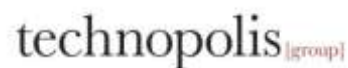




Support for the work on policy guidance on basic skills for adults

Report of findings from further literature search and analysis
30 June 2015

*Written by Shane Beadle
June 2015*



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Report of findings from further literature search and analysis

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1. INTRODUCTION

The problem of low basic skills among adults is being addressed in the EU, primarily by the Strategic Framework for European Cooperation in Education and Training, and the related Renewed European Agenda for Adult Learning. The Renewed European Agenda for Adult Learning (2011)¹ highlights the need to increase participation in adult learning of all kinds (formal, non-formal and informal learning) whether to acquire new work skills, for active citizenship, or for personal development and fulfilment and to address the lack of basic skills in literacy, numeracy and information technology (ICT) among a large number of adults. The Agenda defines the vision for European cooperation in adult education policies for 2012–2020. It builds on the Action Plan on Adult Learning 2008–2010 and the Strategic Framework for European Cooperation in Education and Training (ET2020) from an adult learning perspective

1.1. Purpose of the study

This study provides the Commission with input to inform policy discussions on adult basic skills. Equally, it can serve to provide Member States and stakeholders with policy guidance and good practice examples in order to increase policy effectiveness, with a focus on enhancing such learning opportunities for adults who lack basic skills and those who left initial education prematurely. It can therefore help to better target spending on adult education and training and the allocation of European Structural Funds towards improving basic skills and strengthen the monitoring by the Commission of country-specific recommendations in this area.

In assisting in the preparation of policy guidance on adult basic skills, this study aims to identify policy actions and measures that have demonstrably (on the basis of robust evidence) increased the effectiveness of adult basic skills education.

The following specific questions have guided the search and synthesis of evidence:

- What are the policy actions/measures which bring about positive outcomes for adults with low basic skills (e.g. improved competences, positive attitudes to learning, progression in work) and increase the effectiveness of adult basic skills education?
- In what ways do successful actions/measures provide positive outputs and outcomes from adult basic skills education if different components of delivering successful adult basic skills are examined? Across the learner journey these are signposting, engagement, skills checking and initial assessment; development of learning plans; teaching and learning; assessment and testing of learning; supporting progression in lifelong learning and to employment.
- How and to what extent do different factors and conditions contribute to positive outcomes in adult basic skills education (e.g. governance arrangements and resources; type of provider; instructor training; employer engagement; target population group; target learning setting; skills focus; length of programme; hours of learning; mode of learning)?
- What are the underpinning policy actions/measures contributing to positive outcomes in adult basic skills education?

This paper follows an initial analysis of the documents/sources provided by the Commission on adult basic skills learning. This initial analysis covered the following sources of evidence:

¹ European Commission (2011), Council Resolution on a renewed European agenda for adult learning. Available at: [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011G1220\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011G1220(01)&from=EN)

- European Commission/EACEA/Eurydice, 2015. Adult Education and Training in Europe: Widening Access to Learning Opportunities. Eurydice Report. Luxembourg: Publications Office of the European Union;
- ICF (2015), Study on the analysis of adult learning policies and their effectiveness in Europe - final report, European Commission, DG EMPL;
- Adult basic skills provision for adults: policy and practice guidelines, GHK, 2010.
- Cedefop studies since 2010;
- Networks/projects/groups: BASKET.

This final report is the result of a second phase of work involving a search for additional studies and reports (focusing on gaps in good practice), analysing material in order to extract the main policy relevant findings, and summarising and synthesising findings for use in draft policy guidance.

The further search and analysis of literature has focused on identifying reports, peer reviewed and un-peer reviewed literature reviews to establish a) policy actions/measures that are proven to increase the effectiveness of adult basic skills education, and b) case studies that, based on evidence, contain elements of good practice to serve as examples for policy-makers and which can be described/referenced for use in policy guidance.

To assist in this assessment, the material has been considered against what would be expected to be the different stages a basic skills learner would go through towards increasing their competences and engaging with lifelong learning.

The following stages have been identified on the basis of the literature:

- Signposting, engagement and skills check;
- Initial assessment and development of a learning plan;
- Teaching and learning;
- Assessment and testing of learning;
- Progressing and engaging in lifelong learning.

1.2. Overview of literature

The search and analysis of literature focused on identifying reports and peer reviewed and un-peer reviewed literature reviews.

The literature review inclusion criteria and search strategy are set out in Annex 1. In summary, in addition to journal databases, the search entailed searching the websites of research institutions and networks, implemented projects and initiatives, and government departments. Searches were conducted in English, French, German and Spanish. The search, after a screening process and relevancy check, identified 58 journal articles and 41 organisational research reports.

On detailed reading, only a small proportion of these articles and reports fully met the inclusion criteria and were useful for meeting the study objectives. The main shortfall was that many did not contain evidence that the actions/measures increased the effectiveness of adult basic skills education (according to the outcomes listed in the inclusion criteria).

Some of the best available evidence on measures and case studies was found in substantial literature reviews. We found six literature reviews, described in Table 1.1 below. These reviews are generally of high quality although they draw on mainly English language literature. The strength of the reviews is that they synthesise evidence on the most effective approaches to adult basic skills provision and highlight examples that accord with this best practice. We have discussed these approaches and examples in this

report. We have also used some of the sources' conclusions about the evidence based on their synthesis of the set of evidence.

TABLE 1.1: ASSESSMENT OF LITERATURE REVIEWS INCLUDED IN THE REVIEW

Review publication	Scope of review	Criteria quality assessment and	Sources included	Strengths weaknesses of the review
Benseman, J., Sutton, A., Lander, J., 2005	Coverage: English language international literature but studies primarily from the USA and Britain. Searches: 60 databases and research web pages Publication dates: 1990 onwards Review period: not specified	Sources shortlisted from 500 sources. Those selected were quantitative or qualitative studies that demonstrated a clear relationship between learner outcomes and specific components of teaching or provision. Studies selected were also of sufficient quality to enable statements of confidence about their generalisability beyond specific contexts.	70	The review focused on studies with control groups but due to lack of sources expanded evidence to include case studies, observational studies and collections of professional wisdom from practitioners. The review discusses quality of evidence throughout and generalised statements about evidence are well backed-up by detailed citation of evidence.
Brooks, G., Pahl, K., Pollard, A., Rees, F., 2008.	Coverage: English language international evidence including studies of Britain, Canada, Germany, Nepal, New Zealand, South Africa, Turkey, Uganda, the USA, and from a six-nation initiative led by Malta which also involved Belgium, England, Italy, Lithuania and Romania. Searches: not specified Publication dates: not specified Review period: not specified	Not specified, but qualitative and quantitative studies on family literacy, language and numeracy programmes	160	The review describes study methodologies in detail but does not comment on quality. Some included studies are not of high quality.
Carpentieri, J., Lister, J., Mallows, D., Johnson, C., 2015	Coverage: English-language sources. A rapid evidence assessment (REA) of eight high-performing or improving countries which participated in the	No clear quality criteria	62	This publication is not a systematic review but rather works as a scoping study on practices in high performing countries.

	<p>OECD's Survey of Adult Skills.</p> <p>Searches: PIAAC reports; International assessment literature; literature on the OECD's Programme for International Student Assessment (PISA); other relevant academic literature (ERIC database), policy literature and other grey literature identified from a range of education and policy-focused databases.</p> <p>Publication dates: 1994 onwards</p> <p>Review period: not specified</p>			
Derrick, J., Ecclestone, K., (2008).	<p>Coverage:</p> <p>Searches: Internet searches on key words, suggestions from colleagues, bibliographical trails, and personal knowledge and experience</p> <p>Publication dates:</p> <p>Review period: between June 2005 and February 2007</p>	<p>Given the lack of sources on formative evidence, the review did not take a robust approach to quality and was not systematic.</p> <p>Conclusions are based on a review of mostly small-scale studies, handbooks or other training materials designed to support teachers.</p>	99	The review is mainly descriptive and makes only cautious generalisations about effective practice.
MacLeod, S., Straw, S., 2010.	<p>Coverage: English language international evidence, but mainly focused on UK, US, Australia and Canada with some European countries</p> <p>Searches: 10 bibliographic databases</p> <p>Publication dates: 2001 onwards</p> <p>Review period:</p>	Sources selected on the basis of relevance and quality.	178	The review gives a good deal of attention to quality but does not prioritise any particular methodologies. The evidence is from evaluations of national adult basic skills programmes, secondary data analysis, policy reports and literature reviews
Vorhaus, J., Lister, J., Frearson, M., Johnson,	<p>Coverage: English-language and UK-based sources</p> <p>Searches: 10 bibliographic databases and 16 UK and</p>	Sources shortlisted from 1,600 sources and selected on the basis mainly of relevance to	175	The review does not have a clear quality assessment of sources, but the text describes individual study methodologies.

S., 2011.	international governmental websites Publication dates: 2000 onwards Review period: 13 weeks between March and May 2011	research questions		Generalised statements are well backed-up by detailed citation of evidence.
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Three of these literature reviews have been drawn on extensively because they had a clear and comprehensive search strategy; they were systematic; they have clear quality criteria for inclusion; and generalised statements on the evidence were well supported by the sources checked. These are:

- Benseman, J., Sutton, A., Lander, J., 2005
- MacLeod, S., Straw, S., 2010
- Vorhaus, J., Lister, J., Frearson, M., Johnson, S., 2011

To address the weaknesses in the literature reviews we:

- Omitted actions/measures which have not proven to be sufficiently effective or with weak evidence;
- Sought more recent evidence and non-English literature in our searches;
- Conducted a quality assessment of the individual sources of evidence (where this was lacking in the literature review); and
- Only used synthesised statements about the evidence where such statements are clearly supported by citations of the sources of evidence.

The full bibliography of research referenced in the report can be found in Annex 1.

Section 2 provides an overview of impacts of adult basic skills on individual adult learners, based on an international literature review.

Section 3 discusses the evidence on measures/policy actions which increase the effectiveness of adult basic skills education, and does so in respect to each stage of the learner journey.

Section 4 is a concluding section and highlights some of the relative strengths and weaknesses of the evidence. It also identifies some key lessons for policy and practice.

2 OVERVIEW OF IMPACTS OF ADULT BASIC SKILLS ON INDIVIDUAL ADULT LEARNERS

Before discussing the evidence on adult basic skills policy actions/measures that increase the effectiveness of adult basic skills education, this section briefly indicates the main types of impacts on learners that could be expected from these.

This section is mostly informed by an international literature review conducted between September 2009 and May 2010 (MacLeod and Straw, 2010). These impacts are all proven by high quality evidence reviewed in MacLeod and Straw (2010). Some of the same impacts are also evidenced by other studies and reviews discussed in Section 3, and where this is the case we have cited these other sources as relevant below.

These broadly follow a theory of change which is that the first steps of basic skills training is to increase the learners' confidence and build and interest in learning; then to improve and enhance their knowledge and skills; and finally to develop their skills further as they use their enhanced basic skills to progress in work or contribute to civic life.

2.1. Personal and interpersonal skills and everyday lives

The most frequently reported personal impacts for individuals include:

- Increased self-confidence and the confidence to try new things;
- Increased self-esteem, self-worth and positive self-image;
- Enhanced belief in own abilities and sense of personal achievement;
- Reduced sense of embarrassment or stigma about having low levels of basic skills;
- Better physical and mental health;
- Overall more positive attitudes towards life.

Impacts on individuals' home and everyday lives include:

- Feeling better able to help their children with their homework, including reading with their Children, and increased confidence to engage with their child's school and talk to teachers;
- Increased confidence and capabilities to undertake everyday tasks involving literacy and numeracy, such as household budgeting, checking bills, telling the time, emailing, understanding supermarket three-for-two offers, and using bus timetables;
- Greater ability to contribute to family life.

Specific impacts relating to social wellbeing (in addition to those above) include:

- Increased social networks and socialisation, and reduced isolation;
- Increased confidence to take up volunteering opportunities and engage in society.

2.2. Attitudes towards and participation in learning

These are found to be:

- Increased confidence to engage in learning and re-engage in learning (also highlighted by Vorhaus et al., 2011 and Camilleri et al., 2005);
- Enhanced motivation to engage in further learning and actively seek further training opportunities, especially leading on from ICT courses;

- Increased take-up of other learning or continuation with learning. Casey et al. (2006) found increased staying on rates from embedded learning.

2.3. Knowledge and skills (literacy, numeracy and ICT)

Brooks et al.'s (2004) (cited in MacLeod and Straw, 2010) systematic review of randomised controlled trials (RCTs) found a correlation between adult literacy and numeracy tuition, and literacy and numeracy developments. Six studies showed a statistically significant impact on literacy and numeracy knowledge for the intervention under consideration.

Other literature reviews (Benseman et al., 2005; Benseman, 2010; Vorhaus et al., 2011) and studies (Gyarmati et al., 2014; Swain and Swan, 2007 and Von Rosenblatt and Lehmann, 2013) also find evidence that knowledge and skills increased as a result of different policy actions and measures.

