those who require to 'brush-up' on their basic skills (Alkema and Rean, 2014) (see Box 6.1 on the duration of basic skills programmes in European countries). Evaluating the effectiveness of basic skills programmes is challenging and needs to be conducted over an extended period of time, taking into consideration that learners facing difficulties with basic skills do not necessarily follow a direct or uninterrupted learning path (European Commission/EACEA/Eurydice, 2015a).

Box 6.1. The duration of basic skills programmes in European countries

As with content and standards, the duration of basic skills programmes varies across countries. In some countries (e.g. Austria, Germany and the Netherlands), providers have a lot of autonomy in designing the courses, including determining their duration. In other countries, there are standards referring to the course duration. In most European countries, basic skills programmes usually include between 100 and 300 teaching periods. For example, the programme Key Competences in France comprises around 100 teaching periods and takes around six months to complete. In Luxembourg, courses within Adult Basic Education generally take one year to complete and include between 150 and 300 hours, depending on learners' needs. In Norway, the standard courses in 'basic competence in working life' include 130 lessons and this standard model was chosen by 75% of applicants in 2013 (European Commission/EACEA/Eurydice, 2015a).

Since some countries divide their basic skills programmes into modules or smaller units, a single module may be rather short while the overall length of the programme may be more substantial. For example, Portugal reports that the provision known as 'basic skills training' consists of at least three modules, each lasting 50 hours. As there are six modules in total, the overall duration is between 150 and 300 hours, depending on the number of modules the learner takes. In Denmark 'preparatory adult education' has several 'steps' lasting between 30 and 60 hours, each ending with a test (e.g. reading has four steps of 30-60 hours and mathematics has two steps of 30-60 hours). The overall programme lasts between 120 and 240 hours (Ibid).

Source: 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.

Some researchers suggest a new measure of gains through literacy and numeracy learning

Since research indicates that the recognition of learners' progression supports persistence (e.g. Vorhaus et al., 2011), some researchers suggest that a new measure of gains through literacy and numeracy programmes is needed because some progress learners make, such as improvements in confidence, teamwork, employee initiative and problem solving, cannot be captured by a purely quantitative comparison of basic skills proficiency prior and after the course (Alkema and Rean, 2014; Lesgold and Welch-Ross, 2012). For example, according to Lesgold and Welch-Ross (2012), there are major problems in using grade equivalents to denote adult literacy levels or gains in literacy learning. Grade equivalent scores do neither represent an absolute standard nor do they represent equal units at different levels of development.[27] The researchers therefore suggest as a priority for research to develop more valid ways of measuring adults' literacy gains. For instance, assessment instruments that are calibrated to everyday literacy demands may be better indicators of adult literacy progress than grade equivalents. One existing example of this approach from the United States is the Degrees of Reading Power (DRP) measure. It is a criterion-referenced assessment for grades 1-12 designed to measure reading

26. See footnote 18.

27. The misconceptions about what grade equivalent scores mean have been widely noted (e.g. Airasian, 1994; American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 1985; Miller, Linn and Gronlund, 2009).

facility needed for valued everyday activities (a specific level on the DRP implies the ability to read a job application, another level implies the ability to read a driving license test, etc.) (Lesgold and Welch-Ross, 2012).

Helping to overcome barriers to participation can pay off

With respect to factors that could help reduce barriers to participation in adult education in general, a 2003 CEDEFOP survey (CEDEFOP, 2003) on lifelong learning found as the most common responses: the possibility of flexible working hours, the existence of individualised study programmes, personal choice of study methods, and access to good information and advice. Evidence shows that assistance with childcare, transport, access to social services and reducing the risk of wage loss and unemployment during course participation can make a difference to learner persistence (Benseman, Sutton and Lander, 2005) (see Box 6.2). For instance in the United States, about one-third of adult education programmes report that they provide non-instructional support services, such as transportation, child care, psychological counselling, in an attempt to ease some of the barriers that adults experience, paid for with in-kind services contributed by the community (Tamassia et al., 2007). These findings indicate that to increase participation and persistence, adult learning programmes need to made consistent with other demands on the lives of adults (OECD, 2005).

Box 6.2. Reducing the risk of poverty for adult basic education participants in Germany

The German WeGebAU (*Weiterbildung Geringqualifizierter und beschäftigter älterer Arbeitnehmer in Unternehmen*) programme was implemented in 2006 to provide educational support for older workers without certified vocational qualifications and for those with low skills proficiency to improve their employability. The Federal Employment Agency covers the cost of training courses, travel, and lodging. In addition, participants can receive extra unemployment compensation if they are not able to work while they are taking the courses. At the end of the programme, participants receive a recognised vocational qualification or partial qualification. Some 340 000 adults have participated in the programme since 2006.

Source: Federal Institute for Vocational Education and Training (2013), "Data Report to accompany the Report on Vocational Education and Training", http://datenreport.bibb.de/html/index.html.

Employers can support basic skills education in the workplace

Wage loss is another potential barrier to participation in adult basic education. Employers can encourage their low-skilled workers to take up basic education by supporting its provision in the workplace and/or through financial contributions. A CEDEFOP report (CEDEFOP, 2012b) highlights that paid training leave is a response to time constraints, which are among the major obstacles to participation in adult education and training.

General recommendations to minimise dropout

In his book on didactical action in adult education, Siebert (2003) lists the following recommendations to minimise dropout: *i)* Realistic education information and counselling; *ii)* A discussion at the beginning of the course about the learner interests to be considered; *iii)* An evaluation during the ongoing course; *iv)* A discussion with both course participants and those who quit the class about reasons why they dropped out; *v)* Modularisation of the course as to enable flexible learning modes.

A first qualification or prior learning can motivate learners to pursue lifelong learning

Research findings suggest that persistence may be associated with having more experience as a learner (Porter, Cuban and Comings, 2005; St. Claire, 2006): if inexperienced learners receive sufficient

support to develop a learning identity and/or to obtain a first qualification, this can help put them on the lifelong learning path (Porter, Cuban and Comings, 2005; St. Claire, 2006). For instance, research by MDRC/NCSALL on literacy programmes offered in libraries in the United States[28] found that adults who had previously engaged in basic skills education, self-study, or vocational skills training were more likely to persist than those who had not (Porter, Cuban and Comings, 2005). A similar pattern appeared in the 2003 Pathways in Adult Learning Survey (PALS)[29] in the United Kingdom, where long-term learners were more likely to be involved in a wider range of different types of learning than new learners (Snape, Belle, and Jones, 2004) (see Box 6.3 for an example which uses assessment to enable learners to take part in further education opportunities).

Box 6.3. Assessment and evaluation in India's Saakshar Bharat literacy scheme

Assessing and certifying the competency levels of newly literate adults is an important feature of India's nation-wide literacy scheme Saakshar Bharat (see the Annex for more details on the programme). The assessment aims to recognise learners' achievements and to enable them to take part in further education opportunities. Assessments are also designed to gauge the learners' awareness of social issues and the work-life environment. The learners can take part in assessment tests twice a year (in March and August) and are tested in reading, writing and arithmetic skills through external tests lasting three hours. The tests are based on guidelines framed by the National Institute for Open Schooling (NIOS). Certificates are issued within 60 days and all results made available on the NIOS website. Between the beginning of the Saakshar Bharat programme in 2009 and 2012, the National Literacy Mission Authority assessed and certified 14 438 004 adults for their proficiencies in reading, writing and numeracy.

Source: UNESCO (2014k), "Saakshar Bharat Mission in India", www.unesco.org/uil/litbase/?menu=4&programme=132.

Having learning goals and measuring the learning progress improves persistence

US research on learner persistence found a significant relationship between persistence and learners having specific goals (Comings, Parrella, and Soricone, 1999). Similarly, in qualitative interviews on mandatory and voluntary programmes with 44 learners representing the unemployed, prisoners and other hard-to-reach individuals in England, O'Grady and Atkin (2006) found that those who participated in training voluntarily usually did so because they had a clear idea about their shorter-term goals (usually getting a qualification) and longer-term objectives (usually improved employability and future employment). The US MDRC/NCSALL persistence study revealed that encouraging learners to establish a learning goal and measuring the learners' progress made towards this goal through assessment can support learner persistence (Comings, Parrella, and Soricone, 1999) (see Section 7.2 on formative assessment). Moreover, linking basic skills learning with earning occupational credentials has also proven beneficial for learner persistence (see Section 7.4 on contextualised and embedded literacy and numeracy provision, and Box 7.3 on the Integrated Basic Education and Skills Training (I-BEST) in Washington State).

Appropriate information, advice and guidance are vital in supporting persistence

Both appropriate placement and sustained attendance in a learning programme depend on good quality information, advice and guidance (IAG) (Taylor et al., 2005; Lopez et al., 2007). Evidence underlines the importance of induction and orientation at the start of a programme, as the first weeks are the periods when learners are most likely to withdraw (Quigley 2000; Quigley and Uhland, 2000; Vorhaus

28. See footnote 25.

29. The survey fieldwork was conducted between February and May 2003 in the United Kingdom. The sample was taken from the group of National Adult Learning Survey 2001 respondents that consented to be re-contacted for a further survey and amounted to about 2 000 individuals.

et al., 2011). For instance, while most US community colleges and many local community-based organisations offer student services, such as financial aid assistance, academic advising, and career services, just having services available is often not enough for non-traditional students to succeed. Recent research from the US Center for Community College Student Engagement shows that only a small fraction of students take advantage of the various services offered (McDonnell and Soricone, 2014). Researchers therefore suggest that disadvantaged students may benefit from what is termed "intrusive advising" (Crockett, 1985, p. 284 cited in McDonnell and Soricone, 2014), which may include "structured meetings with advisors, mandatory activities such as academic planning, and close tracking of student success" (Karp, O'Gara and Hughes, 2008, cited in McDonnell and Soricone, 2014). By building services into the structure of programmes, students are connected to services through required activities (McDonnell and Soricone, 2014). A study exploring the impact of the *Beacon Program* in South Texas, designed to bring information on available tutoring services directly to students in remedial maths class, showed that the intervention increased students' use of tutoring services, reduced class withdrawal rates and increased maths class pass rates (Butcher and Visher, 2013). Similarly, Taylor et al. (2005) found in their review of seventeen studies conducted in the United Kingdom and the US that continuing guidance offered in addition to traditional IAG had a positive impact for 'hard-to-reach' groups in terms of qualifications gained.

Learning support systems are needed

In the Longitudinal Study of Adult Learning (LSAL)[30] that took place between 1998-2007 in the US, Reder found that most literacy programmes retained learners only for relatively short periods of time, and that learners often had fragmented patterns of participation in multiple programmes and services (Reder, 2012). Since service providers were often unable to co-ordinate their services, learners were left to assemble and co-ordinate these learning experiences into coherent wholes. Reder therefore suggests that local communities develop new types of learning support systems that provide persistent structures or pathways for adults. These pathways could combine periods in which adults attend programmes, use online materials to work independently or with tutors, or receive support services from local community-based organisations and volunteer programmes (Reder, 2012).

The learning context matters for success

While some low-skilled learners may benefit from a classroom context (see for instance Metcalf et al., 2009),[31] for others it can revive bad memories of their schooldays (Illeris, 2011). Many learners therefore prefer contextualised and embedded learning approaches at home or at work (see Section 7.4 on contextualised and embedded literacy and numeracy programmes). For instance, the Director of Unionlearn, the learning and skills arm of the British Trades Union Congress (TUC), explains that one of the reasons why more formal-based teaching often does not work for adults is that they are not being treated as adults: Often 17-year olds wanting to get up to Level 2 maths and English are put back in a classroom that is not able to provide a more contextualised environment that would treat them like adults and teenagers end up disappointed and failing (House of Commons, 2014). Rather than purely class-based learning, for school-dropouts an embedded learning approach combining basic with vocational skills or a workplace learning approach might be more suitable. Similarly, many older adults find the idea of returning to classroom-based learning daunting and prefer less formal approaches such as community-based provision (House of Commons, 2014) (see Section 7.4). Moreover, two studies, one

30. See footnote 11.

31. The study looked at the ability of *Skills for Life* provision to improve learners' skills by following adult literacy and numeracy learners, some of them attending college-based courses, over a period of three years and comparing their outcomes with a matched group of individuals who did not take literacy or numeracy courses.

aimed at reforming adult literacy education in the United Kingdom, the United States and Canada (Sticht, 2001) and the other investigating into the low take-up of basic skills provision among young adults in England and Wales (Merton, 2001), found that adults often preferred to learn in familiar places such as at home (see Section 7.3 on literacy and numeracy learning with ICT).

Providing flexible and responsive provision can positively affect participation and persistence

Programmes and their mode of delivery need to be adaptable to the learner's personal circumstances and learning styles (Lopez et al., 2007; Reder, 2012; Rhy Warner and Vorhaus, 2008). The nine-year Longitudinal Study of Adult Learning (LSAL, 1998-2007) in the United States found that the largest gains were made by individuals who both participated in programmes and engaged in self-study. LSAL therefore suggests that programmes could increase their outreach, enrolment, and students' persistence by connecting self-directed learning activities with traditional classes (Reder, 2012). Technology can play an important role in offering distance education and connecting different learning activities over time (see next paragraph).

Encouraging learner persistence means supporting self-study

The key to learner persistence is ensuring that breaks in engagement in formal learning are supported by other learning opportunities, such as distance and e-learning (see Section 7.3 on literacy and numeracy learning with ICT). Adults may dip in and out of education provision as their ability to participate fluctuates in line with their changing lifestyles (Porter, Cuban and Comings, 2005). Dropping out of learning programmes is sometimes a rational response to changing circumstances, such as starting employment before the course ends, or pregnancy (BIS, 2011). One small-scale development project carried out as part of the PPA[32] project in the United Kingdom looked at ways in which learners who had taken a break from formal studies due to pregnancy were supported in their learning by continuing access to college resources, including online learning and phone tutorials (QIA, 2008). Looking at the same project, Lopez et al. (2007) found that when adults are learning outside formal provision, they still need some degree of structure and support. The researchers highlight that providers and teachers setting up flexible learning opportunities and tasks outside the classroom should be aware of the possible constraints learners might face, such as limited access to technology, no experience with ICT, and time-consuming family and employment responsibilities.

Motivation can be stimulated by learner involvement in the course design

Learner motivation can be stimulated by involving them in the content and design of their own literacy and numeracy courses and learning material (BIS, 2011). An analysis of existing good practices in the EU that help those with low or no qualifications to achieve a qualification at least one level higher (University of Florence, 2010) concur that learners should be involved in the planning and arrangement of their learning process (see Box 6.4 for examples on learner engagement in the creation of learning materials).

32. PPA stands for the two-year project "Motivating *Skills for Life* Learners to Persist, Progress and Achieve" (2006-2008) which included 14 development projects coordinated by the National Research and Development Centre for Adult Literacy and Numeracy in the United Kingdom.

Box 6.4. Examples of learner engagement in the development of learning materials

An innovative element of Indonesia's nation-wide AKRAB adult literacy programme is that, in addition to learning materials developed by a team of non-formal education experts, learners develop their own booklets and newspapers during writing classes which are then used as learning material by other participants (UNESCO, 2014j; see Box 4.3 for more details on the programme).

In northern India, Khabar Lahariya is a low-cost weekly newspaper produced and marketed by women from marginalised communities in the two rural districts of Chitrakoot and Banda. The newspaper was initiated by the national centre for gender and education NIRANTAR to complement its Sahajani Shiksha Kendra programme[1] which has provided basic literacy training to rural women and girls in India's northern state of Uttar Pradesh since 2002. Since the beginning of the newspaper project in 2002, NIRANTAR has recruited about 30 women on an annual basis to work as community-based journalists, many of whom are graduates of the Sahajani Shiksha Kendra programme. Currently, the paper has a print of 5 000 copies per week and a readership of about 35 000 people in over 450 villages in both districts. It has contributed to an enhanced culture of reading in rural communities and of civic awareness for gender issues. The newspaper has received awards for its achievements, among others the UNESCO King Sejong Literacy Prize, and has inspired women's groups in other marginalised districts to start similar projects (UNSECO, 2014k, 2014m).

Source: UNESCO (2014j), "AKRAB (Literacy Creates Power) Programme in Indonesia", www.unesco.org/uil/litbase/?menu=4&programme=121; UNESCO (2014k), "Saaksha Bharat Mission in India", www.unesco.org/uil/litbase/?menu=4&programme=132; UNESCO (2014m), "Sahajani Shiksha Kendra: Literacy and Education for Women's Empowerment", www.unesco.org/uil/litbase/?menu=4&programme=82; UNESCO (2014n), "Khabar Lahariya (New Waves)" www.unesco.org/uil/litbase/?menu=4&programme=81.

