Integrating Literacy & Numeracy

Final Report

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SOLAS

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Contents

Table of abbreviations

Abbreviation	Description
AEGIA	**The Adult Educational Guidance Association of Ireland.** Organisation representing guidance services in Ireland.
AHEAD	**Association for Higher Education Access & Disability**. Membership body representing individuals that support policy and provision for learners with disability in higher education.
AONTAS	**Irish National Adult Learning Organisation.** Advocacy organisation promoting adult access to high-quality lifelong learning opportunities.
ALO	**Adult Learning Organiser**. Staff responsible for organising literacy and numeracy training in an ETB area.
ALS	**Adult Learning Service**. Organisation funded by ETBs to deliver literacy and numeracy programmes within the ETB area.
BTEI	**Back to Education Initiative.** Part-time courses for over 16s, principally aimed at individuals who have not completed a Leaving Certificate (or equivalent) qualification.
CPD	**Continuing Professional Development**. Term used to describe ongoing vocationally-focused training that workers undertake to become more proficient in their role or maintain their skills and competences.
CDETB	**City of Dublin Education and Training Board.** Organisation responsible for organising Further Education and Training in the City of Dublin.
CETB	**Cork Education and Training Board.** Organisation responsible for organising Further Education and Training in Cork.
CMETB	**Cavan and Monaghan Education and Training Board.** Organisation responsible for organising Further Education and Training in Cavan and Monaghan.
CTC	**Community Training Centres.** ETB-funded centres that deliver community engagement and first steps programme, primarily to disadvantaged learners.
DDLETB	**Dublin and Dun Laoghaire Education and Training Board.** Organisation responsible for organising Further Education and Training in County Dublin and Dun Laoghaire.
DES	**Department for Education and Skills.** Ireland Government department whose responsibilities include Further Education and Training.
ETB	**Education and Training Board**. The 16 Education and Training Boards are responsible for organising Further Education and Training within a defined geographical area.
ETBI	**Education and Training Boards Ireland.** Organisation representing the 16 ETBs.
FÁS	**Foras Áiseanna Saothair (Irish) Training and Employment Authority (English).** Supported provision for individuals seeking employment, including apprenticeships. Dissolved in 2013 with its training delivery responsibilities transferred to the ETBs.
FET	**Further Education and Training.** Terms used to describe Government funded post-16 education, excluding higher education.
FESS	**Further Education Support Service.** Provides resources and support to FET providers to support professional development. Funded by DES and operating through ETBs.

Abbreviation	Description
FIT	**Fast-track into IT.** Industry-led initiative providing a fast track to marketable technical skills for those at risk of long-term unemployment.
GRETB	**Galway and Roscommon Education and Training Board.** Organisation responsible for organising Further Education and Training in Galway and Roscommon.
IACTO	**Irish Association of Community Training Organisations.** Organisation representing CTCs in Ireland.
INOU	**Irish National Organisation of the Unemployed.** Membership body for organisations supporting the unemployed, including community-based resource centres, Citizens Information Services, Money Advice Services and national NGOs.
ILN	**Integrated Literacy and Numeracy.** This is defined as literacy and numeracy provision interweaved as a seamless part of another programme.
KWETB	**Kildare and Wicklow Education and Training Board.** Organisation responsible for organising Further Education and Training in Kildare and Wicklow.
LOETB	**Laois and Offaly Education and Training Board.** Organisation responsible for organising Further Education and Training in Laois and Offaly.
LCETB	**Limerick and Clare Education and Training Board.** Organisation responsible for organising Further Education and Training in Limerick and Clare.
LMETB	**Louth and Meath Education and Training Board.** Organisation responsible for organising Further Education and Training in Louth and Meath.
MSLETB	**Mayo, Sligo and Leitrim Education and Training Board.** Organisation responsible for organising Further Education and Training in Mayo, Sligo and Leitrim.
NALA	**National Adult Literacy Agency.** Government funded organisation responsible for supporting adult literacy and numeracy provision.
NFQ	**National Framework of Qualifications[1].** Twelve level qualification framework used to define the level of difficulty of particular qualifications and the relationship between qualifications.
OECD	**Organisation for Economic Cooperation and Development.** Economic intergovernmental organisation set up to stimulate economic progress and trade. Represents 35 member countries (including Ireland).
PIAAC	**Programme for the International Assessment of Adult Competencies.** International survey conducted by the OECD to assess the literacy, numeracy and digital literacy skills among adults over 25.
PLC	**Post Leaving Certificate.** Comprises a range of courses and qualifications for learners that have finished secondary education.
SOLAS	**An tSeirbhís Oideachais Leanúnaigh agus Scileanna (Irish), Further Education and Skills Service (English).** SOLAS manages, co-ordinates and supports the delivery of FET by ETBs.
VEC	**Vocational Education Committees.** Local education bodies administering most adult education programmes, including PLCs,

[1] More information is available at: http://www.qqi.ie/Articles/Pages/National-Framework-of-Qualifications-(NFQ).aspx

Abbreviation	Description
	Youthreach and BTEI. Dissolved in 2013 with its responsibilities transferred to the ETBs.

Executive summary

Introduction

SOLAS commissioned ICF Consulting Services to examine the delivery of integrated literacy and numeracy (ILN) in Further Education and Training. The purpose of the study was to explore the benefits and challenges associated with integrated approaches, the extent of existing practice and evidence of impact.

The research comprised three primary tasks:

- A comprehensive review of international and national literature on effective approaches to integrating literacy and numeracy and its impact on FET providers and learners. In total, 82 research documents were analysed, of which 26 were from Ireland.
- Interviews with all 16 ETBs and 11 stakeholders involved in the delivery of ILN (including ETBI, NALA, QQI, DES, AONTAS and IACTO). The purpose of the interviews was to explore the developments that have taken place to integrate literacy and numeracy and how it is broadly delivered across the FET landscape;
- Sixteen case studies showcasing different approaches to integrating literacy and numeracy in FET programmes. Case study interviews were conducted with a mix of FET staff and learners (125 interviews in total).

The research was undertaken between June and December, 2017.

Definition of ILN used in the study

The study used a relatively broad definition of ILN, drawing on the definition used by NALA:

'Developing the subject knowledge and skills and the related language, literacy, numeracy … as interwoven elements of a single process. In the vocational or subject classes, it is a planned approach and a moment-by-moment attitude and practice on the part of teachers and learners'.

This definition encompassed a wide range of activities and approaches, which could be characterised for analytical purposes in terms of three models:

- **Model 1:**The provision of discrete literacy and numeracy sessions timetabled around FET courses
- **Model 2:** Embedding teaching of literacy and numeracy within the content of occupation-specific training
- **Model 3:** Informal, responsive literacy and numeracy support provided by FET tutors to their learners on FET programmes.

Key findings

Mapping the landscape

- ETBs largely regard ILN as a key priority. This in part was due to providers proactively responding to the objectives in the FET Strategy (2014 – 2019), which was regarded as defining ILN as a Government priority. However, there was also a general cognisance among ETBs that ILN could also help providers increase retention and success rates.

This demonstrates that there are also organisational drivers at play encouraging new developments in ILN.

- However, within this, there are varying levels of focus/commitment. Some are pro-actively driving forward developments, whereas others are a little less clear on the benefits of integrating literacy and numeracy across *all* programmes. There is a fairly wide recognition of a need to consider some form of integration for apprenticeships and learning at Level 4 and below. However, at higher levels (and particularly PLCs) the practice is generally much more nascent.
- The ETBs are at different levels of maturity in terms of the integration of literacy and numeracy in FET programmes. The most advanced ETBs are at the stage of piloting new initiatives to identify 'what works' or in the early stage roll out of integrated approaches within some specific programmes. Some have drawn on experiences of ILN in Youthreach programmes and a few also have strategies/frameworks in place or in development.
- The most common approach to integrating literacy and numeracy was to deliver standalone classes alongside the programme (the discrete model). Providers felt this model was particularly effective for learners on FET programmes and apprenticeships at L5/6. In these courses, only a minority of learners had literacy and numeracy needs and the pace of the course meant it was difficult to support these learners within the lessons.
- Relatively few ETBs or stakeholders were aware of examples where literacy and numeracy was embedded within a FET programme (the embedded model). Where literacy and numeracy was embedded within a FET programme, it was largely incorporated in Youthreach or ALS programmes. Here, the framing of literacy and numeracy around occupation-specific learning was felt to provide a 'hook' that encouraged learners to develop their literacy and numeracy skills.
- Most ETBs and stakeholders also reported that many tutors would provide additional 1-2-1 support to learners who they believed were struggling with literacy and numeracy components of their course. This was mostly reported to take place after classes. Multiple interviewees reported that it was increasingly difficult to provide this kind of tailored/bespoke support – especially for courses where the profile of learners is evolving over time to include more learners with literacy and numeracy needs.