Gains in ICT skills are evident in the research:

- Low-skilled adults learning ICT skills in an informal space at work gained confidence (Evans and Waite, 2008; cited MacLeod and Straw, 2010);
- In an evaluation of UK online centres, Goodison et al. (2004) (cited MacLeod and Straw, 2010) reported participants' gains in ICT skills, describing the outcomes as 'marketable ICT skills'. However, it was notable that many users were not digitally disadvantaged and many were relatively well-qualified, including having basic ICT skills.

However, in the systematic review of RCTs, Brooks et al. (2004) found that instruction using ICT could not yet be shown to produce more learning than conventional instruction.

2.4. Qualifications gained

Impacts are mainly evidenced in terms of outputs: course enrolment rates, completion rates and numbers gaining qualifications such as level 1 qualifications. The evidence is often less compelling in terms of impacts for individuals. Casey et al. (2006) found increased qualification acquisition from embedded learning.

In a systematic review of the impact of learning on unemployed, low-qualified adults, Dench et al. (2006) (cited in MacLeod and Straw, 2010) found that seven studies reported some findings on the impact of learning on the qualifications or skills of participants. All found a positive impact on participants with no prior qualifications, in that they were likely to obtain qualifications because of the intervention. In three studies there was a control group and those on the programme were more likely to obtain qualifications compared with those in the control group. In the other studies there was no information against which to compare the achievements of those on the programme. Dench's (2006) review process resulted in 16 documents, representing 12 studies, being included in the final research synthesis.

2.5. Employability

Job search impacts include:

- Increased confidence to apply for jobs;
- Feeling more confident about actually getting a job, and having greater aspirations for what that job might be;
- Increased motivation to actively look for a job;
- Enhanced job search skills such as being able to prepare a CV.

Job skills impacts include:

- Working with others, more appropriate behaviour at work, and being willing and able to take on more responsibility at work;
- Better timekeeping, being able to use reading skills at work, and better stocktaking skills.

2.6. Employment

Some of the evidence on employment shows a statistically significant correlation between adult basic skills development and employment, whilst other research highlights that the impact is not statistically significant. Studies with control groups highlight that low-qualified, out-of-work adults going through intervention programmes are more likely to progress to employment than those who do not participate in the intervention.

Metcalf et al. (2009) (Evaluation of the UK Skills for Life) found no statistically significant difference between Skills for Life learners and non-learners regarding employment. However, self-reported employment effects include changes in self-esteem, perceptions of literacy and numeracy gains, and commitment to education and training.

2.7. Earnings increase

There is limited evidence on wage returns from attaining basic skills in adulthood despite the positive impact on labour market outcomes.

Analysis of US and Australian cohort data (Gleeson, 2005) (cited in MacLeod and Straw, 2010) found that when adults with very low levels of numeracy had greater opportunities for work experience during their training, higher earnings were achieved following the education and training.

3. ADULT LEARNER JOURNEY

3.1. Signposting, engagement and skills check

Evidence from the literature suggests that effective teaching of basic skills includes recruitment strategies for learners (MacLeod and Straw, 2010). Effective recruitment strategies are likely to lead to enhanced attitudes towards learning and greater participation in learning.

Recruitment should be planned with publicity and strategies geared to the varied target audiences because factors relating to marketing approaches to learners influence their participation.

Large campaigns relating to basic skills raise the profile of the issue and demonstrate that many people have needs in this area. These serve to de-stigmatise basic skills education and encourage individuals who recognise they have a need to enrol on a course (Warner and Vorhaus, 2008; Frontline Consultants, 2006; in cited in Vorhaus et al. 2011).

Even so to increase participation, marketing strategies must focus on target groups or market segments in order to engage those that lack awareness of their low skills or perceive barriers to participating. Proven methods include (Powell et al. 2003, cited in Vorhaus et al. 2011):

- Word of mouth (with information left in surgeries, community centres, etc.);
- The media (especially television - people with low skills watch more TV);
- Community outreach programmes which provide information for prospective learners (particularly where the specific needs of the local community are taken into account), such as the 'Aula mentor' initiative² in Spain.

The use of outreach community workers or learning champions in particular can help to recruit hard to reach groups (MacLeod and Straw, 2010).

Ireland: recruiting adults to literacy training

In Ireland the National Adult Literacy Agency (NALA) 'NALA Learners' Day'³ is an awareness-raising day fully prepared and organised by literacy learners themselves, in partnership with the Waterford Institute of Technology. Throughout the day, more than 200 literacy learners participate in different workshops and meet each other. They also use this opportunity to inform other learners all over Ireland that literacy networks exist across the country and that everyone should be able to access them easily and freely. To prepare the Learners' Day, learners take ex-ante communication training to enhance their self-confidence and be able to communicate clearly and report on the workshop's outcomes. As a result of these annual events and local promotion and targeting, NALA has increased the number of learners registering for literacy training.

It is evident that participants are motivated by a far wider range of factors than the desire to increase earnings and employability (Wolf et al. 2009). This may include helping children with their homework, pursuing interests outside work, and learning new skills as a form of personal development.

² <http://www.mentor.mec.es/version/v1/lowskill1-1.pdf> (p.217)

³ <http://www.eur-alpha.eu/>

This means that engagement should take a broad view of both learner motivations and the outcomes adults expect to gain from learning (including improving aspects of their everyday lives as opposed to employment, qualification and economic benefits) (Vorhaus et al. 2011).

There are practical issues affecting individuals' participation in basic skills courses and the impacts such courses have on them (MacLeod and Straw, 2010).

Ability to pay any costs associated with participation, such as travel costs and materials, determines whether an individual can participate. There is some evidence that financial assistance helps overcome this. Equally the time and location of a course influences an individual's decision to take part so where and when courses are run must take account of the childcare, family commitments, working hours, and transport/travel time of the target adults.

3.2. Initial assessment and development of a learning plan

MacLeod and Straw (2010) found evidence that initial assessment and diagnosis of an individual's basic skills needs (and any needs related to broader issues of learning) is a key feature of good provision as it tailors the training received. Tools (including online versions) and services to help tutors, employers and learners make this diagnosis are important. These assessments can be embedded in other activities at registration or at marketing/taster events.

Bimrose et al. (2007) examined available evidence relating to the review, identification, assessment and diagnosis of skills, together with good practice, tools and methodologies for identifying learners requiring more intensive support. One aspect looked at skills appraisals to help identify and measure individual skill levels (including those skills needed by employers).

They found that many tools are now available online for self-administration, for use in groups or with the support of a practitioner (i.e. tutors, trainers, careers and employment practitioners). The most reliable results are obtained through facilitated tools – especially where an action plan to develop skills is regarded as a desirable outcome from the process of appraisal (Balgobin et al., 2004; cited in Bimrose, et al., 2007). Success factors in implementing tools include convincing both practitioners and managers of the value of the tool and attending to the anxieties of users, who may associate a skills appraisal with negative experiences of assessment. Both these potential difficulties may be mitigated, however, if a skills check is represented more as a process and opportunity rather than a one-off event.

France: guidance on skills checks

The French National Centre of Local Public Service (CNFPT)⁴ published a Guidebook⁵ for local authorities to raise awareness about illiteracy and identify adults with basic skills' needs. The guidance on skills checking is based on a series of indicators to be checked and assessment tools to verify the degree of illiteracy of adults and their training needs. The Guidebook also includes success factors and obstacles to the effectiveness of such training (more information available at: <http://cnfpt.fr/content/lutte-contre-lillettrisme-2?gl=NjliOGJkMzI>).

Trainers should have a clear learning plan for each learner, deliver clearly structured teaching, and regularly assess progress (adjusting individual learning plans as appropriate) (Brooks et al., 2004; cited in MacLeod and Straw, 2010). Benseman et al. (2005) found that provision needs to allow for learning plans for every learner, which are

⁴ Centre National de la Fonction Publique Territoriale : www.cnfpt.fr

⁵ <http://www.anlci.gouv.fr/Mediatheque/Autre-outil/Iillettrisme-guide-a-l-usage-des-collectivites-territoriales-pour-sensibiliser-reperer-et-s-engager-dans-une-demarche-formation--Guide-du-CNFPT>

related to regular assessments and reviews with learners, and concluded that learner gains should be enhanced by having teachers who can identify the strengths and weaknesses learners have in speaking, reading, writing and numeracy.

The most recent European inventory on validation of non-formal and informal learning (European Commission, Cedefop and ICF, 2014) looked at opportunities for individuals who are unemployed to undergo a 'skills audit'. It found that while in some countries the concept of skills audits is well developed and established (e.g. Bilan de compétences in France) in others, skills audits are not defined as such but were part of the validation process. These are applied to individuals with all levels of skills.

France: skills audits

Skills audits (*bilans de compétences*) are used mostly for workers, but also for jobseekers. The objective is to allow individuals to analyse their professional and personal competencies, their aptitudes and motivation, with a view to define a professional project or re-training project. A skills audit is personalised and is not related to a specific qualification or standard.

A skills audit can be requested by an employee or by his/her employer, but cannot in any case be imposed on any individual. It is often integrated into a training activity and can be requested as part of the individual's right to training and training leave.

The skills audit must be carried out by an external accredited provider and include a preliminary phase, an investigation phase, and a conclusion phase. This includes 10 hours of face-to-face interviews taking place over a period of three weeks to three months with a trained counsellor.

The skills audit results in a synthesis document drawn up by the counsellor. This is confidential and only provided to the person being audited. It includes one or more (two or three) proposals for career development as well as an action plan. Advice is given on necessary steps to achieve the plans.

Michaud et al. (2006) (cited in Bimrose et al., 2007) reviewed the effectiveness of general 'skills checks' (modelled on bilans de compétences) in French speaking countries. They concluded that while there are insufficient robust data to regard these skills checks unambiguously as effective for all users, there is evidence that their use has sufficient positive impacts for individual adults. Drawing on evidence from 1,460 respondents (including students, the employed and the long-term unemployed) who had undertaken skills checks either in France or Canada, the following benefits were recorded (in order of importance): increased self-knowledge; alignment to particular training; career planning; recognising skills; change of occupation; choice of occupation; securing employment; increased mastery of existing job; gaining new responsibility at work; setting up in a business; and getting a pay rise.

In Iceland, lifelong learning centres provide skills audits for unemployed adults who have not completed upper secondary school level education 2014 (European Commission, Cedefop and ICF, 2014). These are used to tailor their needs in a range of competences to the courses available. In Austria, there are no systematic or nationally standardised measures for skills audits in place but there are several initiatives aimed at identifying and analysing an individual's competences, aptitudes and motivations in order to (re-)define a career pathway. Such procedures are mainly offered in adult learning institutions. These measures are often oriented towards career planning for specific target groups. In the UK a set of tools was developed in 2004 as part of a suite of initial and diagnostic assessment tools developed by the Skills for Life unit on literacy, language and numeracy to inform self-assessment. The tools can be accessed here: <http://rwp.excellencegateway.org.uk/Diagnostic%20Assessment/>

3.3. Teaching and learning

3.3.1. Learning time

Vorhaus et al. (2011) looked at the available evidence on how much time is needed to make educationally significant progress in learning. The evidence varies, especially given the range of learners and courses, but the time required is no less than and often more than 100 hours to progress by one proficiency level. Benseman et al. (2005) also found that more than 100 hours of tuition is most effective for both literacy and numeracy.

Learners with low levels of skills need more tuition for longer as do second language learners. A US review (Comings et al. 2003; cited in Benseman, 2005) found that 100 hours of instruction is needed to achieve an increase of one grade level equivalent on a standardised test of reading comprehension.

However, the research focuses on the amount of provision rather than the amount of active teaching. Some provision may entail requirements for self-study. More evidence is needed on what adults do in their own time to improve their literacy and numeracy skills, and how these activities impact on their persistence with and progress in any formal learning they engage in.

3.3.2. Teacher training

Effective adult basic skills education, leading to increased knowledge and skills, depends upon the qualities and skill-sets of trainers (MacLeod and Straw, 2010).

Initial teacher training is one aspect of this. There is robust evidence that greater impacts are associated with trainers who have achieved qualified teacher status (Brooks et al. 2004; cited in MacLeod and Straw, 2010). Cara and De Coulon (2008) (cited in Vorhaus et al. 2011) examined linked datasets relating to 84 adult numeracy teachers: 15% were fully qualified (meaning that they held a full generic teaching qualification and a subject-specialist qualification in numeracy); 52% were part-qualified (holding either a generic teaching or a subject specialist numeracy qualification); and 33% were unqualified. Analysis of learner progress in relation to teacher qualifications showed that teachers with a qualification in maths at Level 3 or above had a highly positive and strongly statistically significant effect on learner progress, as measured between pre- and post-course tests. This was compared with learners who were taught by teachers with level 2 qualifications in maths.

In a study of effective practice in reading when the nine classes that made the greatest progress were compared with the nine classes that made the least progress, teachers in the top nine classes were all trained, and most had substantial experience, while some of those in the bottom group of classes were not trained and on average had less experience (Brooks et al. 2007; cited in Vorhaus et al. 2011).

Teachers may also need to have acquired a specialism in basic skills teaching. Casey et al. (2006), in the context of embedded learning, found that where a single teacher was asked to take dual responsibility for teaching vocational skills and basic skills, the probability of learners succeeding with qualifications was much lower than when embedded courses were delivered by a team of teachers with vocational and literacy and numeracy specialisms working in combination. This indicates that the benefits of embedding learning cannot be achieved by simply adding basic skills to vocational teachers' responsibilities. Rather, learners benefit when taught by teams of staff, with their own different areas of expertise, working closely together.