1. See UNESCO (2014m) for more details.

The quality of students' learning experience and frequent attendance matter for completion

Based on a literature review of research on models of adult learning, Tusting and Barton (2003) found that non-completion of courses reflects both external factors, such as changes in the family or employment situation, and the quality of students' learning experience. They identified the teacher-student and student-student relationships as the most significant factors associated with completion rates. A study on dealing with student resistance in adult basic education with 38 voluntary adult learners from the Pittsburgh area in the United States found that the most significant influence on staying in the programme was the programme atmosphere (Quigley, 1995). Kambouri and Francis (1994)[33] observed in basic skills programmes in England and Wales that those who left basic skills provision before completion had less frequently attended classes than those who persisted, and concluded that frequent attendance was decisive for persistence (see Box 6.5 on the Adult Learners Lives project in England and see Chapter 7 for a discussion about best teaching techniques).

Lessons learned relative to learner persistence from the PPA project in England

The project "Motivating *Skills for Life* learners to persist, progress and achieve" (PPA) by the National Research and Development Centre for Adult Literacy and Numeracy (2008) in the United Kingdom provides the following insights about learner persistence:

- Good teachers are the most important factor in learner persistence.
- A personalised teaching approach characterises many successful projects.

33. This two-phase study examined the incidence and nature of dropout and progression from basic skills programmes in England and Wales.

- Listening and responding to learners encourages learner persistence.
- Taking action to support persistence, particularly using new technology, requires teachers to adapt their teaching practices.
- Teachers need timely access to relevant continuing professional development.

Box 6.5. The *Adult Learners' Lives* project in England

The *Adult Learners' Lives* project was conducted at three sites in Blackburn, Lancaster and Liverpool from September 2002 to June 2003. It investigated how factors related to language, literacy and numeracy provision interface with factors related to the learners, such as their dealing with difficulties and their classroom experience. In the classroom, the project examined the links between teaching and learning, participation, motivation and persistence, aiming to identify teaching and learning strategies that effectively encourage basic skills learning. Research findings included:

- In learning, relationships matter: teacher/student, student/student, and the learner's support network.
- Learning environments often offer structure and stability in learners' lives.
- Being in control is key motivation for learning.
- Health is often a barrier to learning, both physical and mental health.
- Small gains in language, literacy and numeracy skills and their wider benefits need to be assessed.
- Learners value knowing what progress they have made.
- There is a complex relationship between teaching and learning: learners do not learn what teachers teach.
- A more effective interagency response to the social and learning needs of students seeking asylum is needed.
- Students of English as a second language classes often express satisfaction with their classes, but there is a need for more free use of language and "bringing the outside in".
- Involving teachers in research projects benefits their professional development, the culture of their work-places and regional networks.

Source: National Research and Development Centre for Adult Literacy and Numeracy (2014), "The Adult Learners' Lives Project", www.nrdc.org.uk/projects_details.asp?ProjectID=14.

6.3. Challenges of literacy and numeracy teaching

Few intervention studies have assessed the effectiveness of promising literary and numeracy teaching strategies

The knowledge about good practice in teaching of literacy and numeracy skills has improved and could inform development and research programmes. But few intervention studies have so far determined which teaching strategies are effectively raising adult learners' basic skills levels (BIS, 2011; Binder et al.,

2011).[34] What research has identified to be beneficial to adult literacy and numeracy learning (see next section on using proven approaches to basic skills teaching) is not yet widely practiced in class (see also Dumont, Istance and Benavides, 2010).

Much of the literature has advocated the benefits of adult learning and not analysed what works

According to a 2008 OECD publication on adult foundation skills learning, funding and institutional instability in the adult basic skills sector have meant that much of the literature has simply advocated the benefits of adult learning, rather than analysed what works (OECD, 2008). In the United States, Lesgold and Welch-Ross (2012, p. 99) note a "severe shortage of research on effective reading and writing instruction for adults, despite the large population of U.S. adults needing to develop their literacy skills". They explain this research gap by high attrition rates of research participants, the use of methods that do not allow identifying cause-effect relations between an instructional practice and outcomes, and a focus by research funders and researchers on pre-school and school populations rather than on adults outside school. According to them, the field of adult literacy teaching in the United States has lacked a comprehensive and systematic agenda to produce curricula, practices, texts, and other tools that meet the skill development needs of adult learners (Lesgold and Welch-Ross, 2012).

Many teaching methods used in adult basic education are based on insights from children instruction

Much of the assessment and intervention material used in adult basic education programmes are based on the large body of literature about the best ways to instruct children, but adult learners and children do not learn in the same way (BMBF, 2012). For example, regarding literacy, several studies indicate that they differ in critical aspects of word recognition (Greenberg et al., 1997, 2002; Thompkins and Binder, 2003) and that the reading component patterns of low-literate adults do not resemble those of children (MacArthur et al., 2010; Mellard, Fall, and Woods, 2010; Nanda, Greenberg, and Morris, 2010). Specifically, low-literate adults appear to lack the fluent integration of word reading, language, and comprehension skills shown by typically developing child readers. Examples of adult basic education programmes that develop teaching-learning materials especially designed for adult learners include India's nation-wide Saakshar Bahrat basic literacy scheme and the Community Learning Centres (CLC) programme in the Chinese province of Gansu that offers contextualised basic literacy and life skills training. For the Saakshar Bahrat basic literacy programme, first adult learners' needs and interests are identified, based on which adult educators and subject experts develop learning material that is relevant to the adult learners' lives. This material is then scrutinised by the Quality Assurance Committee, field-tested and revised if necessary, before eventually becoming standardised teaching material (UNESCO, 2014k; see also see the Annex for more details on the programme). In order to facilitate efficient implementation of the CLC programme in Gansu province, the Gansu Provincial Institute of Educational Science has both developed a variety of teaching-learning materials about reading/writing and maths/arithmetic in life and AIDS preventions and has adopted materials produced by institutional partners including the provincial departments of education and of health (UNESCO, 2014h; see Box 5.5).

High-quality adult basic education courses require committed and well-qualified teachers

Teachers need to be well-prepared to teach adult learners with low basic literacy and numeracy skills who often have a long history of struggling at school. Evidence indicates that when adult basic skills provision is delivered by tutors, who lack experience and knowledge of literacy and numeracy teaching, learner achievement suffers (Carpentieri, 2007). Several studies emphasise that positive attitudes by the teaching staff towards the learners and the subject matter and a personalised focus on the learners can make

34. In the United Kingdom, a Behavioural Insights Research Centre for maths and English is being set up to analysis of how adults best learn English and maths (House of Commons, 2014).

a difference (Casey et al., 2006; Coben et al., 2007). Teachers should be abreast of evidence-based practice and adapt their teaching methods to adults. Evidence from New Zealand shows the importance of educational organisations committing to ongoing professional development of their adult basic education teaching staff and that most teachers want professional development to be practical rather than theoretical and academic (Hazlewood and Alkema, 2013). But low pay and limited job security are common barriers to recruiting high-performing staff (Kruidenier et al., 2010; EU High-Level Group of Experts on Literacy, 2012). In response to a serious shortage of trainers in France, the national agency for the fight against illiteracy ANLCI (*Agence Nationale de Lutte contre l'Illetrisme*) developed a framework for literacy teachers/trainers and now offers a programme to improve teaching skills through sharing good practice. While the integration of basic skills training into well financed professional training programmes has helped to increase the salary and the professionalisation of basic skills teachers/trainers in some parts of France, pay and preparation of adult literacy and numeracy teachers continue to vary widely (EU High-Level Group of Experts on Literacy, 2012).

Few tutors have specific qualifications in adult literacy and numeracy pedagogy

At present, for example in the EU, very few tutors have specific qualifications in adult literacy and numeracy pedagogy (Eurydice, 2011). In most European countries, teachers who deliver formal programmes to mature students must comply with the same qualification requirements as those delivering initial school education. However, as initial teacher training rarely covers teaching methods and approaches targeting adult learners, formal teachers may teach adults without an adult student-specific qualification or acquire additional competencies through systems of continuing professional development. Only few exceptions exist, such as Norway and Slovenia, where teaching methodology for adult learners is included in initial teacher education (Eurydice, 2011). In Indonesia's national AKRAB programme (see Box 4.3 for more details), every year, one person is selected from each municipality for training to become an adult literacy tutor. Candidates must have at least senior high school education, they must reside in the local area, demonstrate high levels of commitment, be able to master the teaching-learning materials and be able to develop participatory learning methods (UNESCO, 2014j). In the United States, there is no nationally recognised certification for instruction in adult education and most adult teachers work part-time, with few benefits, such as paid professional development (Condelli et al., 2010). The high turnover among the instructors depletes programme resources and challenges the delivery of high-quality instruction (Condelli et al., 2010,) According to Lesgold and Welch-Ross (2012, p. 78), "the bulk of instructors [in the United States] have inadequate or no specific training in best methods for teaching in adult literacy programs" (see Box 6.6 on the characteristics of adult basic education teachers in the United States). Condelli et al. (2010) note that in the US' federally funded or community-based volunteer adult education programmes "raising the quality of instruction will require the system to engage in a campaign of professionalization (which will challenge budgets), coordination with state higher education systems, and the commitment of federal, state, and local education agencies" (Condelli et al., 2010, p. 25).

Box 6.6. Characteristics of adult basic education teachers in the United States

- They work mostly part-time.
- They may leave the field more often than K-12 teachers.
- They are often required to teach in multiple subject areas.
- Few have formal qualifications in teaching adults, though many are qualified and have taught in K-12.
- They have in-service preparation as their primary form of professional development.
- They are not consistently funded to participate in in-service professional development.
- They have access mostly to short-term training and conferences.
- They are hindered by systematic constraints from participating in professional development.

Source: Smith, C. and M. Gillespie (2007), *Research on professional development and teacher change: Implications for adult basic education,* pp. 208-213, www.ncsall.net/fileadmin/resources/ann_rev/smith-gillespie-07.pdf.

1. K–12 is a term for the sum of primary and secondary education in the United States. The expression is a shortening of kindergarten (K) through to twelfth grade (12).

Volunteer staff plays a key role in adult basic education in many countries

The large role of volunteer staff in many countries is partly a response to the low pay and limited job security for adult basic educators which makes recruitment of professional staff difficult (EU High-Level Group of Experts on Literacy, 2012; Kruidenier et al., 2010; OECD, 2008; UNESCO, 2014b). In addition, many countries, such as Germany, have only recently started to offer specific qualifications for adult basic skills teachers (see the next paragraph). While volunteers are often familiar with the life circumstances of course participants, they may lack the necessary pedagogical skills and short-term training may not suffice to guarantee good quality teaching. Examples of volunteer involvement in adult basic education include India, where volunteer literacy educators are crucial to help reach the government target of an 80% national literacy rate which stood at 74% in 2011, implying 70 million more literate adults compared to 2011 levels. Volunteer educators are trained before and during their teaching activity in local languages, methodology and practice of teaching adults (UNESCO, 2014k). In the United States, volunteers also deliver a significant portion of the instruction in adult basic literacy programmes. The most commonly reported educational requirement for teaching volunteers is a high school diploma or equivalent (Lesgold and Welch-Ross, 2012). Another example is Ireland where trained volunteers account for more than 70% of the teaching workforce, though they teach only 20% of all learners because they mainly teach rural learners in small groups or one-to-one, while professional teachers work in classrooms (Bailey, 2007). In the English *Skills for Life* programme, volunteers are recruited and trained in companies by trade unions to become qualified volunteers who proactively identify and reach out to (functionally) illiterate adults (EU High-Level Group of Experts on Literacy, 2012). The Irish *Learning for Life* and the English *Skills for Life* programmes were used as an inspiration for the pilot project *Taal voor het Leven* by the Dutch Ministry of Education, Culture and Science implemented in six regions in the Netherlands between 2012 and 2015 (Dutch Ministry of Education, Culture and Science, 2014) (see Box 6.7 for further examples of volunteer instructors).

Box 6.7. Examples of volunteer instructors in adult basic education

***Alfabetizando com Saúde* (Learning to Read and Write in Good Health) in Curitiba, Brazil**

The *Alfabetizando com Saúde* (Learning to Read and Write in Good Health) programme in Curitiba, Brazil, works with volunteer trainers. The programme has been implemented and developed through a network of qualified community volunteer educators who provide adult literacy programmes that simultaneously promote health awareness, help prevent outbreaks of disease, and increase environmental awareness to individuals aged 15 years and above since 2002. The volunteers are mobilised through the local municipal health unit and are professionally trained as community educators through train-the-trainer programmes that cover basic adult education methodologies. After the initial training, community educators participate in monthly training sessions to keep abreast of current educational developments in the field. Since the inception of the programme, 300 community educators have been trained. However, according to one of the programme co-ordinators, one major challenge is that some community educators are not as motivated as might be expected because they receive no remuneration for their voluntary services (UNESCO, 2014d).

Savoir pour Réussir Paris (Knowing to achieve), France

Another example of an adult basic education programme that works with volunteer trainers is *Savoir pour Réussir Paris.* This Paris-based association is working with thirty trained volunteer facilitators who have helped young people over the age of 16 with major difficulties with their basic literacy skills since 2007. The facilitators are voluntary part-time workers that are trained by the association at the beginning and at regular intervals throughout the year, receiving mandatory training on how to help adult learners develop their literacy skills. Additional meetings are held once a month to exchange best practice and complementary trainings are offered on themes of interest to the facilitators. The mastery of literacy, numeracy and the French language and patience, creativity and open-mindedness are the minimum requirements to become a facilitator (UNESCO, 2014c).[1]

Functional Adult Literacy Programme, Turkey

A distinguishing feature of the Turkish Functional Adult Literacy Programme (FALP) offered since 1995 by the Turkish non-governmental organisation AÇEV is its implementation by volunteer instructors. In 1996 AÇEV received accreditation from the Directorate of Lifelong Learning of the Ministry of National Education (MoNE) for its facilitator orientation, making FALP the first authorised programme in Turkey to train volunteers as literacy instructors. FALP volunteers are reached through posters, brochures, radio and TV programmes, community briefings, and information sessions, and come mainly from local communities or local NGOs. They are required to have at least a high school diploma but no prior teaching experience is needed. Upon successful completion of a three-week training seminar on the programme's philosophy, technical curriculum, field orientation and communication skills, FALP volunteers are certified as literacy instructors by AÇEV and MoNE. The training is provided by AÇEV master trainers, who, after being volunteer instructors themselves, took part in seminars and on the job training. FALP has a core education team of three education specialists who are responsible for planning, implementing and monitoring FALP activities. 12 master trainers support this team in supervision activities and 24 field coordinators serve as direct supervisors of volunteers in individual provinces. Since the start of the programme AÇEV has been able to train almost 4 000 trainers, presenting a successful way to promote volunteerism and civic responsibility (UNESCO, 2014a) (see also the Annex for more details on Turkey's FALP).

Source: UNSECO (2014c), "Fight against illiteracy (Lutte contre l'illetrisme)", www.unesco.org/uil/litbase/?menu=4&programme=156; UNESCO (2014d), "Alfabetizando com Saúde (Learning to Read and Write in Good Health)", www.unesco.org/uil/litbase/?menu=4&programme=2; UNESCO (2014a), *Functional Adult Literacy and Women's Support Programme. Country Profile: Turkey*, UNESCO Institute for Lifelong Learning, www.unesco.org/uil/litbase/?menu=4&programme=141. For more effective literacy practices described by UNESCO see also www.unesco.org/uil/litbase/?menu=4.

1. *Savoir pour Réussir Paris:* Between the programme's start in 2007 and 2012, 333 young people benefited from it.

The workforce of basic skills education is becoming more professional

There has been a move towards professionalisation of adult literacy and numeracy instruction over the last years. For instance, Austria's National Institute for Adult Education introduced a three-semester diploma programme for adult basic education in February 2014 (Bundesinstitut für Erwachsenenbildung, 2014). In Germany, the first two-year Master of Arts in pedagogics of adult basic education was

implemented in 2009/2010 (Egetenmmeyer, 2011; Pädagogische Hochschule Weingarten, 2014) (see Box 6.8 on Germany's professionalisation of the adult basic education profession). In England's *Skills for Life* strategy, professionalisation of the adult learning workforce is one of the central goals. In September 2007, regulations were put in place requiring all new *Skills for Life* teachers to possess full generic adult teaching qualifications and a subject-specific qualification in teaching literacy, numeracy or ESOL[35] (Carpentieri et al., 2009). In Norway, the national agency for lifelong learning Vox provides short courses for teachers and two university colleges offer further education to qualify as a teacher of basic skills (Sørlie, 2010). According to Tett and St. Clair (2011), the professionalisation of the adult learning workforce is accompanied by pressure for adult basic skills education to more closely resemble the established teaching professions. More attention is now given to providing professional development for core staff and specific qualifications for teaching adult basic skills are emerging. While increasing professionalisation fits the trend for more accountability and quality control of the adult basic skills sector, it includes a number of challenges. One implication could be a reduction of the diversity of practices in the field of adult basic skills education due to standardised professional training or teaching degrees. If volunteers and part-time instructors have to undergo professional training before engaging with adult learners, recruitment might become more difficult. Another implication of moving to a more professionalised workforce could be the loss of volunteers, who have so far played a central role in many systems.