Delivering integrated literacy and numeracy

Development and roll out

- Nearly all case studies had a lead individual driving developments. In some cases, it was an ALO, who typically led developments by making initial contact with ETBs and FET providers, and was usually responsible for arranging times for literacy and numeracy specialists to give support to learners. In other cases, the ILN programme was instigated by a senior manager in a FET provider or the ETB. These individuals then liaised with ALS services, individual course tutors and FET programme managers to develop new programmes.
- There was a sense from the case studies that strong leadership and drive was essential in ensuring literacy and numeracy is effectively integrated. The delivery of ILN often requires significant upfront investment and changes to delivery, such as the content and timetabling of programmes. Senior manager buy-in is necessary to mobilise centres and programmes to implement these changes, otherwise there is a risk of fragmented and

inconsistent provision. However, in many case studies, this also needed to be supported by regular monitoring to ensure progress had been made.

- Most of the case study projects had initially been established through a pilot programme or as a staged course-by-course roll out. This reflected the complex partnership arrangements (often involving the ALS and multiple centres), which required testing to ensure they worked effectively. In some cases, piloting led to changes in the timetable of activities and the timing and structure of the classes.

Delivery of ILN

- Most of the case study initiatives were aligned to ETB priorities for raising the quality of provision and supporting progression to further learning. However, they typically sat outside of any formal ILN strategy. This was not, however, reported to have affected implementation. It allowed providers to have flexibility in developing solutions which they felt best-reflected the needs of their learners. However, ALOs acknowledged that it could present challenges in leveraging support among some tutors or centres that were more reluctant to integrate literacy and numeracy.
- In the case studies, FET providers employed both formal and informal approaches to screen learner abilities in literacy and numeracy. The wide variety of approaches to initial screening and varying levels of deployment was one of the most striking findings from the research. Formal approaches ranged from using tailored initial assessment tools, to off-the-shelf products (such as the bksb skills builder tool) and a generic assessment tool developed by the ETB. A significant proportion of providers used tutor observations and a review of learner application forms for informal screening.
- It was also apparent that there were different thresholds applied to determine whether a learner needed literacy and numeracy support, even for learners on similar programmes. For example, in one case study around a third of electrician apprenticeships (7 of 19) received additional literacy and numeracy support, whereas in another case study only two out of 20 learners received support. Finding an appropriate mix is necessary to ensure resources are focused at those who will benefit most.
- In most of the case studies, the literacy and numeracy components were not a mandatory part of the programme. Learners were instead invited to attend. ALOs/centre managers recognised that for some learners there was a ‘stigma’ attached to requiring help in literacy and numeracy. Consequently, most framed the provision as ‘study support’ rather than literacy and numeracy provision.
- Tutors reported that attendance on voluntary programmes was generally high for Level 5/6 FET programmes. This was largely attributed to learners realising the additional support had a direct benefit in helping them complete their qualifications and thereby progress to employment or further learning. For learners undertaking FET programmes at Levels 3/4, encouraging participation was more challenging.
- Where literacy and numeracy was delivered as a formal learning session, this commonly lasted 1-2 hours per week. Courses were a mix of formal classes (where tutors taught from set curricula) and tutorials, where learners could come in and receive 1-2-1 support on any aspects of the course they were struggling with. Provision began relatively early in the academic year (within 1-2 weeks) and generally ran throughout the year. The classes were scheduled across evenings, lunchtime or as part of the learning week.
- In the case studies, literacy and numeracy was mostly delivered by specialist literacy and numeracy tutors. However, these tutors would typically research the learners’ courses to contextualise the learning for particular sectors. In some cases, the FET tutors also

played a key role in reinforcing the learning and structuring their courses to ensure it is accessible to individuals with low levels of literacy and numeracy. This 'blurring of the boundaries' between the roles of literacy and numeracy and subject tutors was generally well-received by learners. It connected with organisation-level approaches to develop a culture in which literacy and numeracy is 'everybody's business' – a mantra repeated by several of the case study providers.

- There was relatively little formal assessment of literacy and numeracy skills at the end of respective programmes, although there is extensive course evaluation in ETBs. This reflects that, in all cases, the literacy and numeracy training did not lead to a formal qualification. The monitoring of learner progress was mostly conducted by subject tutors, who would assess whether learners were making sufficient progress in their literacy and numeracy.
- In the case studies, the NALA literacy and numeracy awareness course was commonly reported as a key programme to upskill staff. The awareness training was considered effective for tutors, where literacy and numeracy was provided as discrete provision. There may, however, be the need for more formal support for tutors that are embedding literacy and numeracy provision and are not specialists (which takes place in some Youthreach programmes).

Outcomes and impacts

- Few of the case studies were able to supply evidence of impact. This is perhaps unsurprising given that most were only recently rolled out. However, one provider reported a significant drop in the number of apprentices that had to repeat exams, and well as a higher proportion achieving distinctions
- Some of the wider literature also identifies ILN as having a positive impact on learner achievement and retention. One study (Casey, 2008) reviewed learner data from nearly 2,000 learners and found that there was a seven percentage point increase in attainment for learners on embedded literacy and numeracy programmes
- The case studies and literature also provided qualitative evidence of increased learner confidence and progression as a result of ILN. However, there is little quantitative evidence on the impact of ILN on employment or productivity. This is perhaps to be expected given that there are inherent challenges in attributing impact specifically to the *integrated* aspect of literacy and numeracy provision.

Enablers of ILN

- *Co-location of specialist literacy tutors within FET providers:* This enables collaborative planning between specialist tutors and FET tutors, as well as makes the ILN support a more visible and less daunting part of the programme.
- *Collaboration between literacy/numeracy and subject tutors:* This helps to ensure ILN is contextualised for the occupational area and reinforced in the FET course.
- *Aligning the timetable of programmes, such as setting out period(s) dedicated to ILN delivery:* This ensures specialist tutor time can be used more efficiently.
- *Senior manager buy-in:* This helps accelerate the roll out of initiatives in FET providers and helps create a more consistent, systematic ILN offering.
- *Awareness raising for tutors on the benefits of ILN in supporting achievement and retention on FET programmes:* This encourages more tutors to integrate literacy and numeracy in their courses.

Barriers of ILN

- *Limited resources in ALS to support FET providers to deliver ILN:* Many case studies relied on local ALS to provide specialist tutors, but as ETBs expand their ILN offering, there is limited capacity from ALS to commit more resources, particularly as ILN provision does not count towards ALS targets for accredited learners.
- *Some ETBs playing 'wait and see' for national developments:* This is discouraging an ETB-level response to ILN, as some are awaiting guidance on ETB responsibilities and are wary of making organisational changes that may subsequently have to be reversed.

Conclusions and areas of consideration for SOLAS

A key strength of existing ILN models is that there is a strong vocational focus and contextualisation of learning. This encourages learner participation as they recognise it is relevant for their FET area. It also ensures that literacy and numeracy provision is framed around supporting learners to achieve their FET programme.

The targeting of provision to particular learners on Level 5 and 6 programmes and most Level 4 programmes seems to reflect needs. These are the types of programmes in which learners are most likely to require literacy and numeracy support, especially as the learner cohort evolves in response to the growing FET role in tackling unemployment.

There are issues with inconsistency in practice and variability in the proportion of students offered support. This mainly stems from the fact that there is no consistent approach being adopted by FET providers to screen learner needs in relation to literacy and numeracy. Moreover, there is also variable tutor buy-in, as some are not aware of the benefits of ILN. In some cases, it reflects a probable lack of demand/need for certain courses and learner cohorts.

However, overall there is a strong landscape that ETBs can build on. SOLAS should consider focusing on increasing the visibility of existing practice and providing tailored support to enhance existing activities. Specific areas to consider are:

- **Area 1:** Collate and sharing ILN resources developed by FET providers.
- **Area 2:** Providing training to leaders in ETBs and providers on the organisational approaches to integrating literacy and numeracy, possibly using/adapting professional development courses that have already been developed (e.g. the SOLAS course targeted at CTC managers).
- **Area 3:** Reviewing funding arrangements with ALS's to ensure they are sufficiently incentivised to work with FET providers to deliver ILN programmes.
- **Area 4:** Supporting the FET sector to employ a consistent approach to conducting initial learner screening.
- **Area 5:** Ensuring support for a plurality of models for integrating literacy and numeracy within FET, reflecting there is 'one-size-fits-all' approach to effectively integrating literacy and numeracy.
- **Area 6:** Across the various models for delivering ILN, there are features that are particularly effective and should therefore be promoted. These include:
  - Packaging literacy and numeracy support around wider study skills
  - Framing individualised ILN around the literacy and numeracy skills learners require to complete their FET programme.

- Using specialist literacy and numeracy teachers to deliver provision to FET training centres and PLCs in a way to complements, reinforces and is reinforced by the work of the FET tutor.
- Specialist literacy and numeracy teachers having a presence within FET providers.
- Organisational approaches to timetabling ILN courses.
- Literacy and numeracy awareness training for FET tutors.

1 Introduction

This SOLAS-funded report presents the findings from the study examining the delivery of Integrated Literacy and Numeracy (ILN) in Further Education and Training (FET). The study included a review of the current landscape in relation to ILN to develop a set of policy considerations for SOLAS in terms of potential future action to support effective ILN. The project was conducted by ICF Consulting Services and is based on research undertaken from June to December, 2017.