Swain and Swan's (2007) conducted a design-based research project attempting to transform educational practices in numeracy classes. The research studied the feasibility and potential impact of different teaching and learning approaches. The project developed and trialled 30 activity-based sessions built on eight mathematical principles. These were introduced to 24 teachers from 12 organisations across the sector in two phases between October 2005 and June 2006. The sessions were used with over 200 learners designated to be working at Entry Level 1 to Level 1, and these were recorded and analysed by 11 observers. In total, 110 classroom observations were carried out and 75 interviews conducted with teachers and learners.

From this they made recommendations for teachers' initial training:

- Include a significant element on the teaching of basic mathematical concepts;
- Include a module on subject-specific pedagogy;

- Include a module about the theories, strategies and techniques of formative assessment; and
- Advise teachers on different managerial and organisational strategies, such as structuring groups, to enable them to cope with the diverse range of learners.

Specific sets of skills are also conducive to effective teaching. These point to the need for continuing professional development (CPD).

Interpersonal and communication skills are particularly important, including developing positive and trusting relations with learners; being able to create a positive, welcoming, supportive, non-threatening atmosphere for learning; being empathetic and understanding; and respecting cultural differences and local contexts (MacLeod and Straw, 2010).

Other skills that are likely to have an impact on learner outcomes are:

- Being able to facilitate independent learning;
- Facilitating both group and individual work;
- Understanding how flexible and distant learning can be most effective;
- Assessing and responding to the needs of individuals;
- Flexibly adapting teaching approaches to meet the needs of a particular group by, for example, adapting to the size of a class, the ability range in a class and rate of progress made.

Coben (2005), drawing on a wide range of reported practitioner experience, provided recommendations for practitioner training and continuing professional development. This included filling gaps if the subjects listed above are not found in initial teacher training as well as ensuring it includes specialist literacy/numeracy/digital courses as well as developing pedagogical approaches for teaching adults.

One example of training of trainers was highlighted by the Eur-Alpha⁶ project. Trainers were trained to animate writing workshops, through very practical training sessions which put them in a situation comparable to that of learners. This immersion then encouraged the development of proposals that are well-adapted to adults. The writing workshops were developed to encourage spontaneous writing and help learners to release their fears and enhance their self-confidence. Trainers learnt to value the texts written by adult learners and apply them in the learning process. Benefits for learners were both linguistic and personal (self-confidence).

3.3.3. Types of provision

3.3.3.1. Embedded provision

Embedded provision is an effective way of teaching basic skills as it integrates or links basic skills learning into a broader curriculum, making it relevant to the real world and participants' everyday lives (MacLeod and Straw, 2010). It is often part of teaching organised as an integral part of vocational programmes (Roberts et al. 2005) and involves instruction around authentic basic skills material, which can then lead to changes in learners' practices around those skills (Purcell-Gates et al. 2004, cited in Vorhaus et al. 2011) to increase their vocational proficiency (Reder, 2010; cited in Vorhaus et al. 2011). Embedded provision is expected to support the achievement of other learning goals (Vorhaus et al. 2011). This can mean offering basic skills in the guise of other learning to incentivise some learners, and timing to coincide with key life events, decisions and transitions. Evidence from the Train to Gain programme in the UK

⁶ <http://www.eur-alpha.eu/>

(cited in Vorhaus et al. 2011) showed that adults were more likely to engage with maths when it was relevant to managing finances (financial literacy), work-related learning (embedded numeracy provision) and – most popular of all – linked to helping children with maths.

Casey et al. (2006) explored the impact of embedded approaches to literacy, language and numeracy (LLN) on 79 vocational programmes. The courses were based in 15 further education colleges and one large training provider located in five regions of England. The research was based on questionnaire responses from nearly 2,000 learners along with their achievement data. The study identified some key effects of embedded provision as follows:

- Learners on the embedded courses had better staying-on rates than those on non-embedded courses. There was a significant positive association between whether learners completed their courses and the degree to which LLN were embedded in vocational programmes. Seventy-seven percent of learners completing embedded courses compared to 62% on non-embedded courses. The increase in retention was only significant for level 2 courses, as opposed to level 1. For level 2, 82% of learners completed non embedded courses compared to 53% for embedded courses;
- The embedded courses also had higher success rates (the number of learners achieving a vocational qualification as a percentage of those who started the course) than the non-embedded courses. The mean vocational success rate for non-embedded courses was 56% compared to 71% for embedded courses. The success rates for courses in the sample were also generally higher than the national average. The national average success rate in 2003-04 was 57%;
- There is a strong link between the degree of embedding of LLN and achievement of qualifications in literacy. For the analysis of the relationship between learners' achievement of LLN qualifications and the degree of LLN embedding, the data used were for those learners in the sample who were assessed at below Level 2 in literacy, language or numeracy at entry to their programmes. Fifty percent of learners achieving Literacy/ESOL qualifications on non-embedded courses compared to 93% for fully embedded courses with 86% for partly embedded courses;
- There is also a strong link between the degree of embedding of LLN and achievement of qualifications in numeracy. Seventy percent of learners achieved numeracy qualifications on non-embedded courses compared to 93% for fully embedded courses and 90% for partly embedded courses.

The study identified features of embedded provision, which were found to have a significant statistical association with achievement in LLN. The top factors associated with achievement in both literacy and numeracy are listed below:

- Formal shared planning (i.e. in officially allocated time) between vocational staff and LLN staff supports integration of LLN into vocational teaching;
- Departmental and institutional management structures which support embedded provision in practice;
- The staff development policy and provision within, and available to, the college support the integration of LLN within vocational areas;
- LLN teachers are viewed by staff and learners as contributing to learners' vocational aspirations;
- LLN teachers understand and engage with the vocational area as part of their work;
- LLN teachers are willing to develop their skills in relation to the vocational area;
- Vocational teachers are willing to develop their skills in relation to LLN;

- Initial/diagnostic assessment is used to contribute to the integration of LLN into vocational teaching;
- ILPs and/or other forms of on-going formative assessment contribute to the integration of LLN into vocational teaching;
- (For numeracy) Vocational staff and LLN staff work as a team;
- (For numeracy) LLN development is considered in principle to be as relevant to all learners as for those who are identified with LLN needs;
- (For numeracy) Vocational teachers understand and engage with LLN as part of their work;
- (For literacy/language) LLN teaching is linked to practical, vocational content and activities;
- (For literacy/language) LLN are seen as essential in the development of learners' professional identity and for success in their vocational area.

The study also identified groups of features that can enable or constrain the embedding of LLN teaching and learning.

- Teaching and learning
 - LLN teaching is linked to practical, vocational content and activities;
 - LLN materials are contextualised to the vocational area;
 - Initial/diagnostic assessment contributes to the integration of LLN into vocational teaching;
 - There is differentiation according to LLN needs in the way in which the vocational subject is taught;
 - LLN are seen as essential in the development of learners' professional identity and for success in their vocational area;
 - LLN development is treated in practice as relevant to all learners, not only necessary for those who are identified with LLN needs.
- Shared working
 - Formal shared planning (in officially allocated time) between vocational staff, LLN staff (and additional learning support staff where applicable) supports integration of LLN into vocational teaching;
 - Informal shared planning (without officially allocated time) between vocational staff, LLN staff (and additional learning support staff where applicable) supports integration of LLN into vocational teaching;
 - The vocational staff and LLN staff (and additional learning support staff where applicable) work as a team.
- Staff understanding, values and beliefs
 - LLN teachers are viewed by staff and learners as contributing to learners' vocational aspirations;
 - LLN teachers understand and engage with the vocational area as part of their work.
 - Vocational teachers understand and engage with LLN as part of their work;
 - LLN teachers are willing to develop their skills in relation to the vocational area;
 - Vocational teachers are willing to develop their skills in relation to LLN.

- Organisational features
 - Departmental and institutional managers and policies support embedded provision in principle;
 - Departmental and institutional management structures support embedded provision in practice;
 - Organisational arrangements support embedded provision;
 - Resourcing and working conditions support embedded provision.

US: Integrated Basic Education and Skills Training (I-BEST) model

An example of successful embedded provision is provided by the Washington State (US) Integrated Basic Education and Skills Training (I-BEST) model. It aimed to increase the rate at which adult basic skills students advanced to and succeeded in college-level occupational programmes. In the I-BEST model, a basic skills instructor and an occupational instructor team teach occupational courses with integrated basic skills content, (Zeidenberg et al, 2010, cited in Vorhaus et al. 2011). An evaluation of this model showed that enrolment in I-BEST had a positive impact on educational outcomes. The difference-in-differences (DID) analysis found that students who attended colleges with I-BEST after the programme was implemented were 7.5 percentage points more likely to earn a certificate within three years and almost 10 percentage points more likely to earn some college credits, relative to students who were not exposed to I-BEST.

3.3.3.2. Work-based learning

Use of literacy and numeracy skills in the workplace and in daily life can support higher levels of knowledge and skills because it helps adults retain and develop those skills. Where it is available, workplace training can offset the loss of literacy and numeracy skills; the offer of training is, however, dependent on occupational sector and level (Vorhaus et al. 2011).

Workplace basic skills courses can reach people who are not normally involved in continuous education or training (especially men and older learners, and those that had not undertaken any learning in the recent past), when compared to publicly funded courses available through colleges and community-based adult learning centres (Wolf and Evans, 2011; cited in Vorhaus et al. 2011).

Employers can promote a 'culture of learning' within the workplace to encourage employees to participate in learning (UKCES, 2009; cited in Vorhaus et al. 2011), especially by drawing on positive experiences of employees who have already participated successfully in training (evidence from UK Train to Gain; cited in Vorhaus et al. 2011).

Gyarmati et al. (2014) found compelling evidence in the Canadian context for the benefit of workplace basic skills learning. A RCT measured the impacts of the Essential Skills training in the workplace programme (including document use, numeracy, oral communication, problem solving/thinking skills, and working with others). A total of 88 firms (1,308 employees) in the hospitality services sector (primarily hotels) were randomly assigned to a group where employees were offered a maximum of 40 hours of skills training on-site during working hours, or to a control group whose employees did not receive the training. The key results were as follows

- Essential Skills training produced significant increases in the average document use scores of participants compared to those who had no training (average gains in document use scores were about a quarter of a level, 12 points, in the first follow-up assessment immediately after training; up to 18 points in the second follow-up after about nine months. A larger 23-point impact was observed after a year, equivalent to about half a level on the internationally-recognized literacy scale;

- This was accompanied by a 20 percentage point difference between participants and non-participants in having document use skill levels in the mid-to-upper Level 2 and Level 3 range. Positive impacts on numeracy skills of participants were also observed, though with more modest gains than document use, and which declined somewhat over time;
- Participants had a 20 percentage point difference to non-participants in the likelihood of meeting industry standards in their ability to communicate with guests;
- After participating in training, participants were more likely to successfully pass the industry certificate performance assessment (12 percentage points higher pass rate) and were also less likely to be unemployed a year after enrolment (only 3% had an unemployment spell compared to 9% of the non-participants).

Various factors related to the process of training delivery were also analysed to determine their influence on the impacts of training. This found that the degree of skills gains and performance improvement were affected by the number of training hours and customisation of the training examples to the business (whether the training matched business needs).

Conditions for success were found to include employer's commitment to learning and training matters, workers' receptivity to learning and workers' levels of trust that employers would enable them to apply learning in their jobs.

Wolf et al. (2009) found more modest longer term results for work-based programmes. They conducted a longitudinal study involving the collection of data from learners over a two and a half year time period. Learners were tested formally on three occasions. Reading and writing were tested each time, learning dispositions twice. After baseline testing, the first follow-up test was scheduled for a year after course completion. The second and final follow-up, a year and a half further on. The study explored whether adult participants in workplace programmes demonstrate substantive changes in measured basic skills. It found that changes in literacy skills are small, though largely positive, and cannot always be attributed to course participation. Progress was significantly affected by interactions between provision and learners' particular characteristics. For example, those who were already qualified at levels 1 or 2 were significantly more likely to improve their reading scores than those with no qualifications beforehand. However, workplace opportunities were found to have a significant impact on learners' skill development. It was workplace experiences, not limited classroom exposure, which appeared to embed and boost literacy skills most powerfully. Wolf and Evans (2011) (cited in Vorhaus et al. 2011) suggest that learners who used their literacy skills actively, in and out of the workplace, were most likely to show consistent gains.

Benseman (2010) found considerable learning impact from work-place learning in the New Zealand Upskilling Programme. A comprehensive, multi-method evaluation study was employed over a three-year period and sought a wide range of both quantitative and qualitative data to identify outcomes for the course participants, their workplace practices, the companies they work for and their lives outside work. Reading and writing skills were assessed using Go, an assessment tool developed by the National Foundation for Education Research in the UK. Three-fifths of course participants reported changes in how they think about themselves (improved self-confidence, feelings of satisfaction with their language, literacy and numeracy skills and an increased belief in their ability to do their jobs). Nearly nine-tenths of participants retested at the end of their course showed an improvement in their reading scores (and average reading scaled scores increased by 10.1 percentage points). There was a limited amount of numeracy teaching in the programme. All course participants (343) were asked to self-assess their maths skills, pre- and post-course. Their average rating increased from 3.6 to 4.1 on a six point scale. Only seven numeracy learners completed pre- and post- course numeracy assessments, and they increased their average score from 12.1 to 15.3 out of 46.