Box 6.8. Professionalisation of the adult basic education profession in Germany

In Germany, little teaching and learning material for adult literacy and numeracy education and few diagnostic instruments were available prior to the funding priority 2007-2012 on "Research and Development for the Promotion of Literacy and Numeracy of Adults" of the Federal Ministry of Education and Research (BMBF) initiated on the occasion of the United Nations Literacy Decade 2003-2012. The output of the over 100 individual projects divided into four working clusters (on basic research on adult basic education, efficiency and quality of counselling and support services, professionalisation of the teaching workforce, and basic education in the workplace) has contributed to a professionalisation of Germany's adult basic education sector. A map of further and advanced education offers has been created containing more than 30 offers ranging from short introductory courses, further education programmes of several modules to a first MA degree in pedagogics of adult basic education. Moreover, trainings for the use of new diagnostics methods and new learning and teaching material have been developed. The new learning and teaching resources cover the following five thematic focal points: material for courses with German native speakers focusing on daily life issues such as family, food, health and finances; material for courses with foreign-language speakers; work-related learning and teaching material; and digital tools such as e-learning programmes, Internet portals, audio files, and documentaries (see also Box 7.1 on E-learning offers for adults with low literacy and numeracy skills in Germany).

Source: BMBF (German Federal Ministry for Education and Research) (2012), Alphabetisierung und Grundbildung Erwachsener: Abschlussdokumentation des Förderschwerpunktes zur Forschung und Entwicklung 2007-2012, www.alphabund.de/1861.php.

Basic skills programmes generally involve a limited number of learners

According to a Eurydice Report (European Commission/EACEA/Eurydice, 2015b), the limited number of adult learners engaged in basic skills programmes can be explained by the fact that such programmes target hard-to-reach groups. In most European countries, such programmes do not involve more than 5 000 individuals per year. In small countries such as Luxemburg only a few hundred people are concerned. However, in some European countries, participation levels are higher. This is the case in

35. English for Speakers of Other Languages.

Ireland, where programmes delivered within the framework of 'adult literacy'[36] reached 57 000 people in 2012. In Denmark, 'preparatory adult education' (*Forberedende voksenundervisning,* FVU)[37] registered almost 25 000 entries in 2013. France's Key Competences (*compétences clefs*) programme (see Box 4.2 on France's National Agency for the Fight against Illiteracy) reached 50 000, mainly unemployed people in 2011.

Relevant stakeholders need to co-operate to ensure an effective adult education sector

See Box 6.9 for country examples of co-ordination of adult literacy programmes.

Box 6.9. Country examples of co-ordination of literacy programmes

The National Basic Adult Literacy Education Association in Korea

In Korea in 1999, more than 30 organisations working in adult literacy education formed the *"National Basic Adult Literacy Education Association"* to work together to develop and promote adult literacy education in the Korean society. In 2006, the association successfully lobbied for government funding and the status of the adult literacy education provided by these organisations is now recognised as equivalent to elementary and secondary education. The partner organisations share knowledge of different types of literacy education, teacher training, learner counsellor training, grassroots citizenship education and management techniques (UNESCO, 2014l).

The Saakshar Bharat Mission in India

In India, the funding of the Saakshar Bharat Mission aiming to promote adult literacy education in rural areas is coordinated at national level. But programme implementation is decentralised. Each district is responsible for regional planning. The local *Panchayat Raj* Institutions (PRIs) are the main implementing agency at the district and local levels and are responsible for the establishment and provision of the Adult Education Centres. All stakeholders, especially at the community level, have a say in programme planning and implementation. The village bodies prepare a financial plan for literacy education at the village level which entails a household survey, data collection, mobilisation, training schedules, procurement and distribution of learning materials, evaluation of learning outcomes and budgetary requirements. Aggregation of the financial village plans leads to the preparation of State plans and ultimately to the national financial plan for the Mission.

The total budget for the programme between 2009 and 2012 has been USD 1.2bn, with the national government providing 75% of the costs, and district governments covering the remaining 25%. The allocation of these funds for basic literacy is based on the number of non-literate adults in each district and all districts with an adult literacy rate of 50% or lower (Census 2001) have been covered.

36. It includes courses in reading, writing and numeracy, and ICT. Priority groups are low-qualified adults and those with literacy and numeracy skills below Level 3 of the National Framework of Qualifications. Courses are mainly provided by the Education and Training Boards but non-profit organisations are also active. Most courses do not have a set number of tuition hours, but they commonly include between two and six hours per week. Courses in the Adult Literacy framework are free of charge and are funded by the Department of Education and Skills through SOLAS, the central level Further Education and Training Authority, and co-financed by European funds (European Commission/EACEA/Eurydice, 2015b).

37. The programme supports the acquisition of basic skills, including reading, writing and numeracy. The aim is to prepare mature learners for further education and training, and strengthen their participation in society. The FVU programme is free for participants and includes between 120 and 240 hours of tuition divided into several steps (reading: four steps of 30-60 hours; maths: two steps of 30-60 hours). It does not lead to any certificate or qualification (European Commission/EACEA/Eurydice, 2015b).

Box 6.9. Country examples of co-ordination of literacy programmes (*continued*)

To meet accountability requirements for public expenditure a customised Funds and Accounts Management System was developed. It features a Fund Flow System, a Customised Banking System and an Online Accounting System. The Fund Flow System removes the requirement of submission of manual reports as the funds expenditure details are available online. It ensures real time monitoring and availability of funds to every implementing agency. The system also allows identification of good performers and laggards in terms of expenditure. The Online Accounting System ensures the Mission's implementing agencies receive grants when required, that funds are not left unused, and that the executing agencies maintain regular accounts.

To manage the extensive Saakshar Bharat Mission involving nearly 200 000 implementing agencies, India's National Informatics Centre developed a Web Based Planning & Monitoring Information System (WePMIS), a customised web-based system for planning, monitoring and impact analysis. This system allows the Adult Education Centres to update information about the progress of their courses, tutors and learners online, thereby facilitating efficient programme evaluations. From 2011, all of the online data has been accessible to the public, encouraging engagement and feedback and an understanding of progress within a given area. The online feedback system can be used to evaluate the ground situation and programme managers can make corrective interventions at respective levels. Training on how to use WePMIS has been provided and e-infrastructure (such as computers and broadband connectivity) now needs to be extended to the village level (UNESCO, 2014k; see the Annex for more details on the Saakshar Bharat Mission).

Indonesia's AKRAB programme

Indonesia's adult literacy programme AKRAB (*Aksara Agar Berdaya*, "literacy creates power") is implemented through cross-sector coordination, which brings together various stakeholders and a diversity of ideas and funding sources. While Indonesia's Ministry of Education and Culture is responsible for the design and overall coordination of the AKRAB programme, other ministries have the following roles:

- Ministry of Public Welfare: defines the roles of individual ministries in the programme co-ordination.
- Ministry of Internal Affairs: encourages provincial, city, and district administrators, the private sector, women's, youth and community organisations and NGOs to participate in the programme.
- Ministry of Religious Affairs: identifies religious facilities that could help implement the programme.
- Ministry of Finance: plans the AKRAB budget in accordance with the Ministry of Education proposals.
- Ministry of Women's Empowerment: creates social networks between learners, institutions and NGOs.

The co-ordination of the implementation of the AKRAB programme is further decentralised to provincial and municipal governance levels through Memoranda of Understanding between the Ministry of Education and Culture, and local Heads of District. Programme implementation is carried out by a wide range of organisations, including NGOs (women groups, environmental groups), community learning centres, religious institutions, and universities. These implementing organisations submit their budgets proposals to join the programme to local coordinators for approval. The budget is awarded based on the proposed number of learners and is typically paid for by the central government at national level (50%), the provincial government (30%), and the municipal government (20%). The cost of the programme is approximately USD 62 per learner (UNESCO, 2014j; see Box 4.3 for more details on the programme).

Source: UNESCO (2014j), "AKRAB (Literacy Creates Power) Programme in Indonesia", www.unesco.org/uil/litbase/?menu=4&programme=121; UNESCO (2014k), "Saakshar Bharat Mission in India", www.unesco.org/uil/litbase/?menu=4&programme=132; UNESCO (2014l), "Mothers' School in Korea", www.unesco.org/uil/litbase/?menu=4&programme=140.

7. USING PROVEN APPROACHES TO BASIC SKILLS TEACHING

This chapter looks at proven approaches to teaching basic skills to adults. Section 7.1 describes effective literacy and numeracy teaching approaches in more general terms, while Sections 7.2, 7.3 and 7.4 identify formative assessment, e-learning, and contextualisation and embedding as teaching methods that can effectively help address the individual learner needs.

7.1. Effective literacy and numeracy teaching

This section discusses evidence on good teaching practices in adult literacy and numeracy. It draws on an Austrian manual on occupational orientation for low-skilled adults (Steiner, Vogelhofer, Schneeweiß, Baca, and Fellinger-Fritz, 2012) and on England's largest study of teaching strategies in basic skills, the suite of five effective practice studies by the National Research and Development Centre for Adult Literacy and Numeracy (NRDC) which explored teaching and learning in reading (Brooks et al., 2007), [38] writing (Grief et al., 2007), [39] and numeracy (Coben et al., 2007). In addition, it has recourse to reports by the British Office for Standards in Education, Children's Services and Skills (Ofsted) on effective approaches helping providers improve their practice in literacy (Ofsted, 2011a), quality of numeracy provision for post-16-year-olds up to and including Level 2 (Ofsted, 2011b), and good adult numeracy teachers (Ofsted, 2011c).

Evidence of effective adult basic skills teaching

Evidence on effective basic skills teaching shows that effective programmes have high expectations of learners' achievements and enable them to gain accreditation for their learning and to move into further study (BSA, 2000). Factors thought to correlate with better progress for learners include: the assessment and diagnosis of learning needs; qualified teachers who regularly assess learning progress to adjust teaching accordingly and who have professional development opportunities (see Section 7.2 on formative assessment); structured teaching and learning plans for each learner; embedded provision to meet individual needs (see Section 7.4 on contextualised and embedded literacy and numeracy provision); progression opportunities for learners; and stakeholder co-ordination and (see Section 8.2 on literacy and numeracy provision in the workplace) (BSA, 2000; MacLeod and Straw, 2010, Siebert, 2003). Moreover, as low-skilled adults are often no longer used to concentrated learning, Miller (2003) recommends having a break every 50 minutes, during which adult learners can exchange views and insights. Also, Steiner, Vogelhofer, Schneeweiß, Baca, and Fellinger-Fritz (2012) found it more beneficial for low-skilled adult learners to attend courses that use diversified teaching methods, including use of images, graphics, different colours and excursions, rather than ex-cathedra teaching.

38. NRDC Effective Practice Study in Reading is one of the largest studies in Britain on strategies used to teach reading in adult literacy classes, and marked the first attempt to correlate that evidence with measures of change in learners' reading attainment and attitudes to literacy.

39. NRDC Effective Practice Study in Writing explored effective strategies for the teaching and learning of writing. The study recruited 341 learners from 49 classes in 25 organisations and complete data were obtained for 199 learners from 40 classes in 20 organisations.

Evidence suggests that basic skills teachers need to have both good generic teaching skills and subject-specific teaching skills

According to an Austrian manual on occupational orientation for low-skilled adults (Steiner, Vogelhofer, Schneeweiß, Baca, and Fellinger-Fritz, 2012), the creation of a good relationship between the teacher and the learner is a prerequisite for a successful course. Teachers should be able to build good relationships with learners and treat and respect them as adults (Coben et al., 2007). Moreover, they should regularly assess progress and adjust the programme to the disparate learning needs of adult learners (Benseman et al., 2005; Siebert, 2003) (see Section 7.2 on formative assessment). Giving clear explanations and asking higher-order questions to encourage higher-level thinking also seem to be beneficial for learners' progress (Coben et al., 2007). Moreover, incorporating learners' personal interests can make learning more relevant and meaningful to learners (Siebert, 2003).

Evidence of effective teaching of adult reading

There is strong evidence from research, backed up by the judgment of researchers and practitioners, that tutors need to be well trained in the reading process. Specifically, tutors need to be skilled enough to observe learners reading and understand what they are seeing and to know how to teach to overcome the difficulties they observe (Benseman, Sutton, Lander, 2005). Technical experts argue that effective teaching of adult reading includes knowing how to teach phonics, providing adequate time for fluent oral reading in class, reciprocal teaching, and explicit comprehension strategies making learners appreciate what is read, and knowing how to apply these skills to texts on both paper and screen. For example, the NRDC Effective Practice Study on Reading (Brooks et al., 2007), the first attempt in the United Kingdom to correlate teaching strategies with measures of change in learners' reading attainment and attitudes in literacy, found that learners who spend more time working in pairs actively reading out loud made better progress in reading.

Evidence of effective teaching of adult writing

Benseman, Sutton, Lander (2005) and Grief et al. (2007) found benefits for learners' progress in writing when time is given for discussion about writing and the writing task, when meaningful contexts are provided for writing activities, linking the writing with life outside the classroom, when learners compose different kinds of texts, and when individual feedback and support is provided as learners engage in text composition.

Evidence of effective teaching of adult literacy (both reading and writing)

Evidence from Benseman, Sutton, and Lander (2007) and Ofsted (2011a) identified the following factors in raising attainment of literacy learners. In effective practices, teachers draw on learners' experiences and closely relate learning activities to language used in everyday work and social settings in literacy; teachers have high expectation for learners' achievements in literacy; they use a rigorous and sequential approach to develop literacy drawing on a wide range of teaching methods; they use systematic phonics to teach reading (including oral reading), writing and spelling; they assess progress in order to determine the most appropriate support; and the impact of provision is monitored. It also seems crucial to have at least one senior member of staff with an excellent knowledge of literacy and its pedagogy.

Evidence of effective teaching of adult numeracy

Drawing on the findings by Ofsted (2011b, 2011c) and Swain et al. (2005), effective teaching of adult numeracy builds on learners' existing knowledge, overcomes their fear of maths, exposes and treats misconceptions, promotes reasoning and problem-solving over 'answer getting', raises higher order questions, and uses co-operative small group work (which has proven to motivate numeracy students who

feel vulnerable). It makes use of ICT, creates connections with everyday situations, assesses the learners' progress to adjust teaching accordingly (see 7.2 on formative assessment), and provides constructive feedback on learners' (Ibid).

7.2. Formative assessment

"Formative assessment" is a teaching approach whereby frequent assessment of learners' knowledge to establish needs and learning objectives is used to modify teaching activities, while tracking learning progress (Looney, 2007; OECD, 2008). It is therefore assessment *for* learning in contrast to assessment *of* learning (Derrick and Ecclestone in OECD, 2008). Empirical studies have demonstrated that formative assessment can make a significant contribution to learning progress (Black and Wiliam, 1998, 2003), and there are reasons for thinking that it is particularly suited to the teaching of literacy and numeracy to low-skilled adults. For example in France, the *Atelier de Formation de Base* workshops in the Haute-Normandie region, the *Savoir pour Réussir* programme in Marseille for young people with low literacy skills, and an adult literacy programme in a prison in Lyon are all successfully using the method (Michel and Maroun, 2008).

The variation in needs of adult learners complicates the teaching of basic skills

Most adults who want to improve literacy and numeracy already have a range of skills and almost none are entirely illiterate (Wells, 2001). Research into the scale and type of needs has shown that adults have a jigsaw-like pattern of skills and gaps in numeracy and literacy. Some simple tasks might defeat them, while they have no problem with other rather complex tasks, so it is more difficult than with children to divide adults into well-defined skills levels defined by researchers and statisticians (Ibid).

Basic skills instructors need to have a clear understanding of their students' learning needs

To teach literacy and numeracy skills to low-skilled adult learners, instructors need to have a clear understanding of students' needs. Numerous researchers have therefore suggested tailoring instruction to adult learners' needs by means of assessment (Binder et al., 2011; Comings et al., 2003; Comings, Garner, and Smith, 2000; Thomas and Ward, 2009). Teachers who use frequent assessment seem to be more able to track their students' learning needs and progress and to adjust instruction accordingly (Dochy, Segers and Buehl, 1999; Strucker, Yamamoto, and Kirsch, 2007).

Principal elements of formative assessment in a learner's journey

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 can therefore 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.

Elements in good formative assessment

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.[40]

- *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 (Derrick and Ecclestone in OECD, 2008).

7.3. Literacy and numeracy learning with ICT outside of the classroom

The focus of this section is on the use of information and communication technologies (ICT) for literacy and numeracy learning outside the classroom. Information and communication technologies (ICT) such as computers and the Internet have opened a new learning space outside the traditional classroom setting. Learning with ICT can be pursued independently from class schedules and place. Many learners would have little or no access to learning opportunities without the support of technologies. This is especially true for those with physical access difficulties or with negative experiences with conventional education, who can thus benefit from the opportunity to use their own learning spaces to access learning. However, lack of access, ICT-literacy, and of direct social contact are potential barriers to the use of ICT.