1.1 Study context and purpose

The aim of the study was to increase the evidence base on if/how literacy and numeracy provision can be effectively integrated within SOLAS-funded FET programmes provided by Education and Training Boards (ETBs) up to Level 6 on the National Framework of Qualifications (NFQ). It was commissioned to support the ambitions set out in the FET Strategy (2014-19) for a FET sector where *'literacy and numeracy are being addressed effectively and are not a barrier to participation in FET or in achieving employment or education and training progression outcomes'.* The Department of Educations and Skills' (DES) implementation plan included a specific objective to expand the evidence base to inform literacy and numeracy policy.

To achieve this, the FET Strategy set out a commitment to integrate literacy and numeracy on FET programmes if there was a strong rationale to do so. The purpose of this study was to explore that rationale and assess the evidence, both quantitative and qualitative, of the benefits of integrating or embedding literacy and numeracy learning within a wide mix of FET programmes.

There is already a well-established infrastructure and resources for delivering literacy and numeracy in Ireland. The Adult Literacy Service, which was established following the 1973 Government 'Adult Education in Ireland' report, provides a broad adult education offering in each Education and Training Board (ETB) area. The National Adult Literacy Agency (NALA) first published integrated literacy guidelines in 2002 and has since published tools and provided training on the subject.

However, there was a compelling case for looking at ways to increase participation in literacy and numeracy training. The results of the Programme for the International Assessment of Adult Competencies (PIAAC)[2] show that literature and numeracy attainment in Ireland remains low compared to other developed countries[3]. Reform of the FET landscape over the last five years has arguably provided the potential to explore new delivery models and created a need to reflect on current practices. This is especially pertinent in the context of the new mission for FET and the evolving institutional landscape heralded, for example, by the set-up of the ETBs, Quality and Qualifications Ireland (QQI) and SOLAS.

SOLAS and other partners were conscious that there is an evidence gap in terms of the current provision in ILN across FET and 'what works' in particular contexts. This

[2] PIAAC is an international survey of adult literacy skills in 40 countries. It is conducted by the OECD every 10 years, with the first surveys starting in 2008.

[3] The 2013 PIAAC survey found that Ireland scores 'below average' in both literacy and numeracy compared to other OECD nations, ranking 17th and 19th respectively out of the 24 participating countries

partly reflected the scale of change within the sector and the previously fragmented nature of FET delivery.

The study addressed this by examining:

- The implementation of embedded literacy and numeracy in FET nationally and internationally for different groups of learners to understand the types and prevalence of integrated models;
- Evidence of the impact of integrating literacy and numeracy, in terms of its effects on retention, achievement and progression to further learning;
- Good practice in effective approaches for integrating literacy and numeracy in FET programmes at a range of levels (NFQ 1 – 6) and across a range of programme types.

1.2 Methodology

The research methodology consisted of three primary tasks:

- A comprehensive review of international and national literature on effective approaches to integrating literacy and numeracy and its impact on FET providers and learners;
- Interviews with all 16 ETBs and 11 stakeholders involved in the delivery of ILN. The purpose of the interviews was to explore the developments that have taken place to integrate literacy and numeracy and how it is broadly delivered across the FET landscape;
- Sixteen case studies showcasing different approaches to integrating literacy and numeracy in FET programmes. The purpose of the case studies was to identify effective examples of ILN and the perceived advantages and disadvantages of the integrated approach.

The approach used to undertake these tasks and the underpinning analytical framework for the research are described below.

1.2.1 Analytical framework

An analytical framework was developed to underpin and make sense of the evidence gathered through the research tasks. The purpose of the framework was to set out measures of the outcomes and impacts associated with ILN (presented in Section 4.2). The starting point for the framework was the development of an intervention logic[4] for ILN, which set out the rationale for an integrated approach and the theory of change that supports the achievement of particular benefits for individuals and society.

The intervention logic was based on certain assumptions:

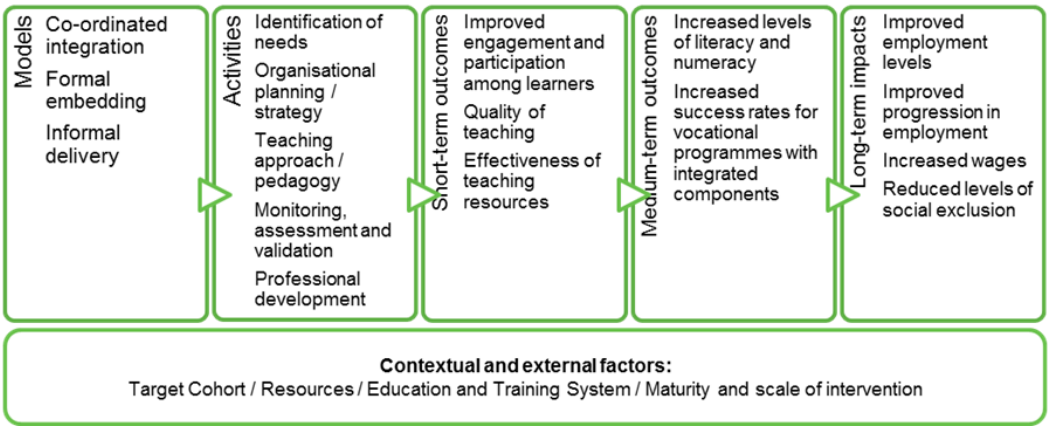
- The study was not examining the value of literacy and numeracy learning *per se*, but rather the benefit of integration within a FET programme as opposed to standalone literacy and numeracy provision (i.e. the potential added value of an integrated approach).

[4] The intervention logic hypotheses how an intervention, in this case ILN, is expected to lead to identified and measurable outputs, outcomes and long-term impacts. This was used to assess the extent to which the examples of integrated literacy and numeracy in Ireland matched expectations.

- There is no single approach to integration. It was therefore important to define models of integration based on the literature and ensure that this was explicit in the analytical framework. By relating outcomes to both activities and models it was assumed that it would be possible to identify not just the overall impact of an integrated approach, but which aspects lead to more positive outcomes.
- The assessment of impact also needed to identify effective practice for different target groups and different programmes. This informed the design of the case studies and literature review.

The intervention logic (Figure 1.1) distinguishes between short, medium and long-term outcomes and impacts. Short-term impacts are predominantly immediate benefits in terms of learner engagement and satisfaction, as well as any expected behaviour change among tutors and learners. Medium-term impacts apply to FET-level impacts on learner retention and achievement. Long-term benefits generally relate to wider economic benefits on employment, productivity, employment and social inclusion.

Figure 1.1 Intervention logic setting out activities and models for integrated literacy and numeracy and expected outcomes and impacts



Source: ICF

1.2.2 Definition and models of ILN

Interviewees described many different aspects of ILN, often flowing from the particular FET contexts in which they were working. There was, however, wide reference to NALA's ILN definition as capturing the essence of what integration actually means:

'Developing the subject knowledge and skills and the related language, literacy, numeracy … as interwoven elements of a single process. In the vocational or subject classes, it is a planned approach and a moment-by-moment attitude and practice on the part of teachers and learners'.

The NALA definition was in line with most definitions apparent from the literature review, such as Courtney and Mawer (1995), which defined integrated literacy as when *'vocational and literacy development become interrelated elements of the one process'.*

Part of the value of the NALA definition is that it can be flexibly applied to a wide range of different contexts. In Ireland and internationally, there are approaches that are recognisably trying to integrate the literacy/numeracy and vocational elements of

learning, but which are doing so in different ways. These differences were not always cosmetic or context-specific. In some cases, they related to fundamentally different approaches to programme design.

Three models of integration were distinguished within our analytical framework to identify some of the core differences in approach that may differentially impact on learners (see Box 1 below). These models relate to *how* literacy and numeracy is delivered in practice within the learning environment and as part of a programme of education/training.

Box 1 Models of ILN

- **Model 1 - Discrete learning** delivered as a formal part of a FET programme. This includes the provision of literacy/numeracy learning as formal lessons or tutorials separate from occupation-specific classes, but integrated within an overall programme of learning, typically based on individual learner need.
- **Model 2 - Embedded learning**, where literacy and numeracy is taught within FET courses and formally included in courses. A paper produced by the NALA-IVEA Working Group in 2013 that stimulated some current ILN activities in FET focuses on this model and reflects literacy/numeracy being embedded within the teaching of occupation-specific FET programmes.
- **Model 3 - Informal delivery** of literacy and numeracy as part of a FET programme. This is where provision is largely ad hoc and responds to needs as they emerge (although it can do so in a planned way). This includes, for example, tutors providing additional 1-2-1 support for some learners after lessons or through the provision of online guidance.

Each model has different implications in terms of organisation and curriculum design. However, they all, to some extent, comprise the following elements:

- **Identification of literacy and numeracy needs** (e.g. pre-course screening learners for literacy/numeracy needs; initial assessment on course; other forms of teacher-led identification of needs, and encouraging learners with needs to access support)
- **Organisational planning / strategy** (e.g. resourcing and working arrangements to support a joined-up approach between literacy/numeracy/FET delivery; effective team working and exchange between FET and literacy/numeracy teaching specialists; institutional policies to support co-ordination and resourcing)[5]
- **Curriculum development** (e.g. approaches to incorporating literacy/numeracy into curriculum planning with varying degrees of formality)
- **Teaching and tools** (e.g. FET-contextualised literacy/numeracy teaching; use of a wider range of teaching styles/tools to support FET learning, such as visual aids)
- **Monitoring, assessment and validation** (e.g. testing literacy/numeracy achievement as part of a wider programme; inclusion of a discrete learner plan

[5] The activities under organisation/planning draw heavily on Casey et al's 2007 research (*You wouldn't expect a maths teacher to teach plastering…*) and a study on *Support for the work on policy guidance on basic skills for adults* (European Commission, 2015)

focusing on literacy/numeracy needs; competency-based and skills-based assessments)

- **Professional development** (e.g. providing support to FET teachers to tackle literacy/numeracy issues in the classroom; helping literacy/numeracy specialists to deliver in FET settings).