From this Benseman (2010) identified the factors that enhance the effectiveness of workplace LLN programmes based on detailed evaluation findings from 18 workplace courses run in New Zealand companies (part of the Upskilling Programme) (see table below).

TABLE 3.1: FEATURES FREQUENTLY ASSOCIATED WITH HIGH-IMPACT COURSES

Review publication	Scope of review
The company	<ul style="list-style-type: none"> ■ All key stakeholders within the company had a clear understanding of the purpose and processes of the course. ■ Managers from senior level through to supervisors demonstrated high levels of support for, and awareness of, the courses; they actively demonstrated their support rather than simply verbalised. ■ Course participants had relief workers while attending teaching sessions or alternative arrangements were made to minimise intrusion on company production. ■ Teaching spaces were on-site, consistently available and removed from outside distractions. ■ LLN provision was integrated into long-term training and company planning.
Providers/tutors	<ul style="list-style-type: none"> ■ Providers supported their tutors in terms of professional support and strong planning and logistics. ■ Providers had a high level of experience of running workplace LLN. ■ Tutors were experienced in both LLN teaching and workplace programmes and had LLN-related qualifications. ■ Tutors had high levels of commitment and were prepared to be flexible in their teaching schedules.
Logistics	<ul style="list-style-type: none"> ■ Employers or providers recruited participants who closely matched the purpose of the course (e.g. clearly had LLN needs or whose work matched the teaching content). ■ Course purpose and content were explained clearly to participants at the start of the course. ■ Tutors set out a clear programme of learning from the first teaching session to ensure learner motivation and retention. ■ Where teaching content was promised to learners, this content was delivered. ■ There were clear and on-going communications between providers, tutors and company personnel.
The courses	<ul style="list-style-type: none"> ■ Courses were run in work time. ■ Teaching content that was closely related to companies' issues was identified in learning needs analyses and the course tutor used company documentation and processes in their teaching. ■ Teaching content was simultaneously related to learners' specific learning needs based on learning needs analyses and their personal interests.
Learners	<ul style="list-style-type: none"> ■ Participants with high motivation and sense of commitment were selected. ■ There was consistent attendance at teaching sessions.

On workplace courses it is important that trainers directly link learning to everyday tasks in the workplace so that learners see their relevance, and can put them into practice (White, 2003; cited in MacLeod and Straw, 2010). A symposium of US practitioners and academics (Condelli et al. 2010) identified a number of promising approaches to combine language, literacy and job skills training:

- Contextualized basic skills instruction, in which reading, writing, maths, and computer skills are taught in meaningful work-related, family-related, or other individually engaging contexts;
- Differentiated instruction, in which career orientation and/or job training can be provided to adults at a broad range of reading and numeracy skill levels even as adults strive to raise their basic skill levels;
- Flexible career pathways in which individual adults take a carefully constructed set of complementary basic skills, occupational, and (in some cases) postsecondary education modules related to a particular learning goal or outcome;
- Innovative public-private partnerships that break down the traditional distinction between basic skills and job-specific skills training for incumbent workers.

MacLeod and Straw (2010) found evidence that the attitude of employers has an impact on learners. Impacts are greater where the employer values the learning being undertaken (Evans and Waite, 2008; Warner and Vorhaus, 2008; cited in MacLeod and Straw, 2010), and are negatively affected when employers do not recognise and require the skills employees are developing.

Norway: Basic Competence in Working Life (*Basiskompetanse i arbeidslivet* – BKA)

A successful example of a workplace programme is Basic Competence in Working Life (*Basiskompetanse i arbeidslivet* - BKA) in Norway (Carpentieri et al. 2015). The BKA is run by Vox, the Norwegian Agency for Lifelong Learning, which is part of the Norwegian Ministry of Education and Research. Funding and participation in the BKA programme have increased since 2006 when the programme was established. There are no costs to employers apart from releasing staff and providing a learning space. It aims to support employees with low levels of basic education through tailor-made courses.

Any enterprise in Norway, private and public, can apply for funding, although the programme targets people with relatively low formal skills. It concentrates on reading, writing, numeracy, and digital skills, but beginning in 2014 the BKA also includes oral communication in combination with other skills. The programme emphasises the following criteria:

- Learning activities should be combined with work and basic skills training should preferably be linked to other job-relevant training, and
- The courses should increase participants' motivation to participate in additional learning.

Employers work with providers to create a tailored programme for literacy, numeracy and digital skills which are specific to the needs of the employees in that company. Training is relevant to the specific, situated practices of individual workplaces. This means that courses are of varying length, time of day, and focus. The courses are generally short, with some classes in work time and others in the employees' own time. There are no assessments of proficiency; the focus is on soft outcomes such as self-confidence.

The University of Florence (2010) identified BKA as an example of good practice because the target group (employees with low levels of basic skills) was reached, especially in the courses to improve literacy competences; the majority of participants reported the positive experiences they had compared to the negative learning experiences they had in the past, and participants could exemplify gains in skills and their application in their work.

Employers reported that it was more of a challenge to motivate participants to attend the literacy courses, less so for ICT courses. In some cases, course providers needed to motivate participants in order to dispel employees' and potential participants' initial and enduring prejudices about further education. Employers also became much more aware of the need to address basic skills and the benefits of doing so.

In Germany, the 2012-2015 programme 'work oriented basic skills provision' by the Federal Ministry of Education and Research (*Arbeitsplatzorientierte Alphabetisierung und Grundbildung des BMBF*) is providing LLN in cooperation with employers to address the basic skills needs of more than 4 million employed with reading and writing difficulties.

The programme currently supports 54 projects⁷. Whilst the overall programme evaluation is not yet available, monitoring results show some positive progress. These are especially relevant in terms of attracting the intended target group and delivering the basic skills learning as intended in workplaces. The key results so far are as follows:

- Between autumn 2012 and end 2013, 134 courses with 13,500 training hours in literacy were supported;
- Two thirds of the courses took place in the workplace;
- 82% of participants were aged 18-49 (i.e. prime working age);
- Many projects chose to package the courses in a way enabling participants to take part without losing their face in front of the colleagues.

3.3.3.3. Family approaches

Family learning generally refers to programmes of learning which include both children and older members of their family (particularly, but not exclusively, their parents), as well as programmes which cover literacy, numeracy, language, and, in some cases, wider skills or subject knowledge (MacLeod and Straw, 2010). The extent to which programmes are designed to, and work towards, improving adults' skills does vary. Benseman et al. (2005) found that family programmes that have a clear focus on literacy/numeracy development appear likely to enhance learners' skills but there is mixed evidence on the effect of family approaches on literacy and numeracy.

Brooks et al. (2008) conducted a UK-wide and international review of family literacy, language and numeracy (FLLN) programmes and practices, and identified criteria for promising practice and models of inclusive and diverse FLLN delivery. The study found some limited evidence that parents' skills benefited from FLLN programmes. Two studies with matched group designs concluded that there was no benefit to parents' literacy (although there was some benefit for general education), and three one-group research design studies (Family literacy demonstration programmes, Family literacy for new groups, Family literacy and numeracy in prisons) reported some benefit for parents' literacy. Two studies (one-group research designs) reported benefits to parents' spoken language (Early Start, FLAME), and two studies (one with a matched group design) reported benefit to parents' numeracy (Family numeracy pilot programmes, Family literacy and numeracy in prisons). Results were stronger where programmes worked with mothers in a 'traditional' family setting (e.g. FLAME in Chicago and MOCEP in Turkey).

Parent Empowerment for Family Literacy Project (PEFaL)

This European Union-funded six-nation family literacy initiative took place between 2001 and 2004 (Brooks et al. 2008). The principal aim of PEFaL was to empower and promote the social inclusion of disadvantaged families through the provision of quality learning opportunities. It was as an 'out-of-school' home and community-based learning project aiming to enhance children and parents' literacy skills and competencies⁸.

Literacy training was undertaken over a period of three months. Learning sessions (each lasting for about one and a half hours and involving between 10 and 12 families) were structured in two parts, with the first session introducing parents and children separately to a joint learning activity, and then a joint session of parents and their children in which they reflect on the assigned learning activity. It used participatory and interactive teaching-learning approaches and strategies such as learn-by-play (games), group discussions, story-telling and simulations / drama. Teaching and learning were also rooted in the participants' educational experiences with a view to building and thus reinforcing their acquired literacy skills. The PEFaL programme benefited 450 families during the first three years of its implementation.

⁷ BMBF (2014) Erfolgreich für Alphabetisierung, Strategien und Ansätze für die Arbeitswelt:
<http://www.bmbf.de/de/426.php>

⁸ <http://www.unesco.org/ui/litbase/?menu=4&programme=53>

Camilleri et al. (2005) evaluated the effectiveness of family literacy provision within the PEFaL project and found from qualitative evidence from across the project that key outcomes were:

- Parents felt encouraged to actively involve themselves in literacy activities that benefit their children;
- Parents reported increased self-confidence and a renewed ability to become pro-active in their own journey of lifelong learning;
- Parents learnt to value education and the literacy community was extended; and
- Parents discovered their own learning abilities and could potentially seek new opportunities for learning, enhancing their employment status and job satisfaction.
- Lessons from PEFaL are that parents should not only be well-informed about the programme but should also be actively involved in its development and implementation because this gives them confidence and enhances their interest to support their children's education. Also, joint learning sessions gives all participants the feeling that they have similar challenges and each has something to contribute towards solving group learning problems⁹.

Based on qualitative evidence drawn from interviews and surveys of small numbers of participants, the UNESCO QualiFLY FLLN project which aimed at promoting good practice in a range of cultural settings¹⁰: Bulgaria, Germany, Ireland, Italy, Malta and Turkey found that:

- Literacy sessions held regularly over several months were perceived to increase parents' interest in their children's education and to raise their own self-esteem and communication skills;
- Provision for parents mirrored the programme for children;
- Parents were actively involved in the classroom and also took part in parallel sessions on their own where they produced materials that they can use with their children at home or in class. Materials were multi-modal and included: a collection of multilingual books, multilingual songs, rhymes, and storytelling bags;
- Tutors were trained to use non-formal adult learning methods to support learning in the adult participants.

From their review of literature, Macleod and Straw (2010) identified the following factors critical to the effective delivery of adult basic skills in FLLN:

- **The use of recruitment strategies to engage families.** This is particularly relevant for recruiting men and parents with low attainment levels. Strategies include offering taster sessions to families; ensuring publicity is geared towards the target audience (as opposed to a generic campaign); and, if feasible, taking a more direct and personal approach by visiting families at home to outline the purpose and benefits of a family learning programme;
- **Professional development for those involved in delivery.** Working across sectors is seen as presenting 'new professional challenges' for early-childhood educators teaching adults, and adult educators acquiring knowledge of pre-school development and literacy;
- **Effective collaboration between stakeholders.** This should include liaison between agencies in the initial planning phases and the involvement of partners to bring together expertise, resources, reputation and credibility (Mallows, 2008; cited in MacLeod and Straw, 2010);
- **Strategies to ensure retention of participants.** The duration of participant involvement in family learning programmes has a direct relationship with the benefits experienced;

⁹ <http://www.unesco.org/uil/litbase/?menu=4&programme=53>

¹⁰ <http://www.unesco.org/education/uie/QualiFLY/index.html>

- **Tailored provision.** Programmes should be tailored to the needs of participants. Careful targeting of services towards subgroups with similar backgrounds might enable projects to focus activities more effectively; programmes should be sufficiently differentiated to address learners' needs (St. Pierre et al., 2003; cited in Macleod and Straw, 2010). Authenticity and relevance in programme design are other characteristics highlighted in the literature as key to the effective delivery of family learning (Padak et al., 2002; cited in Macleod and Straw, 2010);
- **A clear definition and understanding of family learning.** A lack of shared understanding around the purpose of family learning programmes can lead to difficulties.
- **Qualified staff with the necessary expertise.** This should entail staff having a variety of expertise (for example, encompassing adult education, early childhood education and social work), staff adopting a collaborative approach such as joint planning between adult and child trainers, stability of staffing, and an awareness of cultural issues (Padak et al. 2002; cited in Macleod and Straw, 2010);
- **Stable, long-term funding;**
- **Suitable location.** Including the need for adequate space, separate adult and child areas, local and convenient locations, and familiar venues;
- **Appropriate assessment.** Requirements to undertake assessment or achieve a certain level of attainment may have a potentially negative impact on family learning programmes (Swain et al., 2009; cited in Macleod and Straw, 2010). Therefore, assessment and accreditation could be embedded in other activities and tutors should be sensitive to adults' fear of accreditation (especially during the recruitment stages) (Mallows, 2008; cited in Macleod and Straw, 2010).

Benseman et al. (2005) found that programmes that are more likely to ensure learning gains have parents committed to improving their children's chances, have teaching sessions for parents only and children only, as well as together; have home visits; collaborate with other participating groups, to ensure programme and services integration; and have staff whose skills match the unique challenges of family literacy.