The evidence base on ICT use for literacy and numeracy learning is still thin

While according to the British Association for Learning Technology and Technology Enhanced Learning, there is a large evidence base on how ICT can support learning more generally, this is not yet the case in the basic skills sector (Association for Learning Technology and Technology Enhanced Learning, 2010). Given the rate of development of ICT, this is clearly an area worth future research.

E-learning options in the basic skills sector seem to attract and engage certain types of learners

According to a review of research on improving adult literacy and numeracy skills by the British Department for Business, Innovation and Skills (BIS, 2011), learning technology may improve progress and achievement of adult literacy and numeracy learners, but overall the evidence is at best mixed. Some evidence suggests that learning technology helps to attract, engage, and motivate learners, such as learners

40. While these findings draw on evidence of which few are based on systematic research and many are small-scale studies and handbooks for teachers, they have been repeated across a wide range of studies.

of English as a second language and even those hard-to-reach learners and those who have not benefitted from conventional educational models (Davis et al., 2010). Mobile technologies, including applications for smartphones, online interactive games and social media, seem to be motivating many learners (BMBF, 2012). For some learners, e-learning removes the obstacles to attendance of conventional learning programmes, such as time and transport (European Commission/EACEA/Eurydice, 2015a). Learners value the flexibility that the use of ICT offers, along with the opportunity for instant feedback and the ability to engage in non-conventional exercises such as quizzes, games, and pictorial approaches to learning (see Box 7.1 on e-learning offers for adults with low basic skills in Germany) (BMBF, 2012; BIS, 2011). A literature review by Davis et al. (2010) suggests that distance e-learning is a cost-effective and useful way to develop skills, provided it is designed to fit their proficiency levels in literacy and digital technologies.

Box 7.1. E-learning offers for adults with low basic skills in Germany

On the occasion of the United Nations Literacy Decade 2003-2012, Germany developed several e-learning offers for adults with weak literacy and numeracy skills under the 2007-2012 initiative of the Federal Ministry for Education and Research (BMBF) entitled "Research and Development for the Promotion of Literacy and Numeracy of Adults" (*Forschung und Entwicklung zur Alphabetisierung und Grundbildung Erwachsener*). Three examples of such e-learning technology include:

1) Germany's biggest open learning portal www.ich-will-lernen.de/ (translated: I want to learn) which was launched by the German Adult Education Association (DVV) with BMBF funding in 2004 (European Commission/EACEA/Eurydice, 2015b). It provides more than 31000 exercises on literacy, numeracy, German and other general adult skills such as managing finances, applying for a job and intercultural competences free of charge. Learners can use it anonymously, e.g. as an additional support for learning in courses at continuing education institutions or as a preparation for courses that lead to school-leaving certificates. Between 2004 and 2013, more than 400000 learner passwords were allocated and more than 3200 tutors registered to support the learners (BMBF, n.d.; European Commission/ECEA/Eurydice, 2015b, European Commission/EACEA/Eurydice, 2015a).

2) The award-winning learning computer game www.lernspiel-winterfest.de (translated: winterproof) which puts adult learners in the context of the Middle Ages and helps them in a playful way to improve their reading, writing, and counting competencies (BMBF, 2012). It was developed by the Folk School of Magdeburg in cooperation with adult learners whose feedback was taken into account in the programming process.

3) The Internet portal www.ichance.de/ which is very popular among younger adult learners thanks to its trendy design and extensive offer of learning material. On the portal, famous singers and musicians encourage young people to engage in learning.

Source: BMBF (German Federal Ministry for Education and Research) (n.d.), "Ich-will-lernen", www.ich-will-lernen.de; BMBF (2010), "Winterfest: Das Lernadventure", www.lernspiel-winterfest.de/fach.html; BMBF (2014), "iCHANCE: besser lesen, besser schreiben", www.ichance.de; BMBF (2012), *Alphabetisierung und Grundbildung Erwachsener: Abschlussdokumentation des Förderschwerpunktes zur Forschung und Entwicklung 2007-2012,* www.alphabund.de/1861.php; 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; 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, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/179EN_CD.pdf.

E-learning does not suit all learners

While the use of ICT motivates some basic skills learners, for others, weak ICT literacy and poor ICT access are a challenge, and this is sometimes compounded by the demotivating effect of lack of face-to-face contact with teachers and peer learners. While many basic skills learners responded positively to e-learning (either in the classroom or by distance) provided by 26 literacy providers involved in Skills for Life programmes in the United Kingdom, older men were more resistant to learning this way and other learners were limited by their degree of familiarity with computers and the Internet (Hinman and Fletcher,

2008). The PPA project[41] in the United Kingdom found that leaners who encounter problems with ICT resources away from class can lose confidence and motivation (Lopez et al., 2007). Similarly, a US study noted that not all learners have the discipline to benefit from distance e-learning (CAEL, 2006).

Learning with ICT needs to be supported

Researchers in the PPA[42] project in the United Kingdom concluded that while ICT can enhance learning, it is not a replacement for personal contact with a teacher. But the combination of new online learning materials with additional tutor input through face-to-face contact or via telephone or email, can assist motivation, persistence and success among learners (Lopez et al., 2007). The research by Davis et al. (2010) investigating in how e-learning can be used to reach a greater number of adult learners and better meet their learning needs confirms that e-learning is more effective when it is part of face-to-face training. Similarly, in their review of more than 400 studies from the US, Lotkowski, Robbins and Noeth (2004) found that face time with instructors and peers is essential and has knock-on effects on learners' persistence and attainment. This is for instance the case of "Aula Mentor" in Spain, an internet-based open education and training system, which provides non-formal education guided by a tutor through two main infrastructures: physical spaces with computer equipment and Internet connection and virtual study and communication environment (European Commission/EACEA/Eurydice, 2015a).

ICT use can help improve numeracy skills

In their study including a literature review and case studies of five industry trainees in New Zealand who used online learning activities that supported their numeracy learning in the workplace, Thomas and Ward (2010), found that using ICT made numeracy learning more engaging and increased the learners' motivation and persistence. Through ICT, numeracy learning is more accessible as it can be undertaken at any time and provides the opportunity for learners to tap into support networks, such as family and friends. In the study, learners reported that they were able to immediately apply their new numeracy skills in their personal and working lives.

Basic skills learning through ICT may lead to improved proficiency in basic skills and ICT use

Some findings suggest that ICT skills and basic skills may be mutually reinforcing. Mellar et al. (2007) report that learners in a study by the British National Research and Development Centre improved in almost all cases in both literacy/English as a second language skills and ICT skills. Moreover, evidence also shows that learners and employers are more likely to perceive basic skills training to be relevant where it is marketed under the guise of ICT training (Davis et al., 2010).

In Europe, national-level measures for open and distance basic skills learning are still rare

In the majority of European countries, the provision of open and distance learning up to upper secondary level is mainly ensured through local initiatives (e.g. *ad hoc* projects at the institutional level) or activities of private providers. National measures are less common (Eurydice, 2011; European Commission/EACEA/Eurydice, 2015a). The United Kingdom's government has supported the development of a number of specific distance learning initiatives under the title of *Learndirect* (see Box 7.2 on *Learndirect* in the United Kingdom).

41. See footnote 32.

42. Ibid.

Box 7.2. Open and distance learning through *Learndirect* in the United Kingdom

Learndirect is a network of online learning and information services in England, Wales, Northern Ireland and Scotland by the University for Industry. It was launched in 2000 with a remit from Government to provide e-learning courses for post-16 learners (Eurydice, 2011). Although initially set up with the aim of improving the availability and access to workforce skills, much of *Learndirect* is now about basic skills with the principal objective of courses 'to enable adults without a Level 2 or *Skills for Life* qualification to gain the skills and qualifications they need to find a job or to achieve and progress at work' (Broek, Buiskool, and Hake, 2010). Courses are offered in collaboration with further education colleges (FECs), private training providers, voluntary and community sector organisations and higher education institutions. These are branded as *Learndirect* centres.

Marketed through a considerable media presence and online and telephone guidance, *Learndirect* has become the United Kingdom's leading online learning provider, reaching into local communities, the workplace and people's homes. Some 2.6 million learners have taken *Learndirect* branded courses since 2000 and more than 8,500 learners log on and learn every day (Broek, Buiskool, and Hake, 2010). Most learners are aged 24 to 44 years. Currently 30% of the learners are from minority ethnic backgrounds and 8% declare a disability. The House of Commons Committee of Public Accounts reported that *Learndirect* had also been successful in attracting adult learners with low skills, and more so than other providers. In 2004–2005, about 60% of learners enrolling stated that they were pre-Level 2, which substantially exceeded the programme's targets for enrolments by pre-level 2 learners (Broek, Buiskool, and Hake, 2010). The 2001 ECOTEC study, which compared *Learndirect* with 32 other online providers internationally, identified as a key facet of the initiative that it sought to attract non-traditional learners (ECOTEC, 2001). Tamkin et al. (2003) also noted positives features of *Learndirect*: it contributes to lifelong learning by reaching out to traditionally disadvantaged groups; it leads to further learning progression; it helps some learners enhance their employability; and it is contributing to the expansion and diversification of the learning market.

Source: Broek, S. D., B.J. Buiskool and B. Hake (2010), *Impact of ongoing reforms in education and training on the adult learning sector (2nd phase): Final Report*, Research voor Beleid, http://adultlearning-budapest2011.teamwork.fr/docs/Ongoing-Reforms-Adult-Learning-Final-Report.pdf; Eurydices (2011), Adults in Formal Education: Policies and Practices, Brussels, Education, Audiovisual and Cultural Executive Agency, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/128EN.pdf; Tamkin P., J. Hillage, S. Dewson, and A. Sinclair (2003), "New Learners, New Learning a strategic evaluation of Ufi", DFES *Research Report* RR440, London, DfES.

7.4. Contextualised and embedded literacy and numeracy provision

The development of contextualised and embedded[43] approaches to basic skills provision has been at the centre of the work of many countries seeking to strengthen adult literacy and numeracy skills and increase the number of learning opportunities (Aoki, 2005; Alkema and Rean, 2013; Casey et al., 2006). Contextualised basic skills provision is defined here as an approach that creates explicit connections between the literacy and numeracy teaching and the learners' context, be this the family (e.g. parenting, health), the community (e.g. financial management) or the work context (see also Chapter 8 on a separate discussion of family literacy programmes and literacy and numeracy teaching in the workplace). The embedding of basic skills provision is defined here as the delivery of literacy and numeracy teaching alongside instruction in an academic discipline, content area or vocational discipline (e.g. engineering, mechanics) (Casey et al., 2006; Leach et al., 2009; Leach et al., 2010; Lesgold and Welch-Ross, 2012; National Centre of Literacy and Numeracy for Adults, 2015; Ryan et al., 2011; Salomon, 2009) (see

43. Many terms have been used to refer to embedded or contextualised approaches, including contextual teaching and learning (Baker, Hope and Karandjeff, 2009; Johnson, 2002), contextualised instruction (Parr, Edwards and Leising, 2008; Wisely, 2009), content-area literacy (McKenna and Robinson, 2009), embedded instruction (Simpson et al., 1997), situated cognition (Stone et al., 2006), theme-based instruction (Dirkx and Prenger, 1997), anchored instruction (Bottge et al., 2007), academic-occupation integration (Grubb and Kraskouskas, 1992; Perin, 2011), developmental education learning communities (Weiss, Visher and Wathington, 2010), workplace literacy (Mikulecky and Lloyd, 1997), and functional context education (Sticht, 2005).

Box 7.3 on I-BEST for an example of integrated instruction; see also Box 5.5 on integrated basic skills learning in a community in Gansu province, China). The reviewed literature suggests that both contextualised teaching and embedded teaching are more likely than other didactical approaches to engage and retain low-skilled adult learners (e.g. Vorhaus et al., 2011).

Box 7.3. Integrated Basic Education and Skills Training (I-BEST) in Washington State

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 basic 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 basic 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 (Wachen et al., 2010). I-BEST programmes are available in every community and technical college (WTECB, 2013). Individuals must score below a certain threshold on an adult skill test and qualify for adult basic education to participate in the programme (Wachen et al., 2010). 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 (Jenkins et al., 2010).

Source: 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, DOI: http://dx.doi.org/10.1787/9789264202153-en.

The success of contextualised and embedded literacy and numeracy provision

Researchers (e.g. Folinsbee, 2007) found contextualised learning to be key to knowledge transfer

According to Billet (2011), the transfer of learning in educational institutions to real life situations is generally relatively poor (Billett, 2011). Lave's (1988) experiment with grocery shoppers provides evidence that adults learn cognitive processes better in situations of authentic activity rather than in simulated situations typical of the school context. In the experiment, the comparison of prices was considerably more accurate in the activity of shopping (98% error-free) than doing identical calculations on a paper-and-pencil test in the classroom (59% error-free) (Lave, 1988).

Many adults prefer contextualised approaches over classroom-based learning

Many adults with poor experiences of school find the idea of returning to classroom-based learning daunting and prefer more contextualised learning approaches (House of Commons, 2014). Various researchers note the success of contextualised learning in retaining adult participants, positively changing participants' attitudes toward further education and training, helping them improve their self-confidence and parenting and employability skills, and achieve literacy and numeracy qualifications and vocational qualifications (Benseman et al., 2005; Brooks et al., 1996; Casey et al., 2006; Carpentieri, 2007; Coben et al., 2007; Ofsted, 2011a; Ryan et al., 2012; Vorhaus et al., 2011).

Factors contributing to effective community-based literacy and numeracy provision

According to Hannon et al. (2003), successful community-focused adult basic skills provision links learning to learners' lives and interests, is sensitive to any prior negative experiences of education, offers an appropriate learning location, and integrates basic skills into provision, without overtly labelling training as basic skills so as not to discourage potential learners. Benseman, Sutton and Lander (2005) found that the effectiveness of community-based basic skills programmes is associated with community ownership of programmes and resources and strong collaboration between providers and communities. For example, India's nation-wide literacy scheme Saakshar Bharat is described as a 'people's programme'

because the government acts as facilitator and resource provider that works closely with local communities to tailor the programme to their needs. The curriculum includes core content based on the broad National Curricular Framework for Adult Education and content designed according to local needs and relevance (UNESCO, 2014k; see the Annex for more details on the Saakshar Bharat Mission).

Examples of community-based literacy and numeracy provision

Examples of community-based basic skills provision in the United Kingdom include building literacy and numeracy skills while gardening in green community spaces, a college using snooker as a way of helping adults and young people to learn, and the Out There project[44] that provides wide-ranging, short, first-step courses. While some learners are able to go straight into English and maths courses, for many other learners their lack of confidence means that they often need to start with a hobby/leisure course before progressing onto further learning. A typical course would, for instance, involve buying and selling on eBay, requiring the learners to use the computer and basic numeracy and literacy in the bidding process (House of Commons, 2014). These examples show how much opportunity there is to teach literacy and numeracy skills creatively.

Literacy and numeracy provision embedded in vocational courses shows positive results

The study by Casey et al. (2006) on embedding literacy, language and numeracy in post-16 vocational programmes[45] showed that learners on embedded courses were less likely to drop out. The embedded approach helped learners to overcome the stigma associated with low literacy and numeracy proficiency. Programmes were more successful when there were two teachers in the classroom, one for the vocational skills teaching and the other one for the basic skills teaching. Except where a single teacher had dual responsibility for both vocational and basic skills teaching, learners had more positive attitudes to the value of literacy and numeracy and were 86% and respectively 46% more likely to achieve literacy and numeracy qualifications, compared to those on non-embedded courses. This suggests that VET learners were being provided with literacy and numeracy skills that facilitated achievement of their vocational training goals (Casey et al., 2006) (see for another example Box 7.4 on the Accelerating Opportunity initiative in the United States).

44. The Out There project is delivered through St. Vincent College and funded by Hampshire Learning.

45. The study looked at post-16 vocational programmes at 15 further education colleges and one large training provider. It involved around 200 learners from five regions in the United Kingdom whose primary aim was to achieve a vocational qualification. Following the publication of these research results, the English government strongly encouraged the embedding of *Skills for Life* provision. However, it remains unclear to what extent embedding has taken place, and there is little evidence of follow-up research testing the robustness and generalisability of Casey et al.'s findings. The findings of this research were also used to inform much of the work on literacy and numeracy by New Zealand's Tertiary Education Council.

Box 7.4. The Accelerating Opportunity initiative in the United States

Launched in 2011, the Accelerating Opportunity (AO) initiative aims to increase the ability of adults with low basic skills to earn occupational credentials and to obtain well-paying jobs. AO encourages states in the United States to change the delivery of adult basic education for students interested in learning career skills by enrolling them simultaneously in for-credit career and technical education courses at local community colleges as they improve their basic education and English language abilities. It builds on the legacy of the adult education initiative *Breaking Through* and on Washington State's *I-Best* programme. The initiative promotes and supports the development of career and college pathways that incorporate contextualised and integrated instruction, team teaching between adult education and college instructors, and enhanced support services at community colleges. AO is also designed to change how states and colleges coordinate with government, business, and community partners and reform policy and practice to fundamentally change how students with low basic skills access and succeed in postsecondary education and the workforce.