In analysing the delivery of ILN provision, the study explored specifically how each of these elements is delivered.

1.2.3 Research undertaken

Literature review

The literature review was undertaken in two stages. The first stage was an initial examination to identify a longlist of sources for inclusion in the main review. The second stage involved a detailed review of sources and the capture of consistent information (data extraction).

Annex 2 sets out:

- The **inclusion criteria**, which defined the evidence in scope of the review.
- The **search strategy** setting out the types of sources for review and the search terms used.
- The approach to **assessing the quality** of individual studies in terms of their strength of evidence.
- The **data extraction tool** used to collected consistent information during the main literature review.

In total, **82 research documents** were analysed, of which 26 were from Ireland. The research documents included a mix of research studies, presentations and policy papers. All documents were published between the years 2001 and 2017, with nearly half published in the last five years.

The largest number of documents outside Ireland came from the UK, with 26 separate publications. Nine studies were from Australia, and most of the remaining studies were from across Europe, or from multi-country reviews by organisations such as the OECD and the European Commission. One study each was identified from the US and New Zealand.

One fifth of the publications identified were peer-reviewed academic papers. The remainder were non-peer reviewed publications by national governments, agencies and authorities, or international reviews by multinational organisations.

Six of the identified studies were literature reviews, which contained information from a substantial range of studies. These studies examined basic skills more generally, but all contained specific sections on ILN. They were:

- Beadle (2015) which drew on 35 sources;
- Benseman, et al (2005) which drew on 70 sources;
- Brookes et al (2005) which drew on 160 sources;
- Carpentieri et al (2015) which drew on 62 sources;
- Macleod and Straw (2010) which drew on 178 sources;
- Vorhaus et al (2011) which drew on 175 sources.

A key study was Casey et al's (2005) review on *Embedding literacy, language and numeracy in post-16 vocational programmes – the impact on learning and achievement*. This study can be distinguished from much of the literature because of its dedicated focus on integrated approaches and, more importantly, by having a study design that includes relatively robust information on impact.

In Ireland, the main research papers that were relevant to the study were: The *Integration of Language, Literacy and Numeracy in VEC Further Education Courses* (IVEA, 2012); *Literacy-friendly FurtherEeducation and Training* (Hegarty and Feeley, 2009) and *Mapping the literacy demands of a Vocational Training Programme: Case study of work-in-progress* (McSkeane, 2008).

ETB interviews

Telephone interviews were conducted with 18 individuals in 16 ETBs. The purpose of the interviews was to examine:

- Current provision of ILN within the ETB geographical area;
- Strategic priorities and plans for integrating literacy and numeracy;
- Factors that have influenced the ETB approach to integrating literacy and numeracy;
- Examples of good and effective practice that could be examined as case studies.

The interviews were mostly conducted with Adult Literacy Organisers (ALOs) in each ETB area. However, a number of interviews were conducted with FET Managers and FET Directors.

Stakeholder interviews

Interviews were conducted with 11 stakeholders with an interest in ILN, including organisations that support aspects of the delivery of literacy and numeracy within ETB areas:

- NALA;
- QQI;
- Department for Education and Skills (DES);
- Education and Training Boards Ireland (ETBI);
- Irish National Adult Learning Organisation (AONTAS);
- Irish Association of Community Training Organisations (IACTO);
- Irish National Organisation of the Unemployed (INOU);
- Further Education Support Service (FESS);
- Association for Higher Education Access & Disability (AHEAD);
- The Adult Educational Guidance Association of Ireland (AEGAI);
- Fast-track into IT (FIT).

The purpose of the interviews was to explore perceptions of the strengths and weaknesses of existing ILN provision and examples of good practice from outside FET provision organised by ETBs (e.g. Community Training Centre provision,

sector-funded IT provision). Most stakeholder interviews were conducted with senior staff (director or chief executives).

Case studies

The purpose of the 16 case studies was to explore in depth how SOLAS-funded FET providers are delivering ILN programmes and the impacts on learners and their organisation. In particular, the case studies explored:

- The rationale for delivering ILN;
- How different elements were delivered (initial screening; recruitment of learners; teaching and contextualisation; and monitoring, validation and assessment);
- What organisational changes had to take place in order to integrate literacy and numeracy;
- What support was provided to tutors and other FET staff;
- Delivery challenges, and how they were overcome;
- The outcomes and impacts of delivering ILN.

The case studies were conducted face-to-face through visits to provider premises. In each visit, interviews were conducted with a mix of 2-8 FET staff and learners. Overall, interviews were conducted with 15 ALOs, 31 FET managers, 28 FET and specialist tutors, 2 support staff and focus groups with 49 learners (125 interviews in total across the 16 case studies).

1.3 Structure of the report

The remainder of the report is structured as follows:

- Chapter 2 presents analysis of the overall delivery of ILN across the 16 ETB areas.
- Chapter 3 describes how ILN is delivered.
- Chapter 4 presents the outcomes and impacts of ILN.
- Chapter 5 sets out the study conclusions and recommendations.

2 Mapping the landscape

2.1 Introduction

This chapter examines the current landscape of ILN provision across FET in Ireland. It looks at where integration fits within current ETB strategies and the extent of current provision. In particular, it explores the different models used and how these are applied across different FET programmes.

In doing so, the study outlines the actions that ETBs are undertaking to respond to recent policy priorities. It also aims to draw out ETB-level actions that have been effective (or could be effective) in supporting the roll out of ILN more broadly across FET.

2.2 Overview of integrated practices in Ireland

2.2.1 Strategic 'buy in' for ILN

ETBs widely regard ILN as a priority for their organisations. For most, this was stimulated by the FET Strategy (2014 – 2019), which identified ILN as a Government priority. However, some early adopters began expanding their ILN offerings following the publication of the 2010 National Literacy Strategy. The ETBs are therefore at different stages in terms of whether an ETB-wide plan is in place for the effective delivery of ILN – but all appear to be on a similar path.

There is also a general cognisance among managers in ETBs and FET providers that ILN could provide organisational/area benefits. In particular, managers saw it as a potential tool for increasing programme success rates and supporting disadvantaged learners. There were numerous references to the costs associated with learners dropping out of programmes associated with literacy and numeracy issues. This demonstrates that there are also organisational drivers at play which are encouraging new developments in ILN.

However, within this, there are varying levels of focus/commitment. Some are pro-actively driving forward developments, whereas others are a little less clear on the benefits of integrating literacy and numeracy across *all* programmes. There was a sense that this was partly influenced by the scale and ambition of Adult Literacy Services and the level of integration between legacy FÁS and VEC services.

Those that were more advanced in implementing a coherent ETB structure were more likely to have responded proactively to policy drivers. The position of each ETB – and its ability to think strategically about issues such as ILN delivery – therefore relates to individual context and organisational/contextual factors.

Perhaps the widest degree of variation is apparent in terms of whether the integration of literacy and numeracy has percolated through to Post Leaving Certificate (PLC) colleges. In the context of strategic 'buy in', there is fairly wide recognition of a need to consider some form of integration for learning at Level 4 and below, but, in many cases, at higher levels the practice is much more nascent.

Even where there is support for the benefits of integrated practice at management level within the ETB, there is not necessarily a consensus view across FET that integrating literacy and numeracy is relevant to all programmes. From a learner-

centred perspective, it was possible for interviewees in ETB management and at provider level to argue both for and against the value of integrating literacy and numeracy within FET programmes up to Level 6.

2.2.2 ETB response

The ETBs are at different levels of maturity with the integration of literacy and numeracy in FET programmes. Even where there is no active ETB plan to integrate literacy and numeracy across segments of FET provision, there are examples of local, provider-level and ad hoc initiatives to support an integrated approach – some of which pre-date the set-up of the ETBs and are driven by individual teachers and tutors, or build, in a more co-ordinated fashion on support from NALA and other networks.

From an ETB-wide perspective, the most advanced ETBs are at the stage of piloting new initiatives to identify 'what works' or in the early stages of rolling out integrated approaches within some specific programmes. Some are able to draw on experiences from ILN in Youthreach programmes, and a few also have strategies/frameworks in place or in development.

Overall, there appears to be three types of response from ETBs:

- Those implementing a planned (top-down) response, with a centralised strategy and plan for integrating literacy and numeracy across a range of their programmes.
- Those implementing an organic (bottom-up) approach. This is where local programme providers are encouraged to develop solutions that they believe best meets the needs of their client groups.
- Those taking a 'wait and see' approach regarding new developments. These ETBs are wary of developing solutions that may not be aligned to a future national strategy, as they may need to subsequently re-work their solutions.

There were reported strengths and weaknesses with each of these approaches. In the case studies, the top down approaches help to drive developments and ensure consistency in practice. However, it appears to take longer to implement change, as most ETBs are implementing changes sequentially across their programmes.