3.3.3.4. ICT based provision

MacLeod and Straw (2010) report on the impacts of basic skills courses using ICT. Brooks et al. (2004) (cited in MacLeod and Straw, 2010), on the basis of their review of randomised control trials (RCTs) and other controlled trials, found that using ICT cannot yet be shown to produce better results than conventional instruction though studies indicate that it is not necessarily detrimental. A more recent review of 16 RCTs found that ten revealed no clear result or results which were not statistically significant, two showed ICT to have a negative effect compared with conventional teaching methods and four showed ICT to have a positive effect (Torgerson et al. 2004; cited in Vorhaus et al. 2011).

Carpentieri et al's (2015) review of international evidence and the OECD's Survey of Adult Skills identified countries that perform highly in the provision of adult basic skills (Canada, the Netherlands, Norway, Republic of Korea)¹¹. Part of the study looked at evidence of improving literacy, numeracy and problem-solving through a technology rich environment (PS-TRE). The study found that there were no broad-scale technology-based basic skills delivery methods, although all countries have examples of blended

¹¹ The criteria was as follows: the similarity of each country's skills and age profile to that of England; performance in PIAAC; the potential replicability of each country's policies in England; the availability of relevant evidence (in any language) in each country; the quality of information available from each country, in terms of the robustness of the available evidence, and the level of detail available in policy documents and/or policy analyses; and the relevance of that information to the English context.

learning (online learning combined with face-to-face teaching in adult basic skills classrooms). There were some examples of good practice in innovative delivery using ICT but insufficient evidence to compare the relative effectiveness of different uses of ICT.

However, using ICT in adult basic skills learning is associated with other positive impacts for learners. It is an incentive that initially attracts them into learning and then motivates them to keep learning (Evans and Waite, 2008; Hamilton and Wilson, 2005; White, 2003; cited in MacLeod and Straw, 2010). Evans and Waite (2008) described this as 'learning by stealth', as learners enrol and participate in order to improve their ICT skills, but in the process, they also improve their basic skills. There is also the benefit of greater flexibility in delivering training using mobile technologies (Carpentieri et al. 2015; Vorhaus et al. 2011).

The research shows that IT based flexible learning can sustain the engagement of adult basic skills learners in the following ways:

- Technology can be used to create individualised and relevant learning packages;
- Basic skills learning packages can be created which correspond with and harness individual learning styles;
- Combining a range of learning technologies (television, digital video, mobile telephony and games) as well as the internet and giving learners opportunities to repeat lessons and work at their own time;
- Smaller, 'bite-sized chunks' of learning can be easily delivered, making the learning more accessible and attainable.

The Learndirect programme in the UK showed that social media such as Twitter, Facebook and YouTube, online interactive games designed to improve literacy and numeracy skills, and a number of applications for iPhones, served to increase learner engagement and generated highly positive feedback (Vorhaus et al. 2011).

MacLeod and Straw (2010) found that flexible learning, including internet-based distance learning provided learners with access to learning in ways that overcome a range of attitudinal and situational barriers which affected adults' ability to participate in learning activities. This is through choices of mode of study available to the learner (for example, online study, classroom-based study or a combination of the two), and as well as providing different ways in which learners access and engage with course content.

MacLeod and Straw (2010) identify the key requirements for flexible basic skills learning as:

- **Effective recruitment, engagement and retention.** Atkin et al. (2005) found that offering basic skills courses marketed under the guise of ICT training serves as a hook to engage more learners and employers than would be possible if the courses were presented in their true form;
- **The need for appropriate and effective pedagogical approaches.** Simply using traditional pedagogical methods to deliver internet-based distance learning is not an effective approach. Learning models should be collaborative and constructive, whereby trainers assist in the learning process as opposed to leading it (Holland, 2002; cited in MacLeod and Straw, 2010). Learner autonomy and independence should also extend to the assessment and delivery of basic skills training to adult learners using flexible and internet-based learning (De Castell et al. 2002; cited in MacLeod and Straw, 2010). The review of the UK Flexible Learning Pathfinders pilot schemes (Outram, 2009; cited in MacLeod and Straw, 2010) identified several technical aspects of pedagogy that were associated with the schemes' successes: problem- and enquiry-based learning techniques, e-portfolios, blended learning techniques, and learning objects (small amounts of learning resources which can be used in various programmes);

- **The need to foster a group ethos amongst learners.** Collaboration with fellow students can improve the teaching and learning of adult basic skills through flexible and internet-based learning by providing mutual support and impetus. Collaborative learning should be developed through incorporating interactive problem solving, having opportunities for discussion and reflection, and fostering the development of collaborative skills;
- **The need to facilitate learners' motivation.** Distance learning requires the most learner autonomy of all the existing forms of self-directed learning. Factors related to ICT which raise motivation include: making learning fun, making learning a personal activity, which reduced embarrassment, software acting as a 'private tutor', taking tests, which are often included with software packages used to deliver or complement teaching and learning (Webb, 2006; cited in MacLeod and Straw, 2010);
- **The need to provide effective support for learners and trainers (including high quality learning resources).** 'Pure' online delivery is not the best approach to internet-based distance learning. Additional support augments the effectiveness of the learning, and can be provided through: trainer support for learners provided for at least part of the delivery time; learner-to-learner communication; readily available technical support for trainers and learners; peer support for trainers learning to provide internet-based delivery (Silver-Paculla, 2008; cited in MacLeod and Straw, 2010).
- **Widening access to learning technology.** It is important that learners have access to up-to-date, functional equipment to support their basic skills learning. Providing localised access to centres and facilities may be the most effective means of removing this barrier;
- **Overcoming apprehension of new technologies.** Internet-based distance learning should contain instruction on using learning technologies safely and effectively.

There is evidence that ICT is not appropriate for every learner, for example, those resistant to or less confident with technology or those preferring traditional methods. Also, learners with very low basic skills levels may require more face-to-face tutorial support. There are also some examples of moderate success with large scale online learning systems in Germany (ich-will-lernen), Spain (Aula Mentor¹²) the Netherlands, Ireland (NALA: www.writeon.ie) and France (DALIA¹³ and RECIFE¹⁴). In 2012 the Irish system had more than 22,000 learner accounts created, and more than 1,300 learners received over 5,500 nationally accredited certificates. The website is used in more than 100 local literacy centres, involving more than 200 centre-based tutors all over Ireland who also provide online tutoring. However the rate of completion is not high unless there is a system of local support. In the Netherlands, the online learning platform 'Practice' (www.oefenen.nl) resulted in a large number of accounts being opened, but 75 % of those who registered did not persist with learning (Smit & Camo, 2013; cited in Carpentieri et al. (2015).

The Aula Mentor in Spain is not free, but its low cost makes it accessible to most of the population and has a network of more than 450 mentor classrooms, with one administrator in each structure who advises, guides and reports about students' enrolment. In addition to the online learning and informal assessment adults take face-to-face examinations and receive a certificate of achievement.

¹² Aula Mentor is an online, open training initiative aimed at adults who wish to broaden their personal and professional skills. It provides for the needs of participants who do not have computer skills: there is a 20-hour course on ICTs for beginners and a manual on how to use the system.

¹³ <http://www.mentor.mec.es/es/conocenos>

¹⁴ <http://dalia.educationetformation.fr/>

¹⁴ <http://www.recife76.com/>

Germany: E-learning portal 'I want to learn' (www.ich-will-lernen.de)

'I want to learn' is now the largest online portal in Germany offering free of charge literacy and numeracy courses. It has grown from providing free learning materials and exercises for adults wanting to improve their literacy and numeracy skills to include content on basic financial education ('Life and Money'/'Leben und Geld') and a social networking service. While the success of the portal in terms of the learner outcomes achieved has not been evaluated, available monitoring information points to some successes, including a substantial number of registered users. Also, the portal has received national and international awards. It contains over 31,000 exercises, and since 2004, over 490,000 users have registered¹⁵. The success factors are believed to relate to allowing learners to access the exercises and themes based on their own wishes and learning speed and developing also learner autonomy. The concept of the system allows user mistakes in the exercises to be corrected automatically.

The Netherlands: ETV / Basic Skills Practice Portal

Since 2006, ETV has provided online learning and practice materials, grouped in thematic modules which slowly increase in difficulty, for low skilled adults in literacy and numeracy. The modules can be followed as stand-alone courses or in addition to face-to-face or classroom learning. The modules cover a broad range of topics and levels of difficulty allowing participants to track progress. Individual participants can use the portal for free. Access is also possible through regional training centres and libraries, who have to pay for a licence.

The learning impact of the online portal is significantly higher when the portal is used in addition to regular face-to-face or classroom teaching because almost 95 % of participants who register for an account fail to complete the first set of lessons.

The portal has been made sustainable by developing a business model which secures commitment and investment from regional and local partners, including municipalities, regional training centres and libraries.

3.3.4. Teaching approaches

There is considerable evidence on the teaching approaches that promote greater knowledge and skills acquisition in basic skills. The National Research and Development Centre for Adult Literacy and Numeracy (NRDC) in the UK in particular has produced effective practice studies exploring teaching and learning in reading, writing, numeracy, ESOL and ICT where they have been able to correlate evidence on teaching strategies with measures of change in learners' attainments and attitudes.

The evidence also suggests that success may come through teachers having adequate non-teaching time for planning and professional development (Benseman et al. 2005). Swain and Swan (2007) also stress this in their study of trialling 30 activity-based sessions built on eight mathematical principles described in section 3.3.2 above. They suggest that policy-makers should:

- Help teachers build in adequate time to be able to prepare for sessions;
- Give teachers sufficient time to plan and evaluate learning with learning assistants;
- Dedicate time for entitlement to continuing professional development that has a direct effect on teachers' pedagogical knowledge and their classroom practices;
- Adopt an iterative model of professional development where teachers can trial teaching approaches.

Below are some approaches which work relating to adult literacy, numeracy and ICT.

¹⁵http://grundbildung.de/fileadmin/content/01Projekte/ich-will-lernen.de/Handreichung_Einsatzkonzepte_170114.pdf

3.3.4.1. Literacy

Vorhaus et al's (2011) review of evidence concluded that effective practice in literacy occurs where teachers:

- Build on learners' experience;
- Encourage fluent oral reading;
- Use reciprocal teaching and explicit comprehension strategies;
- Provide time for active reading in class.

Benseman et al. (2005) identified a number of factors that appear likely to enhance learner gain from their overview of studies with some evidence of progress being made:

- A curriculum that is linked to the authentic literacy uses that learners experience in their lives;
- Explicit teaching of reading, by teachers who are well trained in the reading process, and who are skilled in identifying reading difficulties and using appropriate teaching strategies to address them. Reciprocal reading was identified as an effective teaching strategy;
- Programmes that deliver clearly structured teaching using a range of methods;
- Writing programmes that use writing based on expressing learners' experiences and opinions;
- Programmes that include project-based instruction that focus on issues of common interest, on authentic tasks and materials and that encourage a variety of writing activities.

As the authors note, the findings need to be considered tentative, owing to the limitations of the research base from which they are drawn. Research to date (2005) was of variable quality and much of it involved small sample sizes from which it is difficult to generalise from the findings although there was consistency in the findings that the factors identified above are likely to contribute to learner gain.

Germany: adult education centres

Survey evidence from Germany (Von Rosenblatt and Lehmann, 2013) on provision of courses in literacy and numeracy in the adult education centres across Germany¹⁶ has shown the need to use better teaching approaches to achieve consistent and quicker results. A survey based on so-called Alpha-panel interviewed a sample of participants in several waves across the adult education centres in Germany. A total of 332 participants were interviewed in-depth and this included a self-assessment of progress. The results showed that participants had attended on average literacy courses for a long time (3-4 years). There was some significant progress: the proportion of those who reported that they could at least read short texts increased from 49% at the start of the course to 79% at time of the survey; the writing skills improved from 39% to 65% respectively. However, only 30% of course participants were achieving the level of literacy considered to be above the level of functional illiteracy – the minimum level required to function. As a result, the national association of the centres has initiated a project 'course concept and framework curriculum for outcome oriented basic skills provision' (Kurskonzept und Rahmencurriculum für die abschlussorientierte Grundbildung (by Deutscher Volkshochschulverband in 2012)¹⁷.

¹⁶ In 2013, there were over 900 adult education centres in all 16 Lander, representing an extensive network with a significant reach of adults with basic skills deficits

¹⁷ <http://grundbildung.de/projekte/abschlussorientierte-grundbildung.html> . This includes the first-ever framework curriculum and specific instruments to measure learner status and progress, standard learning methods, standardised course duration and common learning goals.

3.3.4.2. Numeracy

From a review of evidence, Vorhaus et al. (2011) concluded that effective practice in numeracy occurs where teachers:

- Build on knowledge learners already have and help them overcome their fear of maths;
- Expose and treat misconceptions as a subject for discussion;
- Promote reasoning and problem solving over 'answer getting';
- Make creative use of ICT.