Since 2012, five US states (Illinois, Kansas, Kentucky, Louisiana and North Carolina) have received grants to implement the AO model. In the first year of implementation in 2012, 42 community and technical colleges enrolled 2 600 students and built capacity to provide team teaching with college and adult education instructors, to offer comprehensive support services, and to develop partnerships to support the sustainability and scaling of AO. AO students who participated in the first year described their experience as positive, many of them were planning to continue their postsecondary education after completing a pathway, and several had already found jobs related to their field of study.

Source: Anderson, T., L. Eyster, R. I. Lerman, C. Clymer, M. Conway and M. Montes (2014), "The First Year of Accelerating Opportunity: Implementation Findings from the States and Colleges", Urban Institute, Washington D.C.,www.jff.org/sites/default/files/publications/materials/413238-The-First-Year-of-Accelerating-Opportunity.pdf; McDonnell, P., L. Soricone and M. Sheen (2014), "Promoting persistence through comprehensive student supports", Jobs for the Future, Boston, www.jff.org/sites/default/files/publications/materials/Promoting-Persistence-Through-Comprehensive-Student-Supports%20_031814.pdf

Evidence also highlights the benefits of embedded numeracy teaching

In an evaluation of 59 providers of numeracy programmes, New Zealand's Office for Standards in Education (Office for Standards in Education, 2011) found that the most effective numeracy provision occurred where it was delivered within vocational programmes rather than separately. Where numeracy was integrated into vocational programmes, learners made good progress in developing the technical numeracy skills required for their vocational qualification and related employment. Learners in successful programmes said that they saw how numeracy related to their jobs and everyday lives and were motivated to put the effort into something they had previously avoided. Similarly, a literature review-based report by Thomas and Ward (2009) also highlighted that successful approaches to embedding numeracy clearly link literacy and numeracy with vocational components of the course.

Challenges of contextualising and embedding literacy and numeracy teaching

There is no single model of embedding

There is no single, perfect model of embedding (Leach et al., 2009). Literacy and numeracy courses can either be partly embedded, mostly embedded, or fully embedded in other course components. Casey et al., (2006) observed that the greater the level of embedding, the greater were the literacy and numeracy gains for learners. On the other hand, findings from various *Skills for Life* initiatives that embedded basic skills learning for apprentices in the workplace suggest that such programmes should mix both embedded and discrete basic skills provision (Carpentieri, 2007).

There is disagreement on whether concealing basic skills teaching in other forms of education and training provision is beneficial

Basic skills teaching is sometimes concealed in other forms of education and training provision because this might guard against the stigma associated with lower levels of literacy and thereby improve learner engagement and persistence. Benseman, Sutton and Lander (2005) found in their literature review of best available evidence about effective adult literacy, numeracy and language teaching that 'learning to use a computer' is far more socially acceptable than 'getting help with my reading or spelling'. Hannon et al. (2003) and Atkin et al. (2005) report that 'concealing' basic skills training within community-focused provision for learners resulted in higher learner retention. Similarly, employers participating in the Workplace English Language and Literacy programme (WELL) in Australia often promote it as a general workplace training rather than a targeted language, literacy and numeracy (LLN) support to attract workers to the training who might fear to be stigmatised as illiterates (UNESCO, 2014f). On the other hand, Carpentieri (2007, p. 51) argues that "embedding does not mean smuggling LLN learning into the curriculum by stealth. Where it is viewed as something to be hidden, there is a danger that its importance will be overlooked."

More research on contextualised basic skills teaching is needed

According to the US National Research Council (Lesgold and Welch-Ross, 2012), as the effectiveness of contextualised instruction has not been sufficiently evaluated for adult literacy students, research is needed to identify the features of various contextual approaches that lead both to the development of literacy skills and the achievement of broader learning goals.

Connecting basic skills teaching to other contexts presents organisational challenges

The linkage of basic skills teaching with authentic contexts presents a number of challenges (Casey et al., 2006; Leach et al., 2009; Leach et al., 2010; Ryan et al., 2012; Thomas and Ward, 2009). All approaches to embedded teaching require a whole of organisation approach (Carpentieri, 2007; Leach et al., 2009; Leach et al., 2010). There is a need for an embedding strategy at the senior management level, organisational planning, and sufficient resourcing to support the embedded teaching (Casey et al., 2006; Leach et al., 2010; Ryan et al., 2012; Thomas and Ward, 2009). Sligo et al. (2010)[46] list the following factors as contributing to better outcomes for apprentices receiving additional basic skills teaching in the workplace: basic skills tuition must be made relevant to the context of their vocational learning; there must be one-to-one tutoring in a non-classroom approach; the workplace must have a culture of learning with supportive employers who understand the role of literacy in the workplace and its potential contribution to productivity; and there must be a network of support for the apprentice consisting of three-way collaboration between the literacy tutor, the apprenticeship coordinator, and the employer.

Educational institutions have to make an effort to implement embedded basic skills teaching

Implementing a successful embedded approach to basic skills teaching requires particular efforts from the educational institutions. For example, in their research findings on the extent to which New Zealand's Tertiary Education Institutes (TEIs) were embedding literacy, language and numeracy at the organisation, programme and learner level, Hazlewood and Alkema (2013) report that all organisations found aspects of embedding challenging, including developing a whole of organisation approach, high staff turn-over, and embedding literacy, and numeracy in programmes for distance learners. In their evaluation of pilot projects to embed literacy and numeracy in Industry Training Organisations (ITOs) in New Zealand, Ryan et al.

46. Evidence came from a literature review, data on 200 apprentices who received additional literacy and numeracy support to help them complete apprenticeships, and case studies in 14 workplaces.

(2012)[47] identified various steps that educational institutions need to undertake to ensure successful embedding, including the development of an embedding strategy for both off-job training and on-job training, raising awareness with employers, profiling the basic skills demands of jobs linked to qualifications, and building internal capability. Moreover, educational institutions need to have tools for assessing and diagnosing learners needs. In New Zealand, for instance, most ITOs developed their own assessment tools for this.

The quality of teachers is crucial to successfully embedded teaching

Evidence indicates that when literacy provision is delivered by tutors, who lack experience and knowledge of literacy teaching, learner achievement suffers (Carpentieri, 2007). Several studies emphasise that positive attitudes by the teaching staff towards the learners and the subject matter and a personalised focus on the learners can make a difference (Casey et al., 2006; Coben et al., 2007; Leach et al., 2010). For instance, in the first year of the Accelerating Opportunity in the United States, shifting the culture within community colleges and perceptions about low-skilled students proved difficult. But shifts began when career and technical faculty members became familiar and comfortable with teaching adult education students and collaborating with adult education instructors (Anderson et al., 2014). Evidence from New Zealand shows the importance of educational organisations committing to ongoing professional development of their teaching staff (Leach et al., 2009; Leach et al., 2010). Findings from New Zealand suggest that most teachers want professional development to be practical rather than theoretical and academic (Hazlewood and Alkema, 2013).

Good embedded teaching requires teamwork between the tutors

In their research in England, Casey and colleagues (2006) compared two types of embedded instruction: *i)* courses in which vocational tutors were required to deliver literacy training; and *ii)* courses in which vocational tutors delivered vocational training but specialist literacy tutors delivered literacy instruction. The study revealed that where a single teacher was asked to take dual responsibility for teaching vocational and basic skills, learners were less likely to succeed than learners taught by two tutors (Casey et al., 2006). Similarly, Thomas and Ward (2009) and Marr and Hagston (2007) found that where tutors work as a team, for instance a numeracy specialist supporting the vocational teacher to plan and deliver sessions, learners were more likely to stay in training and complete vocational qualifications. This highlights the importance of a dual presence of both the vocational tutor and the basic skills specialist in the classroom and of teamwork between them (Leach et al., 2009). Analysis of the first year of implementation of the Accelerating Opportunity initiative in five US states showed that there are various approaches to team-teaching (see Box 7.5).

47. Industry Training Organisations (ITOs) implementing pilot projects in embedding literacy and numeracy funded by New Zealand's Tertiary Education Council (TEC) had been encouraged to be experimental with little guidance on how to implement embedding as a practice. Formal guidance from the TEC on embedding for ITOs did not come until two years into the project. This evaluation provides a useful insight into the challenges of implementing policy without sufficient guidance and direction from policy funders (Alkema and Rean, 2014).

Box 7.5. Team-teaching approaches in the Accelerated Opportunity initiative

Team teaching is an important aspect of the Accelerated Opportunity (AO) model which encourages equitable roles of the basic skills teacher and the career and technical education (CTE) instructor in the class. However, it has proven difficult to achieve this equity. According to survey results, the most common method in AO programmes 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 basic 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. Increasing buy-in for the AO model and improving team teaching between CTE and adult basic skills educators are now priorities in the five US states, which have already implemented AO programmes.

Source: Anderson, T., L. Eyster, R. I. Lerman, C. Clymer, M. Conway and M. Montes (2014), "The First Year of Accelerating Opportunity: Implementation Findings from the States and Colleges", Urban Institute, Washington D.C., www.jff.org/sites/default/files/publications/materials/413238-The-First-Year-of-Accelerating-Opportunity.pdf.

8. MAKING THE MOST OF LEARNING CONTEXTS

This chapter highlights the importance of the learning context. While some low-skilled learners may benefit from a classroom context, for many it can revive bad memories of their schooldays and they prefer home-based, work-based, or e-learning approaches to improving their literacy and numeracy skills. This chapter identifies family literacy programmes (8.1) and on literacy and numeracy provision in the workplace (8.2) as promising examples of contextualised basic skills learning that can reach people who are often not involved in further education.

8.1. Family literacy programmes

Family literacy programmes are important because low literacy can be "passed on" to children

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

Many countries have developed family literacy programmes

Family literacy can be found in many countries, including Canada (e.g. the Family Literacy Training Programmes), Mexico (e.g. *Aprendizajes en Familia*), the United States (with a National Center for Family Literacy based in Knoxville, Tennessee), and Germany (see Box 8.1). Regarding European countries, a study by Carpentieri et al. (2011) surveying the developments in the family literacy field across Europe found only few national strategies for family literacy or top-down policies that seek to develop comprehensive provision. Most initiatives in Europe tend to be bottom-up, and despite its advantages such as local responsiveness, this approach can lead to programme landscapes with few or competing initiatives (Ibid). UNESCO has championed family literacy as a component of its drive for universal literacy. During the UN Literacy Decade 2003-2012, UNESCO published project descriptions[48] and promoted the development of family literacy in the 35 countries where 85% of the world's illiterate population live (Benseman and Sutton, 2010).

48. Desmond S. and M. Elfert (2008) *Experiences from Africa and around the world*, UNESCO Institute for Lifelong Learning (UIL), Hamburg, http://unesdoc.unesco.org/images/0018/001804/180481e.pdf.

Box 8.1. The Family Literacy Project in Hamburg

The Family Literacy Project by the UNESCO Institute of Education 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 1 000 parents and 1 000 children annually.

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

Features of effective family literacy programmes

Evaluating the Manuka Family Literacy Project in New Zealand, Benseman and Sutton (2005) (see Box 8.3 on New Zealand experience of family literacy) identified the following features of effective family literacy programmes: a clear focus on literacy and numeracy development, parental commitment, separate as well as combined teaching sessions for parents and children, home visits and programme services, staff whose skills match the unique challenges of family literacy and progression routes for parents to further learning opportunities. Special teacher training is needed as appropriate teaching methods for children and adults are not the same.

Family literacy programmes can help parents and children

Well-designed programmes have been shown to promote child literacy, parents' capacity to support and motivate them to engage in further training. For example in France, the educative family actions (*Actions éducatives familiales*) has helped parents whose reading skills need development improve their engagement with their children's schoolwork since early 2013 (Carpentieri et al., 2001; Education.gouv.fr, 2015) (see also Box 8.2 on a family literacy project in the United Kingdom). Reviewing 29 family literacy, language and numeracy programmes, Brooks et al. (2008b) found that both parents and children benefitted. However, similar to findings of a multi-year study with 200 families in an urban area of Canada (Philips, Hayden and Norris, 2006), evidence suggests that the programmes benefited the basic skills of the children more than those of their parents. Parents reported that they benefitted most in terms of their ability to support their children's schoolwork, to rear them more generally and in terms of employment and self-confidence. The qualitative analysis of 13 of the 29 programmes revealed that: *i)* The delivery of family literacy programmes has become multi-modal; *ii)* Some programmes are being linked to indigenous literacy practices, perhaps in response to the criticism that family literacy programmes tend to supplant vernacular literacies with mainstream or school-like literacies (Reyes and Torres, 2007); and *iii)* Family literacy is becoming women's literacy as many programme providers and participants are women (Brooks et al., 2008b). In their study taking stock of various family literacy programmes, Anderson et al. (2010) conclude that "these studies demonstrate that family literacy programmes are effective in enhancing young children's literacy learning and adults literacy learning, provided there is sufficient focus on adult literacy instruction. Furthermore, other social and cultural benefits accrue beyond enhanced literacy skills".

Box 8.2. The Family Literacy Demonstration Programmes in the United Kingdom

Brooks et al. (1997) present the findings of a study that followed up with parents and children who had participated in the Family Literacy Demonstration Programmes by the British Skills Agency consisting of 12-week family literacy courses that took place in deprived areas in Cardiff, Liverpool, Norfolk, and North Tyneside in 1994 and 1995. The original evaluation of the programmes (Brooks et al., 1996) showed that they had been highly effective in boosting the parents' literacy skills, their ability to help their children to learn to read and write, and the children's language and literacy. Between 20 and 34 months after finishing the programme, 154 parents and 237 children were re-contacted in 1997 (43% of the parents and 60% of children who participated in the original evaluation). Parents were interviewed about their literacy and further courses they had undertaken and their employment. 86% of the re-contacted parents thought that their own reading and writing were continuing to benefit greatly or to some extent from the programme. The report's wider conclusions are very positive but the report does not offer a benchmark for comparison and does not explain what it was about the programme that led to its success in delivering positive outcomes two to three years later.

Source: Brooks, G., T. P. Gorman, J. Harman, D. Hutchison, H. Moor and A. Wilkin (1996), *Family Literacy Works: The NFER Evaluation of the Basic Skills Agency's Family Literacy Demonstration Programmes*, Basic Skills Agency, London; Brooks, G., T. P. Gorman, J. Harman, D. Hutchison, K. Kinder, H. Moor and A. Wilkin (1997), *Family Literacy Lasts: The NFER Follow-up Study of the Basic Skills Agency's Demonstration Programmes,* Basic Skills Agency, London.

Challenges of family literacy and numeracy programmes

Challenge: More research on family literacy programmes is needed

Although there is a growing body of empirical evidence that family literacy programmes enhance young children's literacy knowledge, there is a lack of longitudinal research to demonstrate that the benefits are sustained. Likewise, 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 and Morrison, 2007), more research is needed on longer term impacts (Anderson et al., 2010). The study by Carpentieri et al. (2011) about family literacy programmes in European countries pointed out that data on the extent of provision and research on family literacy are limited in most European countries, the exceptions being the Netherlands, the United Kingdom and Turkey.

Challenge: Gender issues

One of the major criticisms of family literacy programmes is that they perpetuate gender issues (Anderson et al., 2010). Programmes are criticised for unfairly placing responsibility for children's literacy development on women. For example, in their critical analysis of the Parent Education Profile, an instrument used by some family literacy programmes in the United States to measure support for children's literacy development, Prins and Toso (2008) concluded "it is women who will be observed and rated, whose time and energy will be directed toward children's schooling". On the other hand, researchers such as Nutbrown and Hannon (2003) found that fathers were also involved in the literacy lives of the children. Yet, for instance Macleod (2008) reports a number of reasons for fathers to discontinue attending family literacy programmes including: perceived threats to their masculine identity; feeling threatened by what they regarded as a feminised environment and gendered tasks; and feeling unwelcomed by the women participating in the programme. According to the review of family literacy by Anderson et al. (2010), gender issues in such programmes persist and are unlikely to be resolved soon.

Challenge: Funding

Intergenerational family literacy and numeracy programmes may be "the epitome" of relevant adult education, but it is also an educational oddity, straddling generations in a world where educational provision and policy is predominantly age-stratified (Benseman and Sutton, 2010). This can cause

challenges for the funding of such programmes as several ministries, including the Ministries of Education, of Higher Education, and of Employment and Social Affairs, need to cooperate to set up a funding mechanism for family-focused cross-agency initiatives (see for an example Box 8.3 on New Zealand experience of family literacy).

Box 8.3. New Zealand experience of family literacy

The Manukau Family Literacy Programmes (MFLP) in New Zealand illustrate how advocates of family literacy sometimes have to fight to have policies and funding changed to meet community initiatives. The City of Manukau Education Trust (COMET), a non-profit organisation that works in an area of high social needs and large Maori and Pacific populations, developed the Manukau Family Literacy Programmes (MFLP) based on the US Kenan four component of adult education,[1] parent education, child education and parent and child time. Each adult participant attended a tertiary education programme delivered on a school site for 20 hours per week. The children attended their usual programme at either the partner school or an associated early childhood centre. The adults worked toward an entry-level qualification in Early Childhood Education delivered at a pace to suit adults with low or no school qualifications and expanded to include parent education, life-skills and work-readiness and Parent and Child Together Time (PACTT).