ETBs believed that the bottom-up approach helped build on existing good practice and encouraged innovation. However, they acknowledged that it was dependent on tutor support for integrating literacy and numeracy, which provides a greater risk of variation in practice (and a risk of ILN not being sustained if key 'champions' move jobs).

More broadly, the strategy followed and degree of progress achieved reflects the wider pressures on each ETB as they are relatively new organisations (setting up systems; structures and an ETB culture). Some have had more immediate capacity than others to deliver ILN.

ILN activity is also more advanced in some programmes than others. It was most commonly included in full-time programmes such as Youthreach and specific skills programmes, targeted at early school leavers where it is apparent that many learners need to develop their literacy and numeracy skills to bridge the gap to further learning. There is, for example, an established practice and collaborative, strategic development among the CTCs to integrate literacy and numeracy, driven in part, by a leadership development programme previously supported by SOLAS.

There are also some ETBs that include ILN on apprenticeship programmes, largely because they had identified low apprenticeship completion rates as an issue. However, the interviews indicated that relatively few ETBs integrate literacy and numeracy in PLC programmes and part-time initiatives such as BTEI, partly because of reported complications in fitting additional content into the curriculum, even though most ETBs would regard it as a requirement.

2.3 Models of integration in Ireland

The most common approach to integrating literacy and numeracy was to deliver standalone lessons alongside the programme (the discrete model). This approach was commonly used because:

- It was easier to timetable literacy and numeracy specialists to teach standalone courses;
- It minimised disruption to the FET programme;
- It did not require FET tutors to undertake professional development to deliver literacy and numeracy.

This model was used across a range of FET programmes. However, in the case studies, providers felt it was particularly effective for learners on FET programmes and apprenticeships at L5/6. In these courses, only a minority of learners had literacy and numeracy needs and the pace of the course meant it was difficult to support these learners within the lessons.

Most ETBs and stakeholders also reported that many tutors would provide additional 1-2-1 support to learners that they believed were struggling with literacy and numeracy components of their course. This was mostly reported to take place after classes. However, practice was reported to vary, with some tutors being proactive in identifying and helping learners address literacy and numeracy needs, whereas other tutors were less committed or less able to support learners with literacy and numeracy. Multiple interviews reported that it was increasingly difficult to provide this kind of tailored/bespoke support – especially for courses where the profile of learners is evolving over time to include more learners with literacy and numeracy needs and demand is increasing.

Relatively few ETBs or stakeholders were aware of examples where literacy and numeracy was taught within a FET programme (the embedded model). However, some believed that many tutors will be doing this independently, without it being formally part of the programme design. A challenge with delivering this model is that it requires specialists that have sufficient skills to teach literacy and numeracy. It can also have a high resource cost as providers often need to re-design course curricula to incorporate literacy and numeracy.

Where literacy and numeracy was embedded within a FET programme, it was largely incorporated in Youthreach or Adult Learning Service (ALS) programmes. Here the occupation-specific learning was felt to provide a 'hook' to encourage learners to develop their literacy and numeracy skills.

In Youthreach programmes, the development of literacy and numeracy courses are considered a core objective of the programme. Most learners will not have achieved the school Leaving Certificate and therefore it is assumed that most have literacy and numeracy needs. Consequently, most programmes include literacy and

numeracy modules, although a few ETBs and stakeholders reported examples of provision being embedded within FET.

A few ETBs also reported that some tutors would refer learners to adult literacy and numeracy services. In the case studies we found this could be effective when the ALS is housed within a training centre or PLC, as the tutor could introduce them to literacy and numeracy specialists where they could collectively discuss the learners' support needs. However, where the ALS was off-premises, the ALOs we interviewed reported that a relatively small proportion of learners that were referred by PLCs attended the literacy and numeracy training.

2.4 Support for integrating literacy and numeracy

In the case studies, there were a range of common factors that providers felt supported ILN. These were:

- **Awareness raising training on literacy and numeracy for FET tutors.** ETB providers that sent some or all of their tutors on these courses felt that it gave tutors an understanding of how literacy and numeracy barriers can affect learner achievement. This in turn motivated them to identify and support learners with literacy and numeracy.
- **Having named staff with time allocated to lead developments**. Senior managers reported that developing ILN required significant engagement with ALS and internal staff to drive through changes. This is more effective when there is one person that leads on the agenda. Moreover, they also need to mobilise centre managers to make the upfront investment necessary to develop any new resources and materials, and incorporate this within provider plans.

A major challenge that all providers experienced in implementing literacy and numeracy was a lack of capacity and resources. When providers delivered discrete literacy and numeracy programmes, a key challenge was funding the specialist tutors necessary to deliver the provision. Some could not fund this through their existing budget and local ALS services also had difficulty releasing their teaching staff. For embedded programmes, there is a significant resource implication in training existing tutors to effectively deliver integrated courses, as well as upfront costs in revising teaching materials.

Among most ETBs there was also a sense that they have avoided making widespread change as they await more national guidance on their roles and responsibilities in relation to integrating literacy and numeracy. Even with ETBs that had made changes to integrate literacy and numeracy, there was a concern that they may need to change if it did not match future SOLAS/DES expectations on the types of programmes that should integrate literacy and numeracy and how provision should be delivered. Others were reluctant to make changes until they were clear of what was expected from them and what programmes/levels should be considered in scope.

2.5 Case study examples of ILN

In total, 10 ETBs and two stakeholders proposed examples of good practice that could be explored through the case studies. This was used to develop a list of 16 case studies. The case studies encompassed a mix of FET programmes, although one third related to apprenticeship programmes. The final selection included:

- 5 projects in apprenticeships/training centres
- 2 projects in PLCs
- 2 projects in Youthreach centres
- 2 projects on a BTEI course
- 1 project on a Traineeship course
- 1 CTC provider
- 1 project on a Specific Skills course
- 2 case studies incorporating a range of FET programmes

A description of the 16 case studies are presented below.

ETB area	FET programme	Description of the case study example
Cavan and Monaghan	Electrical apprenticeships (L5)	Cavan and Monaghan Education and Training Board (CMETB) include formal, discrete literacy and numeracy training for learners undertaking electrical apprenticeships. Provision is available to individuals that are identified as having a literacy and numeracy need following an initial assessment. Support is available during Phase 1 to address literacy needs identified at this stage and support is integrated in Phase 2 Electrical Apprenticeships and includes Maths and Study Skills. The provision was first rolled out in 2016/17 and is delivered by the ALS and training centre.
Cavan and Monaghan	BTEI in Childcare and Healthcare (L5)	The CMETB part-time level 5 Childcare and Healthcare courses embed literacy and numeracy within the course content. Assessment is carried out with all learners applying for these courses. Both courses are taught by a trainer who is also an experienced literacy tutor. The provision is delivered through collaboration with the ALS and the training centre.
City of Dublin	Ichicore College PLC courses (L4/5)	The ALS works with PLC colleges to provide additional literacy and numeracy support for their learners on L4/5 courses that have literacy and numeracy needs. One PLC college organises for 1-2-1 training to be delivered to learners that have identified literacy and numeracy needs.
City of Dublin	Pearse College PLC courses (L5)	A PLC college organises group numeracy sessions for learners undertaking Access to University Programmes (L5). The sessions are organised one day a week with the ALS providing the numeracy tutor.
City of Dublin	Kylemore CTC (L3/4)	The CTC integrates literacy and numeracy in its mainstream FET and academic courses. Numeracy is incorporated in an Application of Numbers module at L3 and literacy is taught in a L3/4 communications module and within the class planning.
Cork	Specific Skills Life Sciences Ops programme (L5)	The Cork Education and Training Board (CETB) have developed a Learning 2 Learn programme which it has piloted in the life science programme it is delivering with Carriglaine Biopharma Training Centre. The programme delivers training on study skills (which include literacy and numeracy) to learners undertaking career-entry learning for the pharmaceuticals sector.
Dublin and Dun Laoghaire	Youthreach (L3/4)	A Dublin and Dun Laoghaire Education and Training Board (DDLETB) learning centre incorporates literacy and numeracy across all modules of its two-year Youthreach programme. Additionally, learners also participate in 'drop-