Inspection evidence in the UK (Ofsted, 2011; cited in Vorhaus et al. 2011) identified the following characteristics of good adult numeracy teaching:

- Planning individualised learning, ensuring that numeracy is practically applied in everyday and generic work contexts;
- Teaching strategies to overcome learners' fears, employing individualised learning programmes to identify and build on the skills that learners have;
- Addressing misconceptions and developing understanding of mathematical concepts;
- Involving all learners and developing their independence: using different types of activity and using a wide range of resources;
- Making numeracy purposeful: focusing on problem-solving and applying numeracy to build learners' confidence in using it in everyday situations and at work; and
- Assessing learners' progress: assessing the progress of learners during sessions, and adjusting teaching methods accordingly.

Wedge (2010) presented an overview of Danish research in adult numeracy teaching in vocational education. He also found that numeracy teaching has to be relevant to the participants' vocational needs to be effective and that the use of mathematical ideas and techniques has to be related to their everyday needs for employing them in their work.

Ofsted reported that successful provision involves learners' understanding of underlying mathematical concepts through practical and vocational applications. Teaching in numeracy was also more successful where providers had developed the role of one or more well-qualified and experienced numeracy specialists to support vocational trainers in planning and delivering learning sessions.

UK: Thinking Through Mathematics (TTM) programme

Swain and Swan's (2007) research developed and trialled 30 activity-based sessions built on eight mathematical principles. The principles were identified from recommendations given by the school inspectorate (Ofsted) and were based on a previous design-based research study, Improving learning in mathematics (DfES, 2005), which in turn was based on earlier studies into teaching and learning in GCSE retake classes in further education colleges. This previous work described principles for the design of teaching and then applied these principles through different types of learning activity. These types of activity were found to promote learning, particularly when they were used in learner-centred ways. In TTM, the researchers took the same set of principles used in the development of Improving Learning in Mathematics and sought to discover how they might apply in a different context, with adult learners designated to be working as between Entry Level 1 (e.g. recognising and selecting coins, or ordering and comparing numbers up to 10) and Level 2 (e.g. calculating costs and change, or adding and subtracting two-digit whole numbers) according to the English five-level system to categorise adult skills.

The principles are as follows:

- Builds on the knowledge learners already have: through developing formative assessment

techniques and adapting to individual learning needs;

- Exposes and discusses common misconceptions: confronting learners with inconsistencies, and allow opportunities for resolution through discussion;
- Uses higher-order questions: questioning that promotes explanation, application and synthesis rather than mere recall;
- Uses cooperative small group work: encouraging critical, constructive discussion;
- Encourages reasoning rather than 'answer getting': depth rather than for superficial 'coverage';
- Uses rich, collaborative tasks: accessible, extendable, encourage decision-making, promote discussion, encourage creativity;
- Creates connections between topic: to help generalise and transfer learning to other topics and contexts;
- Uses technology: helping to present concepts in visually dynamic and exciting ways to help motivate learners.

To improve the quality of numeracy teaching and embed good approaches, continuing professional development makes a difference. A Lifelong Learning Programme project involving educators in UK (Scotland), Finland, Netherlands, Denmark (<https://sites.google.com/site/leovetmaths/>) which aimed to provide innovative solutions to improving the quality of numeracy teaching produced an in-service teacher training course, including collaborative learning, contexts for learning, dialogic learning and problem-based learning; and a resources toolkit, including ice-breakers, energisers, activities and teaching ideas. Users felt that these had improved their competences and improved the learning experience for students.

3.3.4.3. ICT

Effective practice in ICT covers the teaching and learning of ICT competences to address a range of needs, including access to sources of information and advice and public services as well as social media, and addressing the literacy, numeracy and language skills that can prevent the use of ICT and online environments (Futurelab, 2007) and the creative skills to add their own content.

Mellar, H. et al. (2007) tested the effectiveness of teaching strategies for basic ICT learning. They used action research with the tutors, observation of classes, online reflective diaries completed by tutors, and the testing of students both before the course and after 40 hours of class time. The study highlighted effective teaching strategies as the following:

- 'Extending', where the tutor built on or added to material previously introduced, or added to a comment by a learner. There was a strong correlation between this type of teaching activity and changes in ICT skills and confidence scores;
- Increasing the autonomy of learners so that they were able to engage in self-directed learning. There was a positive correlation between the amount of time spent by tutors managing activities with gains made in both ICT skills and confidence;
- Demonstrating what was to be done ('modelling') as opposed to explaining what is to be done;
- Use of a wide variety of technologies, and in particular mobile technologies to provide greater flexibility for learners to apply skills;
- The use of technology to construct (usually shared) artefacts (e.g. WebQuests, e-Portfolios, digital video), which allowed learners to experiment with a variety of roles, and allowed for differentiation in activities.

The Online Basics pilot programme in the UK showed the success of specialist teaching delivered through ICT learning centres for adults without basic ICT skills. The course consisted of five modules covering using a mouse and keyboard, e-mailing, looking at the internet and keeping safe online. It ran in five areas of England during the period January to March 2010. The evaluation (IFF Research, no date) showed that a large majority of

learners felt that their IT-related skills and knowledge had improved and this was especially evident for the more basic skills. Improvements were particularly evident amongst respondents who had not previously completed any other computer courses while 40% of learners had used a computer ten times or more since completion of Online Basics. The evaluation identified that the training worked because it:

- Integrated the practical 'getting to know' exercises for keyboard and mouse use;
- Created a print-out showing keyboard functions for learners to refer to and take away;
- Used as many real world examples wherever possible;
- Provided extra support for those with very little experience of ICT;
- Had an initial assessment to determine learners' suitability for the course and their needs for additional support because of their literacy and numeracy skills.

Poland: Digital Poland Lighthouse Keepers (<https://latarnicy.pl/>)

This programme targeted people over 50 years old by presenting the advantages of ICT in everyday life and at work. It utilised volunteers (described as Lighthouse Keepers who were local leaders, digital champions and enthusiasts of digital education). The workshops began in 2013 and there have been in excess of 31,000 workshops for 232,000 participants.

An evaluation of activities carried out between up to January 2014 found that:

- After workshops, nearly all participants began using the Internet;
- Prior to workshops many of them had not felt the need to use the Internet;
- Many participants would like to participate in future workshops to improve their digital skills further;
- Participants gave a positive assessment of the teaching methods, the course coverage and the pace of learning;
- The delivery model of classes in community centres and social spaces (even private homes) with support by volunteers skilled in mobilising participants worked well;
- An approach based on motivating, demonstrating real benefits of the Internet, dissolving fears and demystifying preconceptions about drawbacks and challenges of using the Internet (departure from formalized, certified courses conducted by specialists) and relating benefits of the Internet with personal needs and motivations was successful.

France: pedagogical model to improve ICT skills

A best practice example featured by the French National Agency to Fight Illiteracy (ANLCI)¹⁸ shows how digital competences can be improved. In the Haute-Normandie region in France, five partners (ALFA, le CLIPS Lillebonne, Média formation, Forgecnor 2000 and Fodeno Le Havre) formed a consortium to develop a specific pedagogical model to improve ICT skills among people concerned by illiteracy issues¹⁹. Their approach was based on a common online training platform (Syfadis) and delivered through a blended learning model (60% of online courses, 40% on-spot). Results suggest that the targeted groups were interested by this new pedagogical approach (there was very little dropout or absenteeism), participants were more confident and developed their digital competences in identifying and organising information, surfing online, using ICT tools and communicating (e.g. via Skype). They also developed transversal skills, e.g. autonomy, time management and organisational capacities.

There is no outcome evidence for this measure, but the ANLCI set up a permanent Forum of good practices²⁰, which aims at sharing good practices and enabling adult basic ICT teachers to meet to

¹⁸ Agence nationale de lutte contre l'illettrisme (ANLCI) : <http://www.anlci.gouv.fr/>

¹⁹ http://www.anlci.gouv.fr/Mediatheque/Forum-2.0/Vers-une-reconnaissance-de-la-competence-numerique_guide-Haute-Normandie

²⁰ Forum permanent des pratiques: <http://www.anlci.gouv.fr/L-ANLCI/Qui-sommes-nous/Le-Forum-permanent-des-Pratiques>

exchange their ideas and experiences. The good practices presented in the Forum have been identified, first at national level, by practitioners and experts who gathered in different working groups (first phase 2004-2005); then added and adapted through local/regional discussions (2006-2007); and finally in a third phase (2008-2010) through developing and producing tools (such as practitioners' kits) to reflect the practices.

3.4. Assessment and testing of learning

Condelli's (2006) review of the research literature and practice on the use of adult numeracy assessment found that there is scant evidence of the effectiveness of assessment techniques and tools although these are widely used in some countries. In the US, for example, there is a requirement to use a standardised test to measure gains in knowledge and skills in adult basic education. Implementation guidelines require that tests must be reliable and valid. Allowable tests include the Tests of Adult Basic Education (TABE), the Comprehensive Adult Student Assessment System (CASAS), the Basic English Skills test (BEST), and the Adult Basic Learning Examination (ABLE). Most programmes adopted the mathematics sections of the TABE and CASAS to measure the numeracy abilities of adult learners.

US: Tests of Adult Basic Education (TABE)

Condelli (2006) describes TABE. Its subtests assess 'mathematics computation' and 'applied mathematics', each with 40 to 50 multiple-choice questions presented with four response options. The test is norm-referenced (i.e., scores are computed in reference to a norming group of adults), and results are usually reported as grade-level equivalents divided into five levels, from pre-literacy (level L – equal to grades 0–1.9) to Advanced (level A – equal to grades 8.6–12.9). TABE is a skill-based test; that is, most items measure specific skills (e.g., whole number operations, conversion of fractions), often with relatively little contextual information. There are a number of limitations of TABE:

- It is not clear that it covers broader facets of numeracy and acknowledges the nature of the everyday mathematical tasks and problems that adults have to solve;
- It emphasises assessing skills in a decontextualized context and may not provide much information on learners' capacities and competencies in a functional context;
- It relies on problems that involve little or no text, ignoring the inherent links between numeracy and literacy skills in everyday functional contexts;
- Both tests expect accurate results that can be clearly classified as right or wrong. However, many real-life situations call for approximate answers, estimates, or opinions or judgments rather than for accurate results. Other systems may employ scoring systems that give credit to partial responses;
- It does not assess skills such as problem solving and critical thinking, although these are difficult to implement in adult basic skills education because they are time-consuming to administer and difficult to score.

Australia: Adult Migrant English Programme

Moore (2007) reported on a two-year research project investigating the English language assessment of low and pre-literacy adult English as a Second Language (ESL) learners in Australia's Adult Migrant English Programme (AMEP). The research involved a nationwide survey of AMEP teachers who teach low/pre-literacy learners (40 responses), four first language focus groups and three case studies of individual learners at that level. The data informed the development of an assessment technique grid (ATG), which links assessment to classroom activity. The ATG serves several purposes: (1) to systematise ongoing assessment for low/pre-literacy learners; (2) to link assessment techniques with learning outcomes and assessment tasks; (3) to link teacher input types with learner response types; (4) to allow teachers more flexibility in how they assess learners; and (5) as a pedagogical tool to help teachers plan series of lessons.

Formative assessment has been shown to make a significant contribution to learning gains relative to other teaching and learning strategies (Black and William, 1998 and 2003 cited in Vorhaus et al. 2011). Benseman et al. (2005) identified the importance of on-going assessment that takes into account the variation in learners' skills across the

dimensions of reading and writing. Assessment processes need to incorporate measurement of all four components of reading: alphabets, fluency, vocabulary and comprehension.

The OECD's review of literature and case studies of practice (2008) found that formative assessment was part of the process of successful learner progress. The steps include:

- 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 to be used as feedback by learners and instructors to modify teaching and learning activities. Instructors develop effective questioning techniques, and set tasks and challenges at the right level to help learners address gaps;
- A focus on building learner autonomy, including skills for self-assessment and for addressing the literacy and numeracy tasks of daily life independently;
- Tracking of learner progress toward goals and recognition of achievement.

As part of the OECD review, Derrick and Ecclestone (2008) reviewed English-language evidence on formative assessment. The study identified the following guidelines that potentially can help teachers develop and improve formative assessment practices, on the assumption that this will not only improve student achievement and attainment, but also the capacity of students to learn effectively in the longer term, by developing their autonomy and motivation:

- **Dialogue between teachers and learners:** teachers should structure learning as far as possible as dialogue between themselves and their students, and between students, ideally in an open-ended and exploratory manner, and in a way that encourages students to see themselves as constructors of their own learning;
- **Communication skills:** teachers should continually evaluate, maintain and extend their communication skills as a way to develop learning;
- **Feedback and marking:** should focus on the task rather than the person, be constructive and practical, and be returned as soon as possible. Giving grades or marks can demotivate students, especially those who are least confident;
- **Questioning and checking learning:** teachers should foster joint enquiry in a task and a repertoire of questioning techniques for developing learning;
- **Summative assessment tools used formatively:** this involves finding ways to get students to go beyond the bare results of the summative assessment processes and try to understand how they work and reflect on what they mean;
- **Planning and differentiation:** teachers can use formative assessment activities to find out more about their learners' motivation and understanding, so as to inform planning and differentiation;
- **Developing an atmosphere and culture conducive to learning:** formative assessment activities depend for their effectiveness on students being relaxed and feeling secure enough to face challenges and take risks in asking questions or advancing propositions that may reveal their lack of understanding;
- **Types of assessment:** teachers need to develop their understanding of both formative and summative assessment, so as to avoid the danger of formative assessment activities simply serving the purposes of accountability and certification rather than supporting deeper, sustainable learning;
- **Peer assessment and self-assessment:** this should be central elements of all learning situations;

- **Collaborative learning activities:** there is evidence that collaborative discussions, tasks and activities, organised around conceptual obstacles, including disagreement and debate can have benefits for many learners;
- **Improving motivation and confidence, autonomy, and citizenship:** traditional transmission modes of teaching in which students are seen as passive recipients of learning, are unlikely to be effective for many adult learners. More productive are approaches in which learners are active participants in the processes of learning, and particularly in the assessment of those processes;
- **Learning to assess:** developing the capacity of learners to plan, develop and evaluate their own learning and that of others.