Evaluations during the seven years of MFLP showed positive impacts for both the adults and their children (Benseman and Sutton, 2005): greater levels of self-confidence and self-efficacy, improved literacy skills, improved family well-being, greater participation in school life as parents and better performance at school for the children. Longer-term, many of the participants have gone on to gain formal tertiary qualifications (often in early childhood education or school teaching) and pursue more skilled employment than previously. Several of the first learners are now fully qualified teachers at the schools where they started as MFLP students. MFLP also successfully recruited Maori and Pasifika learners, most of whom had no qualifications, and who are under-represented in New Zealand tertiary education.

Despite its success and the community backing, the funding of MLFP presented a challenge. MLFP is a tertiary education programme by a community organisation delivered in schools, but funding streams of school and tertiary education are separate in New Zealand. The challenge faced by this community-driven initiative highlighted the absence of a funding mechanism for family-focused cross-agency initiatives. It was only thanks to ongoing advocacy of MFLP and the personal intervention of New Zealand's Prime Minister that the Ministry of Education, the Tertiary Education Commission and the Ministry of Social Development started discussions about resourcing of MLFP and the policies needed for a sustainable funding basis of further intergenerational family literacy programmes.

Source: Benseman, J. (2003), *Phase 2 of the Manukau Family Literacy Programmes pilot implementation. Interim (2nd) formative and process evaluation report for the City of Manukau Education Trust (COMET)*, The University of Auckland and Auckland Uniservices Ltd, Auckland; Benseman, J. (2004a), *Phase 2 of the Manukau Family Literacy Programmes: pilot implementation. Final (third) formative and process evaluation report*, The University of Auckland and Auckland Uniservices Ltd, Auckland; Benseman, J. (2004b), *'I'm a different person now' An evaluation of the Manukau Family Literacy Programme*, Ministry of Education, Wellington; Benseman, J. and A. Sutton (2005), *Summative Evaluation of the Manukau Family Literacy Project*, Auckland Uni Services Ltd. Auckland; Benseman, J. and A. Sutton (2010), "Family literacy – a case study in how to develop policy", http://unitec.researchbank.ac.nz/handle/10652/2104; COMET (City of Manukau Education Trust) (2014), COMET, Auckland, www.cometauckland.org.nz/.

1. Kenan model: Intensive (3-4 days a week), long-term (over a school year), focuses on low-literacy parents and their pre-school children. It includes adult basic education for parents, High/Scope education for children, parent education and time for parents and children to engage in activities together (Brooks, Pahl, Pollard, Rees, 2008).

8.2. Literacy and numeracy provision in the workplace

Benefits of literacy and numeracy provision in the workplace for employees and employers

Evidence shows that literacy and numeracy provision in the workplace can benefit both employees and employers. For employees who participate on a voluntarily basis and have the opportunity to use their (improved) skills in the workplace (Wolf, Evans and Bynner, 2009), basic skills training can lead to improved literacy, numeracy and confidence (Benseman, 2012), enhanced job performance (Bates and Holton, 2004), job retention (Campbell, 2003) and promotions (Askov, 2000), and can even reach those who are not normally involved in continuing education and training if the course is run in worktime and paid for (Benseman, 2012; Hollenbeck and Timmeney, 2008; Vorhaus et al., 2011). Benefits of workplace basic skills provision to employers include reduced error rates, better safety records, increased employee retention and morale and an improvement of the lifelong learning culture in the workplace (Bensemann, 2012; Conference Board, 2006).

Various countries have developed workplace basic skills initiatives

Countries such as Australia, Canada, England, Finland, France, Germany, the Netherlands, New Zealand, Norway, Scotland, Sweden, and the United States have developed workplace basic skills initiatives (NALA, 2011). For example, the Norwegian government subsidises employers to provide basic skills training for low-skilled employees (see Box 8.4 on the Basic Competence in Working Life Programme in Norway as an example of a basic skills programme in the workplace). This helps address the contentious issue of who is to ensure the employees' basic skills proficiency. In France, employers' and employees' organisations have taken responsibility for organising literacy training in each economic sector. The national agency for the fight against illiteracy (ANCLI) signed and implemented agreements to promote the development of basic skills training in several professional sectors and invited all these sectors to join the 'Good Practice Charter' which promotes action for basic skills learning (EU High-Level Group of Experts on Literacy, 2012) (see also Box 8.5 on the Australian Workplace English Language and Literacy (WELL) Programme).

Box 8.4. The Basic Competence in Working Life Programme (BKA) in Norway

In 2006, the Norwegian government launched the Basic Competence in Working Life Programme (*Basiskompetanse i arbeidslivet*, BKA), which is now administered through Vox, Norway's Agency for Lifelong Learning. BKA learning activities aim to strengthen basic skills in reading, writing, numeracy and information and communication technologies (ICT) and should be linked to work-related tasks and other job-related practices. Within the BKA scheme, companies can apply for funding to provide basic skills courses to their employees (European Commission/EACEA/Eurydice, 2015a). While there is no immediate connection between vocational training and the BKA programme, it can be considered a preparation for vocational training and many enterprises want to see vocational certificates as the end result of what is initiated through BKA. Courses are aligned to competence goals under the Framework for Basic Skills, developed by Vox, and are adapted to the participants' needs. Training often takes place on the workplace premises and school-like settings are avoided. BKA informs about its funding possibilities in newspapers, holds information meetings, has a network of BKA contacts who inform potential applicants, and cooperates with professional organisations and chambers of commerce. Between 2006 and 2011, more than 30 000 adults (ca. 60% women, and 60% older than 40 years) participated in the programme.

Source: European Commission (2011a), "Country Report on the Action Plan on Adult Learning: Norway", http://ec.europa.eu/education/adult/doc/norway_en.pdf; 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, Sørlie, J. (2010), "Basic Competence in Working Life: Norwegian Basic Skills Programme", ALM Conference 28 June, Norwegian Agency for Lifelong Learning, Oslo, www.alm-online.net/images/ALM/conferences/ALM17/Presentations/A1_Jan_Sorlie.pdf.

Box 8.5. Australia's Workplace English Language and Literacy Programme

Introduced by the Australian Government in 1991, the Workplace English Language and Literacy (WELL) programme provides grant funding to support integration of language, literacy and numeracy (LLN) education within vocational training, delivered in the workplace. The main aim of the WELL programme is to assist organisations to train their workers in job-related LLN skills. The WELL programme is integrated with vocational training and dedicated to the needs of the workplace. By building workers' LLN skills alongside vocational training, WELL training is intended to increase workforce flexibility and responsibility, productivity and efficiency, health and safety in the workplace, to improve communication and team work, and to create a training culture in the workplace. Between 2009 and 2014, more than 72 000 employees and 530 Indigenous Employment Programme (IEP) participants have completed training funded by the WELL Programme. Over that time, the programme has supported 1 030 training projects conducted by 160 Registered Training Organisations (RTOs) across 740 employer worksites in Australia. The large majority of employers (ca. 80%) report that the training has a positive impact on LLN skills as well as on employees' career prospects. Embedding LLN within vocational training produces greater improvement across key employability traits than vocational training programmes alone. The most important aspects for future success is attention to activities that support the identification of business needs, the availability of qualified and experienced trainers, and an efficient application process.

Source: UNESCO (2014g), "Australian Workplace English Language and Literacy (WELL) Programme", www.unesco.org/uil/litbase/?menu=4&programme=134.

Workplace basic skills courses can reach people not usually involved in continuous education

Looking at the findings of English-language research on adult literacy and numeracy since the year 2000 Vorhaus et al. (2011) summarise that "workplace basic skills courses reach people who are not normally involved in continuing education or training". For instance, the evaluation of 18 workplace literacy programmes in New Zealand (2007–2009)[49] (Bensemann, 2010; Department of Labour, 2010) showed that the workplace programmes attracted those who did not usually attend learning programmes, including those with low basic skills, low qualifications, men, and those with a Māori and Pasifika background (Department of Labour, 2010). Similarly, Wolf and Evans (2011)[50] found in their longitudinal study of government-funded basic skills workplace programmes in England that these courses reached people who are not normally involved in continuous education. 60% in a sample of 567 learners were male, compared with only 41% and 23% in publicly funded courses in colleges and community-based adult learning centres. Older workers also participated more than usually. While most had undertaken little or no previous, formal post-school learning and very few of the participants would have been attracted to a conventional basic skills class, Wolf and Evans (2011) identified a strong appetite for learning among them (see also Box 8.6 on mobile learning in Denmark). Finland's workplace-specific Noste Programme (2003-2009) was also successful in increasing the participation among low skilled employees (NALA, 2011) (see the Annex for more details on Finland's Noste programme).

49. Under the Upskilling Partnership Programme (2007–2009), evidence came from 18 programmes in 15 different workplaces across New Zealand.

50. This was a longitudinal study of the impact on learners and their organisations of government-funded workplace programmes designed to increase the literacy skills of employees. It involved 567 learners in over 53 workplaces whose reading and writing skills were tested at the start of their courses and one and two years later. In-depth information was gathered on all three occasions about their jobs, learning experiences, education, attitudes to work, and aspirations. At the same time, managers, training managers and course tutors were interviewed. A sub-set of sites and learners were studied and interviewed in greater depth. The courses studied typically offered 30 hours of tuition, after which learners had no further free workplace entitlement. These courses were shorter than is average for literacy (64 Guided Learning Hours in 2006/07) and numeracy courses (62 Guided Learning Hours) and well short of the 100 hours thought necessary for meaningful learner progress. The project examined whether this period had the hoped-for impact on skills, and whether it changed participants' learning trajectories.

Box 8.6. Mobile learning in Denmark

In Denmark, VUC[1] Southern Jutland has established basic education classes at the workplace in close cooperation with companies. VUC Southern Jutland is a part of the VEU, a counselling network that co-ordinates basic education according to the need and location of the employees. The VUC Southern Jutland Vocational Department owns two mobile classrooms in expandable lorries. Each classroom is made for 18 people and fully equipped for teaching, including a blackboard, laptops, wireless Internet, dictionaries, learning materials, a copy machine and printer and even a small kitchen. Two drivers are in charge of the vehicles and prepare the classroom for each lesson. Smaller classes of six dyslexic students take place in a camper which the teacher drives him/herself. Company training consists of basic education in the subjects Danish, arithmetic, and Danish for dyslexics. The classes are normally two days per week with three lessons each time. The classes are a part of the working day, and the employees come directly from their work and do not bother to change clothes. Providing basic skills training at the company site is a flexible solution, as the employees need no transport and can quickly return to their work. Unskilled workers are the main target group. VUC found that workers are more easily motivated to participate in basic skills courses, when they can see their colleagues going to class in their work clothes and hear them talking about class in the lunch break. Throughout the years, VUC has also successfully offered multi-company classes that are easily accessible for all participants and which also enable smaller companies that cannot spare many employees for a whole class to participate. VUC Vocational Department advertises its offer during cultural events, where the mobile classrooms make people curious, so that they stop by for a chat with the VUC consultants.

Source: EU Lifelong Learning Programme (n.d.), *Literacy needs for vocational purposes in Europe. A documentation: facts, information and examples*, Literacy and Vocation project, Zukunftsbau GmbH, Berlin.

1. There are 29 adult education centres (Voksenuddannelsescenter, VUC) in Denmark. General adult education programmes are part of Denmark's public education system and aim at improving adults' future job and educational possibilities. The budget for the Southern Jutland VUC Vocational Department is about EUR 480 000 per year.

Features of high impact workplace courses

Based on the reviewed evidence (see below), the following features of high impact workplace courses have been argued to be important:

- All key stakeholders of the company have a clear understanding of the course purpose (Kuwan and Baum, 2005).
- Managers from senior level through to supervisors support the adult basic skills provision and create environments that allow the use of new skills (Ashton et al., 2008; Benseman, 2012; CEDEFOP, 2013b; Gray 2006; Gray and Sutton 2007; Hollenbeck and Timmeney, 2009; Kuwan and Baum, 2005; Townsend and Waterhouse 2008).
- Course providers have a high level of experience of running literacy and numeracy courses in the workplace (Benseman, 2012).
- Tutors are experienced in workplace programmes and have basic skills-related teaching qualifications (Benseman, 2012; Kuwan and Baum, 2005).
- The course purpose and content are clearly outlined and not presented as addressing employees' deficiencies (Benseman, 2012; Evans, Waite and Kersh, 2012; Marr and Hagston, 2007[51]).
- Participants participate voluntarily and are motivated and committed (Benseman, 2012).

51. Evidence of the place of numeracy teaching in the workplace was gathered through a literature review, interviews with industry representatives, and case studies in three work sites.

- The teaching content is aligned with learners needs and the company's priorities (Benseman, 2012).
- Courses are run in work time and are paid for (Benseman, 2012; Hollenbeck and Timmeney, 2008).
- The course uses multiple teaching methods, tools and contexts (Hinman and Fletcher, 2008).
- The course includes both on- and off-job training for practice and reflection (Marr and Hagston, 2007).
- Trained employees have the opportunity to exercise their (improved) skills in the workplace and to further improve their skills through further formal or informal learning (Wolf, Evans and Bynner, 2009).

Support of the supervisors and co-workers is essential for participation and programme sustainability

To be effective, workplace literacy and numeracy programmes need the support and commitment of employers, supervisors and co-workers (Ashton et al., 2008, Askov, 2000). Supervisors, managers, and co-workers need to understand how to support the learning process. In Indiana's 21st Century Workplace Skills Initiative comprising ten workplace literacy projects,[52] almost all participants (ca. 1 800) indicated that they had received such support from co-workers and supervisors and that it had helped motivate them (Hollenbeck and Timmeney, 2009). According to the 'Enhancing *Skills for Life*' longitudinal study in the United Kingdom (Wolf et al., 2008, p. I), "Learning programmes initiated by and within workplaces are the ones that survive long-term". In other words, employer commitment is crucial to the sustainability of workplace literacy and essential skills training efforts. An in-depth review of a number of workplace initiatives in the United States came to the same conclusion, linking employer engagement, "participation and support" to a programme's "impact" and ability to "endure" (Rosen, 2008). The issue is underlined in other literature, which places employer commitment and willingness to make learning a priority at the top of the list of ingredients for success (Gray 2006; Gray and Sutton 2007; Townsend and Waterhouse 2008). The Vocational Qualification Programme (VQP) offered by Philips Electronics in the Netherlands between 2004 and 2011 is an example of this (CEDEFOP, 2013a) (see the Annex for more details on VQP in the Netherlands).

Learners and managers invest in workplace basic skills programmes for a wide range of reasons

Hollenbeck and Timmeney (2009) report in their evaluation of ten workplace literacy projects funded by the Department of Workforce Development in Indiana that the chance to prepare for college or to earn college credits, was a strong motivator for participating employees. Employers' primary motivation was to provide workplace literacy training as a benefit for employees and not as an expected benefit for business. The business perspective seemed to be that if workers improved their skills and had better morale, they

52. Hollenbeck and Timmeney (2008, 2009) evaluated a set of ten workplace literacy initiative projects in Indiana, funded by the Indiana Department of Workforce Development (DWD) and making up Indiana's 21st Century Workplace Skills Initiative since 2005. The aim of the initiative was to raise the basic workplace skill levels of workers in Indiana while exploring the viability and effectiveness of different models of workplace basic skills education. The core of the initiative was a certification system. The DWD awarded certificates to workers who achieved certain levels of proficiency in reading, maths, critical thinking, problem solving, and computer literacy as assessed by the Comprehensive Adult Student Assessment System (CASAS) and computer literacy as certified by Internet and Computing Core Certification (IC3). There were about 1 800 respondents included in the evaluation analysis whose average age was about 40 years-old and of which about 54% had no postsecondary education experience.

were likely to be somewhat more productive, and consequently, the business would benefit. Similarly, in their longitudinal study of the impact of government-funded workplace programmes under the *Skills for Life* initiative, Wolf and Evans (2011) found that managers were motivated largely by factors other than the desire to fill skill gaps or improve productivity. Their main impulse was to strengthen the psychological contract between employer and employee by demonstrating that they valued their employees. The employees' motivation to participate in the courses included improving their job performance, making up for previously lost opportunities in education, future career aims, helping children with their homework, pursuing interests outside work, and learning new skills as a form of personal development (Evans, Waite and Kersh, 2012).