ETB area	FET programme	Description of the case study example
		in' literacy and numeracy sessions where they work against an individual learning plan.
Galway and Roscommon	Electrical and automotive Apprenticeships (L4 and L5)	The Galway and Roscommon Education and Training Board (GRETB) training centre delivers numeracy sessions alongside Phase II of the apprenticeship programme. Learner needs are assessed against the literacy and numeracy requirements of the courses and learners that have literacy and numeracy needs are supported through small group sessions run weekly at the training centre.
Galway and Roscommon	Gardening adult literacy service programme (L3)	The course was developed by the ALS to use gardening training to encourage participation in literacy programmes. Participants are given literacy tasks that reflect tasks likely in gardening – for example, writing care instructions for plants that have just been planted, and calculating the amount of feed required for certain plants.
Kildare and Wicklow	RACE academy Jockey traineeship (L4)	Learners undertaking the Traineeship programme are given small group work with mixed ability groups and 1-2-1 support for those that require additional support. Presently, specialist literacy and numeracy tutors provide six hours tuition per week which in addition to their occupation-specific training
Kildare and Wicklow	Healthcare BTEI course (L5)	In response to new national requirement for all healthcare workers to be qualified, the ETB, with QQI, developed a new health support programme providing the qualification. Literacy and numeracy is embedded across all modules. The course was designed and delivered by the ALS.
Kildare and Wicklow	Youthreach (L3/4)	Literacy and numeracy is incorporated within all modules of the Newbridge Youth Training and Development Centre programme. Tutors have explicit responsibility for teaching literacy and numeracy content related to their area, in order to support the completion of an integrated learning plan.
Laois Offaly	Apprenticeships (multiple programmes	The Maths for Trades programme provides literacy and numeracy sessions for learners undertaking Phase I of their apprenticeship (pre- college). Provision is delivered on Wednesday evenings for two-hours. Learners with literacy and numeracy needs are invited to attend the training but it is not mandatory.
Limerick and Clare	Multiple FET programmes	LCETB recently developed an Language Literacy and Numeracy Framework. A cross-programme group (consisting of leads from a range of FET programmes) is tasked with driving developments. As a consequence, the ETB is providing standalone literacy and numeracy support for apprenticeships and Youthreach learners.
Louth Meath	Motor Vehicle apprenticeship (L5)	A pilot programme where specialist literacy and numeracy tutor worked with the tutor to mentor them on effective approaches for accommodating and supporting learners with literacy and numeracy needs. The specialist tutor also provided supplementary training in small groups for those that require additional support. These courses were relatively short (2-3 hrs) and organised one day week in evenings.
Mayo, Sligo and Leitrim	Multiple FET programmes	The ALS works with training centres to provide additional support to learners with literacy and numeracy needs.

ETB area	FET programme	Description of the case study example
		These programmes are generally delivered as weekly small group or 1-2-1 sessions. The learning is focused around assignments and tests that the learner is undertaking in their FET course. The support is mostly provided to 3-4 learners in a course that are perceived to be falling behind.

3 Delivering integrated literacy and numeracy

3.1 Introduction

This chapter describes how FET providers and ETBs deliver ILN programmes. It outlines the organisations/individuals responsible for driving developments, how new initiatives were rolled out, and the approaches employed in the case studies to:

- Identify learner needs and recruit them to programmes containing an ILN component;
- Incorporate/embed literacy and numeracy activities in curriculum design;
- Engage and motivate learners to develop their literacy and numeracy skills alongside their learning;
- Incorporate approaches to delivering ILN in provider plans and strategies (as part of a whole-organisation approach to ILN);
- Timetabling literacy and numeracy support;
- Developing staff capacity to deliver integrated programmes (e.g. through CPD programmes).

The chapter then draws out enablers and barriers to integrating literacy and numeracy, using tangible examples of effective practice and lessons learned to inform discussion on the type and level of support that FET providers may need in order to effectively deliver ILN provision.

Within this, it is important to state upfront that integration activities form something of a continuum. The question of support to implement ILN depends therefore on a trade-off between the objectives of integration and the resources available and required to undertake different activities. These questions are further explored in Chapter 4, which situates integration activities alongside the achieved and anticipated benefits (i.e. the return on effort and investment).

3.2 Introducing an integrated approach

3.2.1 Drivers for change

Nearly all case studies had a lead individual driving developments. In some cases (such as those in GRETB, the KWETB healthcare programme and CDETB case studies) it was an ALO. The ALOs typically led developments by making initial contact with FET providers, and was usually responsible for arranging times for literacy and numeracy specialists to provide support to learners. In some case studies, the ALO also worked with tutors to develop screening tools and adapt learning resources so they incorporated literacy and numeracy topics.

In other cases (such as LCETB, KWETB Race Academy, DDLETB and LMETB case studies), ILN programmes were instigated by a senior manager in a FET provider or the ETB. These individuals then liaised with ALS services and individual course tutors and FET programme managers to develop new programmes. The FET provider or ETB then led on timetabling courses and structuring the support on offer.

There was a sense from the case studies that strong leadership and drive was essential in ensuring literacy and numeracy is effectively integrated. The delivery of ILN often requires significant upfront investment and changes to delivery, such as the content and timetabling of FET programmes. Senior manager buy-in is necessary to mobilise centres and programmes to implement these changes, otherwise there is a risk of fragmented and inconsistent provision. However, in many case studies, this also needed to be supported by regular monitoring to ensure progress had been made.

ILN initiatives were largely developed to respond to a particular need. In most cases, this was to ensure that ETB provision was aligned to Government policy regarding literacy and numeracy. However, in some cases it was also to address an identifiable need within a programme or training centre (which may, for example, be low retention and low success rates). In one exceptional case, the ALS saw an opportunity to develop an ILN programme following a change in legislation for a particular industry (see box 2 below).

The developments were also underpinned by a widespread cognisance among FET providers and ETBs of the need for literacy and numeracy support for learners' transitioning to higher-level programmes. It was recognised that some learners may not have sufficient literacy and numeracy skills to undertake higher level courses, even if they have the requisite technical skills. Importantly, it was widely-understood that this comprises not only learners without a school leaving certificate, but also disadvantaged learners and those who have been out of learning for some time and, consequently, whose skills may have lapsed.

While the case study organisations described a process of change to introduce a *new* integrated approach, it is important not to under-estimate the organic nature of development in some areas. In many cases, current and recent developments are building on long-standing local practice to integrate literacy, in particular.

These local approaches are often driven by individual teachers, tutors or managers with a passion for the subject – and would recognisably fit within the NALA definition of integrated practice. The difference is that much of this activity is small-scale and may not be sustained over time as resourcing changes or local 'champions' move roles. It does, though, provide tools and ideas that can be useful for considering a more structured/systematic approach – i.e. while many of the case study projects are relatively new; they were not starting from a blank piece of paper.

KWETB Incorporating literacy and numeracy in the design of a healthcare programme

In 2012, the Health Service Executive introduced a new stipulation that all its employees who delivered home-based healthcare services should have a relevant qualification. The ALS identified a likely training need associated with this change, as many employees who work in this area have no formal industry-specific qualifications, and some will not have completed the Leaving Certificate or equivalent qualification.

Staff in the ALS approached the Health Service Executive to discuss its requirements. It was established that a Level 5 BTEI qualification in Healthcare Support would be appropriate. However, the ALS suspected that many of the sector's existing employees would have literacy and numeracy needs to be addressed in order to achieve the qualification. The BTEI programme was seen as the appropriate programme through which to offer such a qualification and training offering.

The ALS decided to develop a healthcare course under the BTEI banner with embedded literacy and numeracy. The programme was delivered by specialist literacy and numeracy tutors, but the ALS was fortunate in that these tutors had knowledge and experience in working in the healthcare sector. The ALS had high take-up for the programme, mostly from individuals that already worked in the sector. However, they also found that most individuals felt the literacy and numeracy learning was also useful for their work and for wider life skills. An example reported was that an added benefit of the programme was that a learner could communicate with relatives living overseas using online tools such as Skype. A few also progressed to further education programmes since completing their course.

3.2.2 The process for rollout

Most of the case study projects had initially been established through a pilot programme or as a staged course-by-course roll out. This reflected the complex partnership arrangements (often involving the ALS and multiple centres), which required testing to ensure they worked effectively. Providers also needed time to make the initial upfront investment required for many case study projects, including developing resources, mobilising tutors and making timetabling changes. The development of learning materials that effectively support literacy and numeracy was repeatedly mentioned as a time-and resource-intensive activity to get right (because it can be an iterative process and has to relate to diverse learner groups with distinctive learning styles).

Some case study projects were initially rolled out for a particular course or centre. For example, the GRETB programme for integrating literacy and numeracy was initially rolled out to L6 motor vehicle apprentices before being introduced to L6 electrical and hospitality apprenticeships. The Youthreach and CTC case study projects were also rolled out for a particular centre in the ETB area. The courses or centres were mostly selected because tutors or centre managers had expressed a particular interest in delivering the integrated programme. This initial roll out often lasted for 6-12 months before they were expanded to further programmes.

In most of the case studies that piloted an approach, ALOs and centre managers generally believed the pilots were effective in testing the effectiveness of the programme. In some cases, it led to changes in the timetable of activities and the timing and structure of the classes. For example, one case study (KWETB RACE academy), the provider moved from ability groups to mixed ability groups, as the latter was found to facilitate improved peer-learning. In another example, a training

centre moved sessions from Friday afternoons to Wednesdays as they felt learners were too tired at the end of the week.

In addition, some case study providers also found that the pilots helped to generate tutor interest in delivering ILN. As one ALO stated: *"when we first mention it to tutors then they don't always see the need for it – they think that learners should already have these skills and there are always some that struggle. However, once it got going and they saw the tools we produced, and other tutors told them how good it was, then it really started to get going".*

Sometimes these pilots were highly-structured and in other cases less so. However, all generally contained a strong focus on evaluation and learning for continuous improvement. The scale and types of courses covered in the pilots also varied, but this partly reflects a recognition that the integration needs are highly varied across FET provision. It was also a pragmatic approach, as it allowed FET providers to build on existing relationships and interest from particular centres or course tutors.