3.5. Progressing and engaging in lifelong learning

MacLeod and Straw (2010) found that effective practice entails providing opportunities for learners to progress on to further learning. Progression routes need to be clearly signposted to learners and can be promoted through various channels. Information, Advice and Guidance (IAG) services are critical, and the content of basic skills training should include opportunities to discuss next steps and have trainers facilitating access to further learning. Equally, accreditation and certification open up progression opportunities, including transition to employment, career advancement and further study. A modular course structure can aid progression in learning.

Effective learning requires persistence, which is keeping adults engaged in basic skills learning long enough to make significant progress which will make a difference to their skills levels and then engaging in self-directed study or distance education when they are not participating in programmes, and returning to learning at a convenient time (Vorhaus et al. 2011).

Basic skills courses can be effective in supporting and increasing learner persistence. The United States MDRC/NCSALL persistence study (2000-2003) was designed to help library-based literacy programmes largely delivered by volunteers teaching in small groups or one-to-ones to increase the persistence of adult learners (where programmatic funding was not dependent on learner retention). Porter et al. (2005) identified five learning pathways for the programme participants it studied: a long-term pathway (in programmes for an extended period); mandatory pathway; try-out pathway; intermittent pathway (allowing a break in participation); short-term pathway (intense but brief participation). This research suggested that the challenge for education providers is to value each pathway and the outcomes that are associated with it.

An earlier study identified three supports to persistence (Comings et al., 1999; cited in Vorhaus et al. 2011) which is supported by more recent studies:

- Managing the barriers that help and hinder persistence:
 - Information-gathering strategies to better respond to the needs of learners;
 - Support strategies, including, pastoral support; child care facilities; help with transportation; referral procedure for using external agencies;
 - Operational strategies that promote flexible learning (adapting to the personal circumstance and learning styles of individual learners);
 - Programmatic strategies: including the curriculum changes, recruiting students in innovative ways, redesigning tutor training, redesigning student and tutor orientation;
- Building self-efficacy through building the feeling in adults that they can be successful learners, through regular recognition of learner progress, and by using successful adult learners as role models. It should include recognising progress towards 'soft' outcomes, such as improvements in self-confidence and by

formative assessment taking account of small steps as well as significant gains (Eldred et al, 2006; cited in Vorhaus et al. 2011);

- Establishing learning goals and ensuring that progress is made by learners towards this goal.

To which could be added:

- **Support for learners during breaks from learning.** This can be achieved by distance and blended learning (combining face to face and technology based, formal and self-study methods). For example, learners taking a break due to maternity could benefit from access to college resources, including online learning and phone tutorials (QIA, 2008; cited in Vorhaus et al. 2011);
- **Provision of self-study support.** This enables programmes to serve more learners, attract new learners to classes (since some adults who self-study might later attend classes), and increase the overall persistence of adult literacy learning (since many adult learners engage in self-study and attend classes at different points in time) (Reder and Strawn, 2006; cited in Vorhaus et al. 2011);
- **Developing the skills of teachers.** Teachers made a difference to persistence and completion (Lopez et al., 2007; cited in Vorhaus et al. 2011);
- **Voluntary participation.** There is evidence that persistence is improved when participation is voluntary for learners as opposed to mandatory. Involuntary learners are significantly less likely than voluntary learners to engage in follow-up education or training (Wolf et al. 2009). Wolf and Evans (2011) (cited in Vorhaus et al. 2011) compared learners participating voluntarily, and those obliged to study by their employers, and found that the former had a greater inclination to undertake further learning or read more. The changes were small and not universal, but they were statistically significant. In terms of motivation, there is also evidence that making adults attend training programmes through interventions such as directions and sanctions does not lead to full engagement and this can lead to increased resistance to subsequent training (Vorhaus et al. 2011). Motivation is improved when learners have specific goals as a reason for entering adult basic education programmes (Comings et al. 1999; cited in Vorhaus et al. 2011).

A symposium of US practitioners and academics (Condelli et al. 2010) found that accelerating learning for adults is a key factor toward their sustained motivation and engagement. Approaches that could promote this are:

- Embedded learning that contextualises basic skills: such approaches lead to greater persistence and completion rates for participants than do sequentially offered programmes in which literacy skills are taught prior to work-related training. Casey et al. (2006) also found that embedded learning has been associated with less learner drop-out from courses compared to courses with separate basic skills - this may be because of less stigma being associated with having literacy and numeracy needs. However, the effect is stronger for Level 2 compared to Level 1;
- Packaging content into courses in a way that allows for compression and chunking so that learners can focus on the elements of a subject with which they are struggling, rather than be forced to retake an entire course. For example, learners could be given the opportunity to take and re-take specific units, such as fractions, rather than retake an entire course if failing an exam;
- Blended learning has also been shown to be very successful, as it combines self-directed learning (usually online or computer-based) with opportunities to learn with peers and a teacher or tutor. In a range of programmes, students engaging in a blended option achieve as high as (or more than) peers in either pure online or classroom only settings, and report greater satisfaction with and persistence in the experience.
- **Progressing to employment**

A recent EEPO Review (2015) on upskilling unemployed adults found that relatively few national policies focus explicitly on training for low-skilled unemployed adults although training for unemployed people often but not invariably includes the provision of basic literacy, numeracy, language and ICT skills as a pre-requisite for other work related education and training.

In Denmark (EEPO, 2015), Public Employment Services must test the unemployed for any problems with general skills in reading, writing or arithmetic. From 2015, unemployed people who lack basic reading, writing and numeracy skills, are expected to participate in this training. In most labour market activation programmes, studies do not separate the effects of basic literacy and numeracy training from work related training in their contribution to upskilling unemployed adults and their progression to employment.

Kelly et al. (2012) highlight the value of using labour market activation programmes to invest in adults with literacy and numeracy difficulties. Their research in Ireland shows that market-orientated training for people with literacy and numeracy needs helped to enhance employment prospects.

The research assessed the impact of training among around 800 individuals reporting literacy and/or numeracy difficulties relative to the population of unemployed individuals as a whole against a control group (of over 8,000) who had received a public employment service interview during the study period but no training (who qualify for an intervention but have not been exposed). Relative to the claimant population as a whole, when those with literacy and/or numeracy difficulties receive training, they benefit by much more than average: 29% per cent left the Live Register compared to 11% of all the unemployed.

France: Key Competences Programme (*dispositif 'compétences clés'*)

The Key Competences Programme in France launched in 2009 focusses on helping adults to acquire one or several of the following five fundamental competences: written comprehension and expression, basic skills in mathematics, science and technology, English communication, digital skills and internet as well as the ability to develop knowledge. It particularly targets people who need to develop their basic competences for re-employment.

Dares (2013) shows that in 2011, 50,100 adults participated in the 'key competences' programme, a third of which 34% were unemployed for more than a year. While 28% of the 2011 starters had dropped out of the programme before the end, six months after the end of the programme, 33% of the participants who successfully completed their training had a job.

An EEPO review (2015) featured practice in Aquitaine. Here the programme is designed as follows: identifying training needs; measuring gaps between skills and the objective to be attained; designing an individual training programme; individual and collective workshops and evaluations. The programme is directed towards the longer term unemployed, and it allows them to continue their job search, since there is a maximum of 18 hours of training per week.

The 'key competences' developed include: understanding a text and improving written expression, initiation to a foreign language, mathematics and basic skills in technology, mastering desktop tools and using the Internet, and ability to learn and develop one's skills.

Three training actions have been added to the training actions eligible for the 'key competences' measure: ability to work in a team, ability to work independently, and mastering gestures and behaviour for respecting hygiene, security and environmental rules.

3.6. Governance arrangements

MacLeod and Straw (2010) found that inter-agency and stakeholder collaboration and coordination is a key principle of effective adult basic skills provision. Proactive and positive partnership working is commonly cited in studies, both as a driver of the effective planning and delivery of learning provision, and as a critical factor in the successful engagement of learners.

Effective coordination may be achieved by a one-stop-shop model or co-location of services where more than one agency is on hand to provide support across a range of matters including finance, personal issues and gaining employment. A keyworker role may, similarly, be able to refer learners to those agencies offering appropriate support for any associated problems

Collaboration is enhanced when resources and assessment are shared across a range of agencies and when employers are engaged in championing basic skills training and having a role in determining a course's design, content and goals.

Warner and Vorhaus (2008) (cited in MacLeod and Straw, 2010) evaluated the impacts of the UK Skills for Life (DfEE, 2001) strategy, and identified the scale and scope of the strategy and its infrastructure as important for its success. For example, the funding enabled new projects and initiatives to be developed that built on existing practices; the profile of basic skills was raised; and the scale of activities meant that trainers became more aware of different avenues their learners could take in order to develop their skills further (Canada, Netherlands, Norway and Korea). Common features of successful governance were:

- Commitment to involve employers in co-funding some of the training and ensuring that the content of any training is matched to current workplace needs;
- A concern to generate demand for basic skills training among employers, through education of employers or subsidies;
- A focus on workplace programmes (the low-skilled population is more likely to be employed than unemployed);
- Programmes for those not in employment and an appreciation of the wider benefits of adult basic skills learning (e.g. confidence and self-esteem);
- Long-term funding to allow providers to understand local need, develop appropriate provision and build capacity.

TABLE 3.2: KEY FEATURES OF HIGH PERFORMING COUNTRIES

Country	Key Features
Canada	<ul style="list-style-type: none"> ■ Responsibility for education and training is held by the 13 provinces and territories. ■ At the provincial level, there is a sub-sector for adult literacy programmes and projects. These are funded in hundreds of different ways through hundreds of different organisations, and therefore it is a highly heterogeneous sector characterised by individual and/or isolated projects rather than coherent, coordinated policies and programmes. ■ In terms of the purposes of basic skills, the federal government emphasises labour market preparedness and outcomes. ■ The Canada Job Grant reflects federal government policy shift from the suppliers of training to demanders of training, particularly employers - to increase employer demand for basic skills training. The Canada Job Grant matches employer investment in basic skills training with funding from central government, which goes direct to employers.
The Netherlands	<ul style="list-style-type: none"> ■ Basic skills provision is a right for adults has recently been devolved to the Netherlands' 400-plus municipalities, which receive funding from central government to purchase and provide education services. ■ About 10-15% of adult education programmes are provided by regional education centres and the rest by private companies. ■ Municipalities may commission programmes for at-risk groups. The objectives of the programmes, may differ across municipalities. In Rotterdam, unemployed people who fail a Dutch literacy test are required to attend courses or have their welfare benefits reduced. In

	Amsterdam, in contrast, there is no such requirement and attendance is voluntary.
Norway	<ul style="list-style-type: none"> ■ Adult learning is a statutory right. This includes the right to free primary education for adults who need it, including guidance to assess the individual's needs. Adults over the age of 25 who have not already completed their upper secondary education have the right to complete upper secondary education in accordance with the national curriculum. ■ Validation of prior learning is a right for those with a right to primary or secondary education. ■ Providing equal access to lifelong learning for all adults in the country is an important principle of Norwegian educational policy, and there is a strong focus on adults with low levels of education. ■ Responsibility for provision is with municipalities. In terms of coherence and coordination, the adult learning sector is complex. ■ Tripartite cooperation between social partners and government has been a key driver of reforms in adult education, including basic skills. In addition to providing adults with the right to education, these reforms have led to higher programme funding, employees' right to educational leave from work, and tax exemption when education is paid for by the employer. ■ Adult basic skills programmes are assessed not on the basis of skills gains or qualifications gain for participants, but with regard to other metrics, such as participation, satisfaction, and impact on factors such as confidence and everyday practices.
Republic of Korea	<ul style="list-style-type: none"> ■ A primary objective of central government policy and funding is to encourage local and regional collaboration across the full range of stakeholders, including local government, NGOs and private providers. The National Institute for Lifelong Education (NILE) is the key body in terms of planning, executing and evaluating adult literacy programmes. ■ The Second National Lifelong Learning Promotion Plan proposed a number of strategies including: expanded learning opportunities for low-educated adults; improved quality of literacy education programmes; and certification of participation in adult literacy programmes, through the conferral of elementary and middle school qualifications. ■ There are few lifelong education opportunities for low-skilled, older people and women. Adult literacy policies and programmes typically target specific groups, especially women.

4. CONCLUSIONS

4.1. Messages of effective practice

This section assesses the quality of evidence in each of the learner journey stages and highlights messages of effective practice which are exemplified.