Formal and informal workplace literacy and numeracy skills training

Gray's review of international literature on workplace literacy and essential skills (2006) found that most employers offering training to their workers supported both formal and informal learning approaches. However, some employers believe that informal strategies are "more important and effective" than formal training and workers have shown "an overwhelming preference" for less formal, more hands-on training, as opposed to courses or classes (Gray, 2006, pp. 3, 20-21; Merrifield, 2007, pp. 18-19). In addition, SMEs tend to prefer informal training (much of it undocumented) because they can only train small numbers of workers at a time (Gray, 2006). Other factors to consider when deciding whether to go the formal or informal teaching route include quality assurance and attitudes towards learning. In the United Kingdom, the national *Skills for Life* strategy centred on the formal approach because it made quality assurance easier (Merrifield, 2007). A study looking at literacy and essential skills programmes in workplaces in Canada and the United Kingdom found that "formal workplace programs had the potential to compensate for previously negative educational experiences". Moreover, "employee participation in a formal program acted as the catalyst for the various informal training activities that occurred back on the shop floor" (Taylor, Evans and Mohamed, 2008, pp. 6-9, 11).

Peer-to-peer teaching in the workplace is cost-effective

British and Australian evidence suggests that low-skilled employees often prefer informal learning at work delivered by peers and supervisors over learning in a college that reminds them of school (Evans and Waite, 2008; Marr and Hagston, 2007; Yasukawa, Brown, and Black, 2012). For example in the United Kingdom, the union learning model by *Unionlearn*, the learning and skills arm of the British Trades Union Congress (TUC), consists of peer-to-peer coaching of literacy and numeracy (House of Commons, 2014). 30 000 trained union learning representatives train their fellow workers, such as dinner ladies teaching other dinner ladies, train drivers teaching other train drivers. Between 2004 and 2014, about 1.2 million learners have been training at an average cost of GBP97 per learner, which is less than 5% of the cost of the typical student in a further education college (House of Commons, 2014).[53] Despite the advantages of peer-to-peer learning, there may be concerns about quality assurance of the teaching.

Paid training leave encourages participation in education programmes

Paid training leave is a common characteristic of successful workplace literacy and numeracy courses. If low-skilled adults are employed and wish to follow an educational programme during working hours, in the absence of a provision for paid training leave, this could imply the loss of wages and form a barrier to participation. For example, in Indiana's 21st Century Workplace Skills Initiative, about half of the workplace sites compensated workers for their time spent in training and had no difficulty in recruiting individuals and had high attendance rates. On the other hand, when the training was on the employees'

53. In the United Kingdom, around half of all the learning that unions do is funded by the taxpayer through the Department of Business Innovation and Skills; the other half is funded by the unions themselves.

own time, attendance faltered, and the expected number of participants lagged well behind what was expected (Hollenbeck and Timmeney, 2009). CEDEFOP and Eurydice research (European Commission/EACEA/Eurydice, 2015a) found that all European countries (except Ireland and Greece) have included in their regulations the possibility for adults to take study leave. However, in only two countries, namely Denmark and Spain, low-qualified adults can benefit from training leave as a priority group. In Spain the individual training permit (*Permiso individual de formación*) identifies the low-qualified and gives them preferential treatment for attending an officially-recognised training activity leading to an official qualification. In Denmark, employers can request the VET allowance to cover wage loss incurred through employee's training leave (European Commission/EACEA/Eurydice, 2015a).

Blended learning seems to benefit workplace learners the most

The literature suggests that participants in workplace literacy and numeracy programmes benefit most from "blended learning", i.e. the use of multiple teaching methods, tools and contexts (CAEL, 2006, pp. 14, 73-74; Gray, 2006, pp. 36-38; Hinman and Fletcher, 2008, p. 6). Blended learning responds to the diversity of workers as they have not only different skills needs, but also learning styles, work and family schedules, and technical support (such as computer access) (Gray, 2006; Hinman and Fletcher, 2008). By incorporating a mix of teaching methods, tools and contexts, a workplace training programme has a better chance of recruiting, assisting and retaining workers with basic skills needs. Although there is no perfect cocktail in blended learning, getting the mix right for each specific work context is essential. This could mean using some combination of instructor-led classes, drop-in workshops, shop floor, hands-on instruction, the use of peer trainers and mentors, simulation or role-playing, field trips to worksites, job-shadowing, and self-access e-learning (CAEL, 2006; Hinman and Fletcher, 2008).

Workplace basic skills courses can increase learners' confidence, basic skills, employees commitment, and job performance

In New Zealand, Benseman (2012) found that 60% of workplace course participants[54] reported changes in how they think about themselves, in terms of improved self-confidence, satisfaction with their basic skills, and belief in their ability to do their jobs (e.g. speaking in different work situations). Courses had a strong impact on participants' reading skills, with 86% of them making gains in their reading scores (31% moved up an ALL level), but less impact on writing skills, with 66% of participants making gains in their writing scores. There was consistent evidence that the courses had a positive impact on workplace practices. But determining the extent to which changes in the workplace resulted from improved basic skills is not straightforward because of the complex relationship between these two aspects (Gray, 2006). Course participants cannot always simply transfer their newly acquired basic skills to the workplace because they need opportunities provided in the workplace to do so (Benseman, 2012).

Skills developed through workplace basic skills training can contribute to a company's productivity

Contributions of improved basic skills to productivity include (Bensemann, 2012):

- More accurate completion of forms such as incident reports and timesheets.
- Improvements in specific language, literacy and numeracy skills (e.g. measuring).

54. In New Zealand's 18 literacy, language and numeracy programmes under the *Upskilling* project, a total of 491 course participants, aged on average 40, were interviewed and assessed pre-course and 343 (69.8%) of these participants were also interviewed and assessed post-course; most of those who missed the post-course interviews had left their companies and were not able to be contacted (Benseman, 2012).

- Better following of policies and procedures.
- Improved oral communication.
- Increased confidence in work roles, and in taking initiative.
- Less frustration with workmates and supervisors.

(See also The challenge: Measuring performance and productivity outcomes)

Workplace basic skills training can have a lasting effect on learners' literacy and numeracy practices

Evidence shows that voluntary adult learning in the workplace can change learning trajectories, while those who are obliged to study are less likely to continue learning (Alkeman and Rean, 2014; Wolf and Evans, 2011)[55] found that voluntary participation in short 30-hour workplace training under the *Skills for Life* strategy and learner satisfaction with the courses were correlated with higher rates of later participation in adult education. Over a two-year post-instruction period, average performance continued to improve for former participants who used their literacy skills actively in and out of the workplace.

Learners with a different mother tongue benefit from workplace programmes

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). While Wolf and Evans (2011) attribute the improvement simply to continued exposure to an English-speaking environment, a study of ten workplace literacy projects in Indiana also found that the most positive learning gains in maths and reading took place in the workplace site with an ESL learning programme, suggesting that ELS learners benefit from workplace programmes (Hollenbeck and Timmeney, 2009).

Employees evaluate workplace programmes positively, but do not evaluate the economic benefits

According to a survey of Canadian employers, they appreciated the value of how their workplace programmes "enhanced workers' lives, personally and at work, and thereby contributed to a culture of lifelong learning in the workplace". Most of those interviewed "were reluctant to try and measure the economic benefits of workplace literacy training or tie the results too closely to the bottom line" because of the fact that such programmes cannot be expected to have an "immediate" impact (Plett, 2007, pp. 65-66). Similarly, in their study of *Skills for Life* workplace courses, Wolf and Evans (2011) report that managers believed the courses improved staff confidence and morale, but reported very few examples of direct impact in economic terms. According to the supervisors and managers in the workplace *Upskilling* programmes in New Zealand, learners had improved in personal and job confidence, teamwork, communication, attitude, initiative, ability to work unsupervised, willingness to try new tasks, and completion of paper work, and interest in training (Benseman, 2010).

Challenges of work-based literacy and numeracy teaching

Challenge: Measuring performance and productivity outcomes

The Kirkpatrick model is the most popular approach to evaluation of workplace literacy programmes (Pye and Hattam, 2008; Dunberry and Péchard, 2007). Kirkpatrick's four levels of evaluation include:

55. See footnote 50.

i) Learner reaction to the training programme; *ii)* Learning or knowledge acquisition; *iii)* Learning or knowledge transfer (job performance); and *iv)* Impact on the business productivity (Salomon, 2009). Programme evaluations have tended to focus on the first two levels, with only some reporting on Level 3 and very little on Level 4 (Gray and Sutton, 2007). Evaluation at Level 4 is not easy "because it can be extraordinarily difficult to isolate the effects of the training alone on certain business metrics, [especially since] employers often implement more than one improvement strategy at a time" (CAEL, 2006, pp. 105-106). Moreover, a Level 5 has emerged which is supposed to capture return on investment (ROI), "the true monetary value of the program by comparing the monetary benefits with the actual costs of administering the program" (CAEL, 2006, p. pp. 105-106). While ROI evaluation can be very difficult to carry out, usually requiring expert and costly assistance and/or special software, many believe it is "critically important for showing employers the strategic, bottom-line importance of training and workforce development" (Benseman and Sutton 2007: 9-10; CAEL 2006, pp. 105-6). Recently, due to growing concern about getting employers more interested and involved in literacy and essential skill training, there has been a shift in evaluation focus towards performance and productivity. One example is the Workplace Literacy Language and Numeracy Evaluation Toolkit Project (WoLLNET),[56] which developed a web-based, theoretically grounded toolkit "to enable employers, providers and unions in participating countries to systematically evaluate the impact of workplace basic skills training programmes […] on individual and organisational performance" (WoLLNET, 2014).

Challenge: Few enterprises (can) develop lasting opportunities for workplace learning

Workplace basic skills programmes are often not sustained beyond a pilot phase (Finlay, Hodgson and Steer, 2007; Wolf and Evans, 2009). In New Zealand, Benseman (2012) found considerable variation in developments among companies 12-15 months after the initial *Upskilling* courses finished. Most of the companies had come to see that literacy and numeracy needs were greater than they had originally anticipated. About half had taken steps to improve the readability of basic skills-related aspects of their operations (e.g. signage, orientation material). Some companies had developed strategic plans that integrate basic skills into their ongoing operations and training programmes (Benseman, 2012). Wolf and Evans (2011) found that in just over two years 14% of the 53 workplace learning sites previously supported by government funding under the *Skills for Life* initiative had closed. In over half, there was no manager in post who had any knowledge about the courses which had taken place. The workplace learning model tracked by Wolf and Evans was top-down provision, with short-term funding and heavy fixed costs. This shows the difficulty in sustaining provision where there is lack of organisational support at top and line management level and/or of management continuity (Evans, Waite and Kersh, 2012).

Challenge: Government subsidisation

An obvious question is why more firms do not undertake workplace training. Government subsidisation may be a critical catalyst to increasing the incidence of workplace literacy and numeracy programmes (Campbell, 2003; Peterson, Peterson, Ott and Wilson, 2002; Hollenbeck and Timmeney, 2009). According to Hollenbeck and Timmeney, 2009, public funding is not simply altruistic for at least three reasons. First, states may wish to avert the social costs of unemployment including lost productivity, external costs for treatment of physical or mental health problems, and loss of tax receipts. The second rationale for public funding is the notion that employers tend to avoid offering training that imparts general skills because of potential poaching by other employers (Becker, 1975). A third justification for public intervention in the market for training is that capital markets do not readily fund investments in human capital because human capital accumulations are not valued on a company's financial statements; human

56. The WoLLNET project ran between 2007 and 2009 and was jointly funded by the European Commission's Leonardo da Vinci Sub-Programme, the London Development Agency and the Learning and Skills Council London Region (see: www.wollnet.org/inbrief_en.htm).

capital cannot be collateralised, and business financing has a short-term payoff bias that militates against the funding of training (Hollenbeck and Timmeney, 2009).

Challenge: Employers recognise the issue of low basic skills but are hesitant to take the initiative

According to the Australian Industry Group (2012),[57] 75% of consulted employers in Australia reported that their businesses were affected by low literacy and numeracy levels among employees. Although employers do not consider themselves as having the capacity to address the issue, a survey undertaken as part of the report indicated that it is possible to shift employers' perception about this. Many employers believe that tackling the issue of low basic skills must be a shared responsibility between the government, education authorities and employers. They also acknowledge that the involvement of managers is critical for efficient basic skills workplace courses.

Challenge: There is a role to play for trade unions in the provision of workplace learning

Reviewing evidence from literature and two small case studies, Yasukawa, Brown and Black (2012) argue for a larger role of unions to support basic skills learning in the workplace. Workers and unions have the opportunity to shape workplace learning to meet their needs along with those of the employers. Experience in Canada has shown that workplace education and training is successful when the union is an equal partner with management in decision-making and union involvement is highly visible to learners (Centre for Workplace Skills, 2011). Union involvement affects the programme approach and its outcomes and union membership appears to lead to more participation in employer-paid and formal courses (Canadian Labour and Business Centre, 2005; CODA, 2011). In the United Kingdom, around 15-20% of what unions do is now about learning, with an increasing focus on workers who would otherwise never stop moving in and out of low-paid jobs (House of Commons, 2014). However, Union Learning Representatives, who have proven an important factor in enrolling learners in work-based courses, are present in only 13% of United Kingdome's workplaces. They are often absent from those areas of the economy where skills and training problems are often at their most acute, notably in private sector services such as hotels, hospitality and retailing (Lloyed and Payne, 2006; Warner and Vorhaus, 2008).

Challenge: Workplace basic skills training requires the involvement of all relevant stakeholders

Evidence shows that from conception through to planning, design, marketing, implementation, delivery and evaluation, managers, supervisors, workers, union representatives, providers and instructors must work together as a team to determine where the training needs are, what the goals of training should be, how training should be delivered and how the entire process and its results should be evaluated (Folinsbee, 2007; Gray, 2006; Townsend and Waterhouse, 2008; Parker, 2007). The various stakeholders have their own interests and objectives but it is only by recognising this and incorporating the diversity into the training agenda that strong support for and participation in the programme can be ensured. Giving everyone an equal voice fosters confidence and trust and strengthens the stakeholders' commitment to the programme and ownership of it, thereby promoting not only quality and relevance, but also sustainability (Folinsbee, 2007; Gray, 2006; Townsend and Waterhouse, 2008; Parker, 2007).

Challenge: Employers need to create environments that allow the use of newly acquired skills

One important condition for effective workplace learning is that trained employees have opportunities to exercise their (improved) skills (Benseman, 2012; Gray, 2006). Wolf, Evans and Bynner (2009) confirm

57. This report sets out the findings of the National Workplace Literacy Project that started in 2009, including evidence gathered through consultation with employers and evaluation of workplace trial sites (Australian Industry Group, 2012).

that such opportunities can result in substantial progress but found that they are quite rare in England. Benseman observes in his study of 18 workplace courses in New Zealand that the transfer of newly learned skills to the workplace can be facilitated by changes made to better accommodate employees with low literacy skills, such as allowing company documentation in plain English (Benseman, 2012). In describing the importance that participants of workplace literacy programmes in Indiana placed on receiving some college credits, Hollenbeck and Timmeney (2009) suggest that employers or providers interested in offering workplace basic skills instruction should collaborate with postsecondary institutions to facilitate further learning.

Challenge: Contextualising literacy and numeracy learning in the workplace

Hollenbeck and Timmeney (2009) observed a lack of contextualisation in the ten workplace literacy projects making up Indiana's 21st Century Workplace Skills Initiative. The project evaluation found that the typical site had made some effort to include workplace materials but that they were generally not as central to the instructional materials as expected. Several reasons might explain the low incidence of contextualisation. First, the programmes were attended by employees from different firms making it difficult to find materials relevant to all participants. Second, some of the workplace sites used off-the-shelf instructional materials that had been developed for other employers, and that were modified only slightly (Hollenbeck and Timmeney, 2009).

Challenge: There is little information on what is working best

There is little information about what kinds of workplace programmes workers with basic skills needs are participating in and what is working best (Taylor, Evans and Mohamed, 2008). A 2007 review of workplace literacy and essential skills training programmes in New Zealand (Gray and Sutton, 2007, p. 5) found "no evidence that one programme model was more effective than any other". This echoes what the wider literature on literacy and numeracy provision in the workplace conveys: what counts ultimately is not which model is used, but making sure that it suits the learners and their employer in terms of their specific needs and goals (CCL, 2007).

Challenge: Numeracy training needs to be framed positively

An Australian study (Marr and Hagston, 2007)[58] looking at the place of numeracy teaching in the workplace argues that numeracy training for low-skilled workers needs to be framed positively, rather than as a response to a deficit. Similarly, Evans, Waite and Kersh (2012) positively assessed that the *Skills for Life* programmes were not framed as addressing employees' deficiencies. Marr and Hagston (2007) argue that for numeracy teaching to be efficient, the learners' numeracy skills needs have to be explicit, input into training programmes is required from both numeracy and industry experts, and on- and off-the-job training is important to allow learners time for practice and reflection.

Challenge: Instructors of workplace programmes need to be flexible

Hollenbeck and Timmeney (2009) note in their evaluation of ten workplace programmes in the US State of Indiana that sometimes work-related responsibilities got in the way of attending class. Instructors had to be flexible because they were never quite sure about how many students they would have in class and found this situation relatively challenging.

58. Evidence was gathered through a literature review, interviews with industry representatives, and case studies in three work sites.