The initial roll-out to courses or centres where the teachers, tutors or managers instinctively support the need for ILN is a sensible tactical move while a new approach is being tested. In a way, this shows integrated approaches being targeted at areas in which the perceived need is greatest based on the actual experiences of programme delivery (programmes at Levels 4 and 5, and certain apprenticeships at Level 6). However, the gradual roll-out also means that the wider delivery of ILN often remains untested – i.e. where the implementation barriers (be they cultural or organisational) are greatest.

3.3 Integration activities

3.3.1 Identifying literacy and numeracy needs

3.3.1.1 Learner screening

In the case studies, FET providers employed both formal and informal approaches to screen learner abilities in literacy and numeracy. The wide variety of approaches to initial screening and varying levels of deployment was one of the most striking findings from the research. It might be expected that that there would be similar approaches to screening for learners on the same types of courses. Many interviewees at provider- level and ETB-level recognised that initial screening is a 'work in progress', and there is considerable current activity to reflect on and systemise screening approaches across FET (within particular levels).

For the formal assessments, there was a mix of approaches, which included:

- A tailored literacy and numeracy assessment, based around the literacy and numeracy a learner requires to undertake a particular course. This was the most resource-intensive method, as it required a detailed review of course curricula. However, it provided the most detailed information on the extent to which learners have the skills they require for their course.
- Of-the-shelf basic skills packages. Here, some providers used the bksb skills builder commercial assessment tool[6] and others adapted publically-available

[6] The bksb skills builder tool is a computer-based test that learners undertake at the start of their course. The results of the test show which aspects of literacy and numeracy the learner performs well in, and which topics could be improved.

tools to provide a measure of literacy and numeracy levels. These tools were felt to be useful based on the widespread sense that academic qualifications (the Junior Certificate) were not always a sufficient marker of basic skills capability to progress to Level 4.

- A generic initial assessment tool developed by the ETB, which includes a basic assessment of literacy and numeracy skills, in some cases alongside a formal test learners undertake to identify whether they have learning difficulties and disabilities.

Tailored initial assessment used by GRETB

An innovative approach to undertaking initial assessment took place in the GRETB apprenticeship programme case study, The ALO developed a tailored initial screening tool for each apprenticeship course. The screening assessment was developed by the ALO and course tutors systematically reviewing the course curricula to identify what literacy and numeracy skills were required to undertake particular tasks. These skills were then grouped into the following categories:

- Basic arithmetic
- Percentages
- Fractions
- Sequences
- Equations
- Geometry

An initial assessment was then developed, which comprised questions related to each of these categories. Learners who score below 70-80% on the screening assessment are invited to attend literacy and numeracy lessons. The results of the screening assessment are used as the starting point to tackle their strengths and weaknesses.

In around half of the case studies, the providers did not have a formal assessment method for identifying learner needs. In these cases, literacy and numeracy needs were identified through a combination of reviewing learner application forms (most applications include a free text box inviting applicants to explain why they want to undertake the course), a review of qualification achievements and through tutor observations. The process was perceived to work well. As one centre manager stated: "*our tutors have been doing this for a number of years, so they know what the learners need, to be able to do the course".*

Providers that employ informal methods report that they would generally provide literacy and numeracy support to learners without a Leaving Certificate and whose application form indicates that they have literacy and numeracy needs. However, they then add to the cohort, learners who are struggling in their FET programme or have shown in assignments that they have literacy and numeracy needs. This learner-centred approach seems to work well where teachers and tutors are tuned to identify literacy and numeracy needs early on, and there is capacity within the programme design to then refer individuals to co-ordinated, additional support that can be provided at separate times to their occupation-specific learning.

In the case studies, it was also apparent that there were different thresholds applied to determine whether a learner needed literacy and numeracy support, even for learners on similar programmes. For example, in one case study around a third of electrician apprenticeships (7 out of 19) received additional literacy and numeracy support, whereas in another case study only two out of 20 learners received

support. Finding an appropriate mix is necessary to ensure resources are focused on those who will benefit most.

From the wider literature, Macleod and Straw (2010) and Casey et al (2006) reported that formal methods were the most effective method as it provided a consistent assessment of learners' skills. However, screening assessments should not be considered equivalent to formal qualification achievement, as the latter are normally undertaken after a sustained period of learning and revision. Some of the case study respondents were clear that they used initial screening as one part of a composite assessment of learner support needs.

The Education Training Foundation (UK) guide to initial assessment[7] suggests that effective initial assessment includes:

- A good mix of practical and test-orientated assessments, to ensure the assessment covers not just learners' knowledge but their ability to apply literacy and numeracy to different contexts.
- The assessment to be contextualised to the FET area where the learner is familiar.
- A range of tasks varying in complexity/technical demand and which measure the extent to which a learner can conduct tasks independently.

Many of the case studies employ some of these criteria in their initial assessment, and there was some particularly good practice in the GRETB example of a contextualised initial assessment. Other ETBs that were exploring the question of whether they should develop their own initial screening assessment or use an off-the-shelf package, flagged awareness of ETB-developed tools. It does not seem feasible that each ETB would develop its own FET-specific screening tools, and there may therefore be demand across the ETB Sector to make use of materials that have already been developed.

Relatively few ETBs used practical assessments. The latter is likely to be particularly effective with adult learners who have been out of education for a while and therefore may be less-experienced in conducting written assessments.

3.3.1.2 Recruitment and selection

In most of the case studies, the literacy and numeracy components were not a mandatory part of their programme. Learners were instead invited to attend. ALOs/centre managers' recognised that for some learners there was a 'stigma' attached to requiring help in literacy and numeracy. Consequently, they employed a range of approaches to encourage participation:

- Most framed the provision as 'study support' rather than literacy and numeracy courses. This was because they believed learners would be more willing to admit that they required support for certain assignments, rather than confessing to having literacy and numeracy needs.
- Most begin the support programmes early in the term (within the first two weeks). They believed that as a result learners would then less likely view it as a response to poor performance, and there would be less stigma associated with participating as it would be before learners had made friendship groups.

[7] Available at: http://toolkits.excellencegateway.org.uk/functional-skills-starter-kit/section-3-developing-effective-practice/assessment-functional-skills/initial-assessment

- When allocating students to particular classes based on abilities, providers reported that it was best to avoid labelling groups 1, 2, 3 or A, B, C. This implies a ranking system. Instead, one provider used race horse names.
- Ensuring provision is local to the learner's course. A few providers stated that they would not expect learners to travel more than a short walk to a class, and from experience they found that courses further away had low attendance. In most case studies, the support was provided at the same centre where the learners were undertaking their learning.

Tutors reported that attendance on voluntary programmes was generally high for L5-6 FET programmes. This was largely attributed to learners realising the additional support had a direct benefit in helping them complete their FET qualifications and thereby progress to employment or further learning.

For learners undertaking FET programmes at Level 3/4, there was a sense that they were motivated to attend when their first language was not English. However, for other learners, there was less motivation to attend when the learning did not provide a direct entry route to employment.

To address this issue, some providers embedded literacy and numeracy in FET programmes at Level 3 and 4. This enabled all learners in a class to receive literacy and numeracy support, without requiring them to 'opt in' to undertake additional learning. Providers felt it was a reasonable approach given that most learners undertaking these courses have literacy and numeracy needs or scope for improvement. It was felt to be less relevant for FET programmes at Level 5 and higher, as in these courses only a subset of learners require support and them learners are more motivated to undertake additional training.

3.3.2 Organisation planning and strategy

3.3.2.1 Organisational plans

Most of the case study projects were generally aligned to ETB priorities for raising the quality of provision and supporting progression to further learning. However, in most cases they were not part of a formal ILN strategy. The exceptions included the DDLETB Youthreach and LCETB case studies. LCETB has developed an integrated literacy, language and numeracy framework, which sets out the roles and responsibility of ETB staff in relation to literacy and numeracy. It is similar to the ILN framework used in the primary and secondary sector. DDLETB requires all its Youthreach centres to have a strategy for integrating literacy and numeracy in the programme.

Integrated literacy, language and numeracy framework used by LCETB

An example of an ETB-wide approach to integrating literacy and numeracy was identified in LCETB. In 2017, the ETB produced a framework for the Integration for Literacy, Language and Numeracy, which set out core values to be shared by all ETB staff. This included a commitment to inclusion and care, a culture of care and of positive learning relationships, commitment to excellence and respect for diversity. It also sets out four strategic priorities:

1. To engage proactively with the Adult Literacy and Numeracy Strategy as set out in the FET Literacy and Numeracy Strategy
2. To strengthen the corporate level LCETB wide commitment and capacity to deliver literacy, language and numeracy support across all their programmes
3. To enhance structures and resources at centre and programme level that support inclusive learning
4. To value and support learning practitioner collaboration in the integration of literacy, language and learning

For each priority there are a set of actions for ETB managers and practitioners. The ultimate aim of the framework is to ensure:

- Each programme and service has a policy and plan on integrating literacy and numeracy
- Centres and programmes incorporate learner feedback into the review of courses
- All phases of a programme will have literacy-friendly procedures and practices
- Literacy, language and numeracy support is built into FET or subject classes
- Clearly defined roles and working partnerships between subject teachers, literacy specialists and learner support staff
- Professional development opportunities are available for all ETB staff to develop and sustain an approach for integrating literacy and numeracy.