4.1.1. Signposting, engagement and skills check

There is limited evidence on this stage of the learner journey but overall effective recruitment strategies are likely to lead to enhanced attitudes towards learning and greater participation in learning. Key messages of effective practice are:

- Recruitment should be planned, with publicity and strategies geared to the varied target audiences, especially to de-stigmatise basic skills learning and engage hard-to-reach groups;
- Engagement should also take a broad view of both learner motivations and the outcomes adults expect to gain from learning.

4.1.2. Initial assessment and development of a learning plan

Initial assessment of an individual's basic skills needs (and any needs related to broader issues) and development of a learning plan is a key feature of good provision as it tailors the training received.

There is very limited evidence on effective practice in respect to initial assessment and development of a learning plan. One review found that success factors in implementing tools include convincing both practitioners and managers of the value of the tools and attending to the anxieties of users, who may associate a skills appraisal with negative experiences of assessment.

The French Skills Audit (*bilans de competences*) is a good practice example, for which there is some evidence that this supports positive outcomes from the basic skills learning.

4.1.3. Teaching and learning

There is ample evidence on effective practices for delivering teaching and learning, although this largely applies to literacy and numeracy. Key messages of effective practice are:

- The learning time required is no less than and often more than 100 hours to progress by one proficiency level;
- Trainers should be experienced, have achieved qualified teacher status, have assistance in the classroom, and high expectations of learners;
- Teachers need adequate non-teaching time for planning and professional development;
- Trainers should be dedicated to teaching of basic skills rather than this being an added responsibility for vocational teachers, and in all cases trainers need to develop pedagogical skills for teaching basic skills to adults;
- For both literacy and numeracy there are specific pedagogical methods which may be effective for adult basic skills learning, including content linked to learners' real everyday lives and reciprocal teaching.

In respect to teaching ICT skills, one review recommends the following effective teaching strategies:

- 'Extending', where the tutor built on or added to material previously introduced, or added to a comment by a learner. There was a strong correlation between this type of teaching activity and changes in ICT skills and confidence scores;
- Increasing the autonomy of learners so that they were able to engage in self-directed learning. There was a positive correlation between the amount of time spent by tutors managing activities with gains made in both ICT skills and confidence;
- Demonstrating what was to be done ('modelling') as opposed to explaining what is to be done;
- Use of a wide variety of technologies, and in particular mobile technologies to provide greater flexibility for learners to apply skills;
- The use of technology to construct (usually shared) artefacts (e.g. WebQuests, e-Portfolios, digital video), which allowed learners to experiment with a variety of roles, and allowed for differentiation in activities.

The Online Basics programme in the UK shows the success of specialist teaching delivered through centres while the Lighthouse Keepers programme in Poland shows the success of using volunteers to recruit participants as well as support teaching.

There is an abundance of evidence on the different learner settings and how they can be effective.

Embedded provision is particularly valuable for increasing adults' confidence to engage in learning and enhanced motivation to engage in further learning. It is also associated with higher achievement of literacy and numeracy qualifications compared to other kinds of provision.

Work-based learning is also associated with positive outcomes for learners. There is good evidence from Canada and New Zealand that work-based programmes lead to better attainment of knowledge and skills. It also helps adults retain and develop those skills. Work-based programmes can also reach people who are not normally involved in continuous education or training.

There is mixed evidence on the benefit of **family programmes** for attainment of knowledge and skills. However, some case study evidence suggests that there are positive outcomes in regard to engagement of adult learners and increased confidence of learners, while perceived opportunities to help their children learn are a strong motivating force behind adult participation.

There is less evidence on the effectiveness of basic skills learning for the **unemployed / inactive**. However, experience in Ireland suggests that relative to the unemployed claimant population as a whole, when those with literacy and/or numeracy difficulties receive training, they are more likely to obtain employment than those who have not.

ICT-based provision cannot yet be shown to produce better attainment of knowledge and skills than conventional instruction. However, ICT can serve as the incentive that initially attracts adults into learning, and then motivates them to keep learning. It also helps to provide flexibility for learners, which may support retention, and improve ICT skills. In particular, blended learning techniques (ICT provision blended with other delivery methods) is associated with successful schemes, especially as it promotes learner persistence through combining self-directed learning (usually online or computer-based) with opportunities to learn with peers and a teacher or tutor.

4.1.4. Assessment and testing of learning

The evidence is very clear that ongoing formative assessment can make a significant contribution to learning gains relative to other teaching and learning strategies. There is

good evidence on some of the principles that contribute to effective formative assessment, but there is very little robust evidence demonstrating the effectiveness of particular measures or initiatives.

One example of an assessment tool in the US is TABE. A critical review highlights several ingredients of value in the design of assessment tools:

- Covering the everyday mathematical tasks and problems that adults have to solve;
- Assessing learners' capacities and competencies in a functional context (rather than being de-contextualised);
- Linking numeracy and literacy skills in everyday functional contexts;
- Giving credit to partial answers that demonstrate some understanding;
- Assessing problem solving and critical thinking.

4.1.5. Progressing and engaging in lifelong learning

It is important to provide opportunities for learners to progress on to further learning. The evidence suggests that this can be supported by:

- Clear signposting to progression routes;
- Provision of Information, Advice and Guidance (IAG) services; and
- Accreditation and certification of learning.

Effective learning requires persistence, which refers to keeping adults in basic skills learning long enough to make significant progress. Learner persistence can be promoted by the following strategies:

- Managing the barriers that help and hinder persistence, for example by information-gathering strategies to better respond to the needs of learners, pastoral support, and flexible learning;
- Developing self-efficacy through building the feeling in adults that they can be successful learners;
- Establishing learning goals and ensuring that progress is made by learners towards this goal;
- Support for learners during breaks from learning (which may be protracted depending on other competing events in adults' lives);
- Support for self-study through blended learning, with adequate structure and support in place, and combining self-directed learning (usually online or computer-based) with opportunities to learn with peers and a teacher or tutor;
- Ensuring learning participation is voluntary; and
- Packaging content into courses in a way that allows for compression and chunking so that students can focus on the elements of a subject with which they are struggling.

4.1.6. Progressing to employment

There is limited evidence on how adult basic skills programmes can enhance progression to employment as part of labour activation programmes to upskill the unemployed.

Research in Ireland highlights the value of using labour market activation programmes to invest in adults with literacy and numeracy difficulties. In Denmark the Public Employment Services test the unemployed for any problems with general skills in reading, writing or arithmetic so that they can participate in basic skills courses. France's

Key Competences programme (*dispositif 'compétences clés'*) has shown it helps participants on such courses to progress into employment.

4.2. Policy recommendations

The evidence also points to some key recommendations for policy.

- Supporting inter-agency and stakeholder collaboration and coordination has a key principle of effective adult basic skills provision. This should involve resources and assessment being shared across a range of agencies;
- Establishing requirements or guidelines that basic skills instructors are qualified teachers and have undertaken specialist training in basic skills teaching;
- Ensuring that there is a framework curriculum for outcome oriented basic skills provision;
- Creating conditions that prioritise and support embedded provision and work-based provision;
- Promoting employer engagement and championing of basic skills training; this should include employers having a role in determining a course's design, content and goals, ensuring that the content of any training is matched to current workplace needs;
- Generating demand for basic skills training amongst employers, perhaps through education of employers or subsidies;
- Providing opportunities for learners to progress to further learning, and ensure that progression routes are clearly signposted to learners and are promoted through various channels;
- Ensuring that learners have opportunities for accreditation and certification of learning in order to open up progression opportunities, including transition to employment, career advancement and further study;
- Providing support to adult learners (e.g. support with course fees, travel costs, childcare, and time off work) to encourage learner participation and persistence;
- Learner persistence and motivation is inhibited by mandatory participation in learning, and therefore unemployed adults with basic skills needs should be encouraged to take-up opportunities on a voluntary basis.

4.3. Gaps in the evidence

This paper has presented the results of a literature review conducted subsequent to an initial analysis of the documents/sources provided by the Commission on adult basic skills learning. The initial analysis found aspects of policy and practice on adult basic skills learning where there are gaps in information.

The further search and analysis has provided a good deal more evidence in respect to signposting, engagement and skills check, and the delivery of teaching and learning. It has also filled a gap in the initial analyses on the issue of progressing and engaging in lifelong learning. However, there remain three major gaps in the evidence, according to the learner journey framework:

- **Initial assessment and development of a learning plan** – we know that development of a learning plan is a key feature of good provision but there is little evidence on effective practice in respect to this.
- **Assessment and testing of learning** – again this is an important aspect of practice but there is little evidence demonstrating the effectiveness of particular measures or initiatives.

- **Progressing the unemployed to employment** – there is some evidence on how adult basic skills programmes work as part of active labour market programmes to enhance progression to employment but the added value is not well evidenced in the evaluations available.

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Annex 2: Literature review inclusion criteria and search strategy

Inclusion criteria

The table below shows the criteria for study inclusion.

Table A2.1: Criteria for study inclusion

Characteristics of the literature	Inclusions
Time period	2005-2014
Geography	EU-28 and Associate countries; international
Type of publication	<ul style="list-style-type: none"> ■ Major Commission project evaluation reports (e.g. Grundtvig/Leonardo) ■ Commission outputs (e.g. Staff Working Documents and commissioned research) ■ Peer reviewed studies and literature reviews ■ Un-peer reviewed studies and literature reviews Publications of other research organisations / think tanks / advocacy bodies
Population groups	<ul style="list-style-type: none"> ■ Adults who have left compulsory schooling with proficiency (literacy and numeracy) at EQF Level 1 or below
Learning settings	<ul style="list-style-type: none"> ■ Formal learning ■ Non-formal and informal ■ Second chance education ■ VET ■ Work-based learning ■ Employability-based learning (for unemployed) ■ Family learning ■ Embedded in other learning programmes
Learner outcomes	<ul style="list-style-type: none"> ■ Recruitment to participate in learning ■ Completion of courses designed to increase competences ■ Attainment in basic skills (qualifications, improved competences) ■ Entry to employment, training or education ■ Application of competences gained in work, home life and civic life ■ Progression to other learning ■ Progression to employment/in employment
Other outcomes	<ul style="list-style-type: none"> ■ Quantity and range of provision ■ Quality of provision

Search strategy

The table below details the sources to be consulted, based on the study objectives.

Table A2.2: Sources of material

Type of source	Sources to be consulted
Journal databases	EBSCO journal database, Scopus, Google Scholar; Education Resources Information Centre (ERIC)
Specific journals and depositories	<ul style="list-style-type: none"> ■ European Journal for Research on the Education and Learning of Adults ■ Lifelong Learning in Europe (LLinE) ■ AlphaPlus (http://alphaplus.ca/en/web-tools/online-

	tools/alphaplus-web-index/alphaplus-web-index.html <ul style="list-style-type: none"> ■ UNESCO Global Report of Adult Learning and Education – GRALE ■ European Employment Policy Observatory (ICF), including ALMP database. N.B. The EEPO Thematic Review on Learning provision for unemployed adults aged 25 to 64 is due for completion 13 April 2015.
Educational and learner data	<ul style="list-style-type: none"> ■ PIAAC ■ AES
Research institutions, networks and projects	<ul style="list-style-type: none"> ■ DG EAC ■ Cedefop ■ The Lifelong Learning Programme ■ UNESCO Institute for Lifelong Learning (Adult Learning Documentation and Information Network) ■ European Training Foundation ■ European Association for Education of Adults ■ The European Civil Society Platform on Lifelong Learning (EUCIS-LLL) ■ Centre for Research on Education and Lifelong Learning (CRELL) ■ Centre for Research & Development in Adult and Lifelong Learning (CR&DALL), Glasgow University, UK ■ Centre for the Study of Education and Training, Lancaster University, UK ■ European Society for Research on the Education of Adults (ESREA), Linköping University, Sweden ■ German Institute for Adult Education, Leibniz Centre for Lifelong Learning (DIE) ■ The National Research and Development Centre for Adult Literacy and Numeracy (NRDC), UK
Implemented projects and initiatives	<ul style="list-style-type: none"> ■ ANCLI ■ Journée nationale de la Défance ■ ELINET ■ ALFIE ■ VOX ■ NALA ■ DVV Germany ■ Training for employment in Norway
Government and government agencies	<ul style="list-style-type: none"> ■ Education Ministries and educational/curriculum agencies in EU countries and other countries which promote adult basic skills (e.g. US, Australia) ■ National lifelong learning agencies
Languages	<ul style="list-style-type: none"> ■ Database, government website and other web searches will be conducted in relevant languages

The English terms below will be used to search for journal articles held on databases. Terms will also be translated and searches undertaken in French, German and Spanish.

Table A2.3: Initial database search terms (each primary term will be combined with each secondary term, and in turn each secondary term will be combined with each tertiary term)

Primary	AND	AND
'Adult basic skills'	Teach*	Impact
'Lifelong learning'	Educate*	Effect*
'Adult basic competencies'	Learn*	Outcome

'Adult literacy'	Instruct*	Achieve*
'Adult numeracy'	Class*	Attain*
	Support	Progress*
	Tuition	Academic
	Provi*	Participat*
	Assess*	Qual*
	Test*	Employ*
	ICT	Train*
	Digital	Higher
	Target*	Further
	Recruit*	Work

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