Challenge: Standardised tests

A variety of generalised or standardised assessment tools intended for use across various workplaces have been developed, for instance the Work Readiness Credential and WorkKeys in the United States and the TOWES/Test of Workplace Essential Skills in Canada (CAEL, 2006; Folinsbee, 2007). However, the existing tools have been criticised for not being sensitive enough to measure the small amounts of progress that participants may make (Gray, 2006; Merrifield, 2007). In this connection, the Enhancing *Skills for Life* longitudinal study developed and piloted a Reading and Writing Assessment Tool and an Inventory of Teacher Attitudes and Practices (Gray, 2006).

9. ANNEX: EXAMPLES OF POLICY INTERVENTIONS FOR LOW-SKILLED ADULTS

Australia's mandatory Literacy and Numeracy Training programme for Jobseekers

In 1998, Australia's federal government introduced the Literacy and Numeracy Training Programme for Jobseekers which provided literacy and numeracy training that originally targeted unemployed jobseekers aged 18-24 but that was later made available to jobseekers of any age. This training was obligatory if jobseekers wanted to receive unemployment benefits, a policy known as Mutual Obligation. The programmes provided up to 400 hours of basic literacy and numeracy training, and were designed to lead to measurable improvements in those skills (McKenna and Fitzpatrick, 2004). Provision for these mandatory programmes was via competitive tender (Searle, 2004).

An evaluation of the Literacy and Numeracy Training programme in 2002 contains the following findings (Rahmani et al., 2002):

- 84% of the jobseekers targeted by the programme participated in it, with most participants stating that the primary reason for participation was to improve their literacy and/or numeracy skills, rather than because they were required to do so.
- 30% of those not enrolling on the programme cited the reason that they had obtained a new job.
- 60% of the programme participants did not complete their literacy training, mostly because they had found employment.
- 17% of the programme participants achieved a successful outcome, with success measured as achieving one of the approved outcomes of the National Reporting System.
- 80% of responding participants thought the training had improved their literacy or numeracy skills.

The evaluation found little difference in employment outcomes between eligible jobseekers who engaged in literacy training and those who did not. Comparing the same groups, the evaluation found also little difference in earnings. The evaluators urged caution regarding the evaluations of the programme's impact on earnings and employment rates. First, participants in the programme had less time and opportunity to seek employment then those not participating. Second, the evaluators had access only to short-term results, as the evaluation was carried out soon after programme completion. Overall, the evaluators concluded that programmes such as the Literacy and Numeracy Training Programme for Jobseekers have a promising potential in improving a wide range of outcomes for participants (Rahmani et al., 2002).

Finland's Noste programme to forestall a projected skilled labour shortage

Finland's Noste Programme ("Lifting Up") ran from 2003-2009 and aimed to raise the competences of disadvantaged adults without vocational education and training and of those whose qualifications were outdated. 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 (Ministry of Education and Culture Finland, 2010). The programme aimed to forestall a projected skilled labour shortage, to raise the employment rate, and to further equality in society. Over the seven-year period of the programme, funding came from the central government which contributed EUR124 million to local and provincial projects (Ministry of Education and Culture Finland, 2010). In exchange for funding, education providers were required to work with employees and employers to develop workplace-specific implementation approaches. For learners, studies were free of charge, but those

wishing to take examinations leading to qualifications were required to pay examination fees. Noste was a very wide ranging programme, providing funding for basic education, vocational qualifications, ICT training ("computer driving licences"), and unfinished compulsory-level education (Ministry of Education and Culture Finland, 2010). The programme was primarily targeted at 30-59-year-olds, although those aged 25-29 were eligible, if they were seeking to complete the comprehensive school education. A high level of customer orientation was ensured through targeted outreach activities including company visits and face-to-face discussions, needs analysis and counselling. Implementation was based on tripartite co-ordination, close co-operation with local and regional institutions, local trade unions and education providers (OECD, 2014c).

By 2009, a total of 25 700 adults, representing approximately 7.3% of the target group had taken part (thereby not meeting its participation targets of at least 10%). Noste was successful in increasing the participation among low skilled employees, raising the national qualification levels and the number of qualifications, and has provided a range of employability-related benefits. However, the programme does not appear to have improved participants' economic or occupational status, at least in short-term assessments (NALA, 2011).

Helping experienced but low-skilled workers to gain diplomas in the Netherlands

In the Netherlands, the Vocational Qualification Programme (VQP) was offered by Philips Electronics Netherlands between 2004 and 2011. It aimed to train the company's staff to meet the skills and knowledge requirements of the company and the labour market, bringing employees up to a basic qualification or offering alternatives for those who were not able to reach this level, and to help experienced but unqualified production workers to gain a sector-recognised diploma (CEDEFOP, 2013a). VQP was a joint initiative of Philips Electronics and the Netherlands' four largest employer organisations, defined in a collective labour agreement in 2004. VQP's success depended on stakeholder involvement to make the training and validation outcomes more relevant to the continually changing labour market and more respected among other employers. In 2004, local VQP training programmes were set up in every production unit, all under the framework of the national VQP training scheme, which still allowed for adaptions to local training needs and infrastructure. Dual training courses were included in the VQP training plan, where at least 60% of the time was devoted to practical tasks such as processing, metalwork and logistics industries. Before the training, candidates with at least two-year work experience took part in assessment of their prior learning (APL) in order to tailor individual training programmes. Between 2004 and 2010, 1 900 employees gained a nationally recognised diploma, and 3 000 employees, corresponding to 75% of Philips Electronics Netherlands' overall employees, had undergone training. After 2010, the company focused on low-skilled, aged 40+ employees who had not yet taken part in training.

According to CEDEDOP (2013a), VQP proves that it is possible to train people with lower qualifications, or without, so that they can gain a nationally recognised diploma. Lessons learned include that being an organisation that believes in its workers and puts effort into improving their qualifications and career prospects pays off; that it is important that training is developed according to labour market needs; and that the whole organisation needs to adapt, providing, for example, training time during work time and coaching throughout the entire process.

Saakshar Bharat Mission in India

The Saakshar Bharat Mission is the centrally sponsored nation-wide literacy scheme of the Indian Department for School Education and Literacy. It was launched in 2009 with the objective to increase women's literacy and to foster lifelong learning in rural communities through the establishment of an institutionalised adult education system, parallel to the formal education system. While India's national literacy rate was 74% in 2011 (an increase of 9% compared to 2001), the literacy rate of women (66%)

continues to be lower than the men's rate (82%). The scheme aims to reduce this gender disparity and thereby to achieve the government's target of 80% national literacy. This implies the provision of basic literacy to 70 million people, of which 60 million are women (UNESCO, 2014k). Local educators, the radio and TV are used to mobilise potential learners, including a recent promotional video with national celebrities performing a Bollywood-style song about the programme (www.youtube.com/watch?v=k7AOXQY9iLM) (UNESCO, 2014k).

A Saakshar Bharat programme typically provides 300 hours of basic literacy education, vocational education and skill development, applied sciences and sports to a learner. Saakshar Bharat is described as a 'people's programme' because the government acts as facilitator and resource provider that works closely with local communities to tailor the programme to their needs. The curriculum includes core content based on the broad National Curricular Framework for Adult Education and content designed according to local needs and relevance. Adult educators and subject experts develop learning material based on assessment of learners' needs and interests. Before eventually becoming standardised learning material, such material undergoes scrutiny by the Quality Assurance Committee at national level, is field-tested and revised if necessary. Literacy educators act as mobilisers and teachers and impart literacy skills to groups of 8-10 learners. Most are volunteers who receive training before and during their work as teachers in local languages, methodology and practice in teaching adults.

The Adult Education Centres (AECs) are the operational arm of Saakshar Bharat, responsible for the organisation and delivery of classes. AECs are established by local governments at village level (*Gram Panchayats*), with one AEC being set up for a population of 5 000. Every AEC has two paid coordinators (*Preraks*), of which at least one must be a woman reflecting the programme's drive to encourage gender equality. AECs offer services such as course registration, a venue for teaching, a library and reading rooms, and the promotion and practice of sports and cultural activities (see also Box 6.10 for more details on the coordination and funding of the programme).

According to UNESCO (2014k), from 2009-2012 most of India's states have successfully implemented Saakshar Bharat, expanding the programme to 372 districts and establishing 170 000 facilities such as libraries and reading areas. During these three years, the National Literacy Mission Authority assessed and certified 14 438 004 adults for their literacy and numeracy proficiencies.

Guidance and mentoring for vulnerable adults in Ireland

In Ireland, the Ballymun job centre (BJC) has provided free of charge support services to unemployed job-seekers to find employment and develop a career since 1986 (CEDEFOP, 2013a). The BJC is a non-profit, non-governmental organisation that is funded through the local employment services, the department of social protection, and support from Ballymun's drugs task force and private funding. It has built relationships and works closely with a wide range of public and private, community, national and European organisations. The BJC provides a range of services including individualised and group career guidance and counselling, basic and specific skills training, and coordination and inter-agency approaches to meet the needs of vulnerable job-seekers and to create pathways to further education and training or employment. Unemployed job-seekers can register with the service or may be requested to attend an appointment as part of the Ireland's national employment action plan (CEDEFOP, 2013a). In the BJC service, a typical route for an individual starts with a registration process where the needs are identified through a one-to-one information session. The person is then referred to a guidance practitioner in a specialised service that supports early school leavers, VET learners, and the long-term unemployed. The guidance practitioner helps to identify personal skills, working style, potential and career interests, and encourages the development of career objectives and self-efficacy.

With the help of EU funding, the BJC has developed various guidance tools and methodologies that assist the individual and practitioner, including an audio visual web-based tool for identifying competences developed in everyday life which is mainly used with vulnerable clients who feel they have no potential in the workplace due to weak basic skills. In 2011, 2 274 individuals accessed guidance and employment support services, 11% of them found jobs and 36% started education and training. According to CEDEFOP (2013a), over the years BJC has made efforts to ensure that research findings contribute to improving services, activities, and skills of guidance staff and proposes to transfer this model to other contexts and target groups.

Essential skills certificate for vulnerable adults in Ireland

In Ireland, the EQUAL essential skills certificate is a tool designed to help adults, who missed out on earlier education opportunities, to access education and training and/or progress in the labour market (CEDEFOP, 2013a). EQUAL Ireland Education Research and Related Services Co. Ltd is a not-for-profit charitable trust trading under the name EQUAL Ireland, originally founded in 2001, and offering the essential skills certificate since 2006. Various stakeholders are involved in the provision of the essential skills certificate, including social partners and community representatives who contribute to the academic content; education and training providers who manage the development and delivery of the programme and ensure academic quality; adult learners who ensure the relevance of the teaching content to everyday life and the suitability of delivery methodologies and support systems; and Ireland's vocational education committees. The original multi-stakeholder partnership was developed with funds from the EU EQUAL initiative and has since been taken over by Sectorial Skills Alliances (CEDEFOP, 2013a). EQUAL Ireland provides two ways, in which to obtain the essential skills certificate. When an enterprise encounters difficulties and workers begin to lose their jobs, EQUAL Ireland is invited to address the workforce either by the employer, the trade union or both, to motivate workers to use education as an option for self-development. In addition, EQUAL Ireland carries out information sessions and education programmes in the community. The essential skills certificate has modules that include 'learning to learn', communication to help learners improve their competence in written and oral communication, everyday numbers, basic ICT training, and an introduction to enterprise and community development. In 2011, approximately 1 000 adult learners took part in the programme with most completing all modules, and 60% progressing to the higher certificate in workplace and community studies.

According to CEDEFOP (2013a), the essential skills certificate has been successful because of the inclusive manner of its development, the flexible delivery system, and the participant support methodologies. Following the success of this tool in Ireland, a transnational project, ESCape, was set up for its dissemination in 2008. EQUAL is still leading the consortium for the development of this vehicle for essential workplace and community skills to make it transferable across the EU.

Turkey's Functional Adult Literacy Programme (FALP)

The ongoing Functional Adult Literacy Programme (FALP) developed in Turkey by the non-governmental organisation Mother & Child Education Foundation (AÇEV) was created in 1995 as an effective alternative to the official adult literacy courses by the Directorate of Lifelong Learning of the Ministry of National Education (MoNE) to principally target Turkey's largest group of non-literates: girls and women (UNESCO, 2014a). The programme aims to develop dimensions of literacy, arithmetic skills, cognitive skills, and functional skills of women older than 15 with limited literacy skills (Durgunoğlu, 2000; Durgunoğlu, Oney, and Kuscul, 2003; Kagitcibasi et al., 2005 in Lesgold and Welch-Ross, 2012; UNESCO, 2014a). The programme also includes components to promote the confidence and empowerment of women in society. It is the first adult literacy programme in Turkey developed with a scientific base by a non-governmental organisation. In 1995, AÇEV signed a partnership agreement with the previously established MoNE Directorate of Non-Formal Education and Apprenticeship (now the

Directorate of Lifelong Learning) in the framework of which all literacy activities were to be conducted. The programme began 1995 in Istanbul and by 2013 was implemented in 25 of Turkey's 81 provinces (UNESCO, 2014a). FALP has been awarded the status of a state-recognised literacy programme which is a distinction for a non-governmental organisation. To date, 125 000 individuals have benefited from FALP, mainly women but also a number of men conscripted into the Turkish Military Forces (UNESCO, 2014a).

According to external evaluation studies (Öney and Durgunoğlu, 1997; Kagitçibaşı, Goksen and Gulgöz, 1999; Durgunoğlu, 1998; Gülgöz, 2001), the new FALP curriculum was more effective in meeting literacy goals, affective goals (increased self-confidence), functional goals (e.g. being able to find the right bus) and sociocultural goals (e.g. knowing about rights and voting) than mainstream adult literacy courses. These studies suggest that FALP encourages social integration, positive self-concept and family cohesion of the participants and that graduates are more active in society and more aware of their rights than non-participants (UNESCO, 2014a). Affective and societal outcomes were evident one year later. Sustaining cognitive and literacy skills depended on the starting levels of skill, with students at higher levels of skill and continued self-study showing more sustained benefits (Lesgold and Welch-Ross, 2012). FALP's methodology has also had an impact on literacy policies of the MoNE. First, MoNE is now introducing new literacy programmes which are similar to FALP. Second, the success of FALP has been instrumental in convincing MoNE to increase the officially required duration of literacy courses from 90 contact hours to 120 contact hours (UNESCO, 2014a) (for more examples on effective literacy practice described by the UNESCO Institute for Lifelong Learning see also: www.unesco.org/uil/litbase/?menu=4).

Three types of literacy programmes in the United States

In the United States, according to the 2001-2002 Adult Education Program Survey (AEPS), [59] adult education programmes offer three main types of literacy instruction (Lesgold and Welch-Ross, 2012):

- Adult basic education (ABE) provides instruction to adults who lack "competence in reading, writing, speaking, problem solving or computation at a level necessary to function in society, on a job or in the family" (National Reporting System for Adult Education, 2001, p. 25).

- Adult secondary education (ASE) is "designed to help adults who have some literacy skills and can function in everyday life, but are not proficient or do not have a certificate of graduation or its equivalent from a secondary school" (National Reporting System for Adult Education, 2001, p. 25). Adults usually attend ASE classes to obtain a GED[60] or adult high school credential.

- English as a second language (ESL) instruction is "designed to help adults who are limited English proficient achieve competence in the English language" (National Reporting System for Adult Education, 2001, p. 25).

English as a second language serves the largest number of students (43%), followed closely by 40% of adult students in adult basic education and 19% participate in adult secondary education. Most English

59. The Adult Education Program Survey (AEPS) provides information on a nationally representative sample of 1 200 adult education programmes and enrolled learners during the 12-month period 2001-2002. At the time of the survey, 3 000 adult education programmes were offered in 30 000 learning sites (Tamassia et al., 2007).

60. The General Education Development Tests (GED) is a set of five tests that measure writing skills, social studies, science, interpretation of literature and the arts, and maths in the United States. It is the most common alternative way to earn a high school credential. To pass the test, one must achieve a minimum total score and a minimum score on each of the five subject tests.

language learners (85%) attend ESL programmes. Of native language learners, two-thirds attend ABE and one-third attend ASE programmes (Tamassia et al., 2007).

Instruction is offered in many different places and programmes. According to the AEPS, local education agencies are the major providers of adult education, offering 54% of the programmes surveyed, followed by community-based organisations (25%), community colleges (17%), and correctional institutions (2%). 3% of programmes were offered by other entities, such as libraries, departments of human services, institutions for people with disabilities, and coalitions made up of the various provider types. Community colleges offer the largest programmes in terms of the median number of students enrolled (Tamassia et al., 2007).

Learning goals cannot simply be aligned with programme type or location. For example, English language learners may be taught reading and writing skills in ESL classes in a workplace education setting or in a community college ABE programme. Although the major goal of students in both settings may be to increase English language proficiency, the instructional aims will differ, with one focused on meeting specific job requirements and the other on developing more general literacy practices. Similarly, the goal of earning a GED certificate may be addressed in settings as diverse as prisons and volunteer library literacy programmes (Lesgold and Welch-Ross, 2012).

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