The framework is being implemented by a working group comprising representatives from each programme area (Youthreach, Apprenticeships, ALS, BTEI, PLCs, VTOS, Community Education, Guidance and Quality Assurance) and is supported by the ETB senior management team. The group is currently in the process of developing an action plan specifying the dates when certain outputs will be achieved.

In the case studies, the lack of a formal ETB strategy on integrating literacy and numeracy did not affect implementation. This was largely because there was sufficient leadership to bring together the key partners required to deliver the service and also to leverage the buy-in from tutors and managers in the training provider. Moreover, it also allowed providers to have flexibility in developing solutions that they felt best-reflected the needs of their learners. However, ALOs acknowledged that it could present challenges in leveraging support among some tutors or centres that were more reluctant to integrate literacy and numeracy.

Given the organic developments of most initiatives, relatively few senior staff in the case studies had set key objectives and a timetable for how they would expect to integrate literacy and numeracy over the next 3-5 years. However, most had short-term plans on how they planned to expand their offer in the coming 1-2 years. This perhaps reflects the natural planning cycle for FET, with most providers unwilling to make long-term plans due to the evolving policy landscape. However, in some cases it was also because ETBs were awaiting further national guidance from SOLAS on how they need to respond to the proposals in the FET Strategy (2014 – 2019).

3.3.2.2 Timetabling and structuring of the programmes

Most of the case study projects began relatively early is the academic year, typically starting 1-2 weeks after learners began their programme. A few provided literacy and numeracy support later in the year. Here they linked the start to the deadline for the first few assignments, as this was when they believed learners would most require support.

FET courses at Levels 5-6 were more likely to involve delivery of ILN through formal lessons or 1-2-1 support. This reflects that only a proportion of learners require additional support to prevent them from falling behind. Programmes targeting individuals with barriers to learning, or those that have been out of education for a while (such as Youthreach and BTEI), are more likely to embed literacy and numeracy in their programmes. In these cases, the acquisition of skills was used as a 'hook' to engage learners to develop their literacy and numeracy skills.

Where literacy and numeracy was delivered as a formal learning session, this commonly lasted 1-2 hours per week. Courses were a mix of formal lessons (where tutors taught from set curricula) and tutorials, where learners could come in and receive 1-2-1 support on any aspects of the course they were struggling with.

Learners receiving 1-2-1 support with a literacy or numeracy specialist typically received shorter lessons (around 30 minutes per week). Here, support could sometimes be more irregular, with learners only accessing support in the few weeks running up to the submission of an assignment. The sessions were in some cases organised in 'free' periods where the provider did not provide any classes, or a slot was agreed with the learner bilaterally at the start of the week.

One training centre described having an open door 'drop-in' approach. This was felt to be an effective way to engage learners within 'hidden' support needs while the sessions were located next to the centre canteen. When the sessions were moved to another part of the building with much less 'footfall', demand dropped off considerably. This highlights some of the complex dynamics underpinning whether and how learners will make the first step to accessing individual support if it is not mandatory to do so. Ease of access, initial informality and removing barriers such as being referred to external sites appear to be significant factors in shaping learner engagement.

Flexible timetabling of learner courses in Newbridge Youthreach Centre, KWETB

Newbridge Youthreach adopted an innovative approach to organising literacy and numeracy classes. The centre has no fixed groups for literacy and numeracy. All learners have bespoke timetables and the groups present in any class change throughout the day. This allows each learner a much more tailored learning plan.

This approach is possible because all learners at the start of the programme undertake a screening assessment of their abilities and then develop an Individualised Learning Plan (ILP). When learners attend literacy and numeracy sessions they generally work through this ILP, with support, where necessary, from the course tutor.

To ensure learner progress is being monitored, each learner is assigned two key workers. The key workers' role is to examine trainee progress (alongside the course tutor), hold regular catch up meetings and identify any additional support needs the learners may have.

The provision was largely well-received by learners. Most believed their literacy skills had increased and although they preferred numeracy provision in a more practical environment, most also saw the value of the numeracy sessions. As one stated *"I no longer hate maths".* Tutors also reported that learners mostly give positive feedback on the sessions.

The Newbridge model for timetabling courses is, however, only possible because it has in-house tutors. Similar key worker models are in place in the CTCs. Moreover, there are sufficient learners receiving the support (it is made available for all learners) for the courses to run regularly during the week. If a centre only has 40-50 learners on literacy and numeracy courses, then it would be costly to run 8-10 sessions a week with average class sizes of 5-6 learners. It may be more difficult to implement this approach where tutors are provided by the ALS. These tutors have competing pressures on their time, as they may work with other providers or spend a larger proportion of time delivering accredited ALS learning.

3.3.3 Curriculum development

For embedded courses, writing and numeracy tasks were largely included as discrete tasks within the course, but linked to the subject area. For example, in one case study, learners undertaking a Youthreach cookery course were invited to write out a recipe including instructions (to develop literacy) and calculate the proportion of different ingredients that are needed (to develop numeracy). In a gardening course, learners were asked to produce care instructions for new plants and were supported to understand planting instructions.

For discrete courses, the curriculum was typically designed to relate to specific aspects of the course. For example:

- In the GRETB apprenticeship programme, the curriculum related to practical numeracy calculations that learners would need to undertake on the job. For example, learners on an electrician apprenticeship would be taught how to use Ohm's Law and calculating current and resistance in circuit diagrams
- In MLSETB, the specialist literacy tutor met with the teacher each week to discuss what would be covered in the course that week and what areas learners were struggling with. This was then used to define the lesson plans for the week. A similar model was used by Cork Training Centre, with the literacy tutor liaising with tutors in advance of rolling out upfront 'Learning 2 Learn' lessons to provide relevant study materials.

However, there were also examples of training centres having a set curriculum of literacy and numeracy learning for a particular occupation-related programme (see box below). A strength of this approach is that it ensures all learners have a common preparation to the course. It is provided to all learners, regardless of their prior attainment, as a refresher and a tool to aid their preparation for further learning.

Learning to Learn (L2L) component of the Lifesciences Manufacturing Operations Programme L5 programme

Cork Training Centre developed a common literacy and numeracy programme for FET courses. This bolt-on study skills programme (comprising literacy and numeracy training) was piloted for the pharmaceuticals sector, but the training centre aims to roll the component of the course across its apprenticeship programmes and some FET courses.

The programme was developed to support learners that are transitioning to higher level courses that may not have the prerequisite skills. It was felt to be particularly beneficial for learners that had been out of learning for a while and consequently needed to refresh their study skills in preparation for further learning.

The course is delivered over 4.5 hours at the start of the session with a 1.5 hour follow up. It contains an initial assessment followed by a *'soft introduction to studying'*. If learners require additional literacy and numeracy support they are referred to additional support. The course uses practical examples based on text relevant to a particular FET area.

In a few case studies, the learning programme was largely defined by the learner. Learners brought coursework or highlighted areas of their learning programme where they struggled. The tutor then provided tailored support in these areas.

In the literature review, some studies reported that personalised lesson planning with learners is the most effective method for teaching embedded literacy and numeracy, because the needs of learners will vary considerably. Ofsted (2011) in its review of numeracy programmes found that effective practice involves developing and then planning work against an Individual Learning Plan (ILP). Similar approaches were proposed by Vorhaus et al (2011) and Macleod and Straw (2010).

However, these approaches were largely for learners undertaking specific literacy and numeracy provision (as commonly takes place in Youthreach centres and CTCs). Where learners are being taught literacy and numeracy specific to a course, it is perhaps unsurprising that this is aligned to course content. It reflects learner aspirations of, as one learner put it, *"practical examples of where we would use maths and English at work"*.

3.3.4 Teaching and tools

3.3.4.1 Responsibilities for teaching literacy and numeracy

Casey et al (2006) proposed that embedded literacy and numeracy courses require a mix of vocational experts and subject specialists. This was because, with a few notable exceptions, the study found most vocational teachers in the UK did not have the subject knowledge or pedagogical skills to effectively deliver both elements of an embedded course.

This was generally the approach adopted in the case studies, where most literacy and numeracy was delivered by specialist tutors. However, in some case studies, most notably the GRETB apprenticeship programme, MLSETB and the Youthreach programmes delivered by KWETB and DDLETB, ALOs reported that tutors also play

a key role in reinforcing the learning and structuring their courses to ensure it is accessible to individuals with low levels of literacy and numeracy. In most cases, the ALOs or centre managers were able to give practical examples of tutors altering materials or introducing literacy and numeracy content within the FET programme.

Similarly, centre managers and ALOs also reported that most specialist tutors researched the learners' courses to contextualise the learning for particular sectors. As noted above, in some cases, this involved liaising with the tutor to review the course content. Learners commonly reported that they saw the literacy and numeracy learning as part of their occupation-specific programme. One electrical apprentice stated *"he [the specialist literacy and numeracy teacher] knew so much about the sector, I had always thought he was an electrician!"*

This 'blurring of the boundaries' between the roles of literacy and numeracy tutors was generally well-received by learners. It connects with approaches to try to ensure that literacy and numeracy 'becomes everybody's business' – a mantra repeated by several of the case study organisations. Learners generally reported that the literacy and numeracy sessions were effectively linked to what they were learning on their occupation-specific course. Specialist tutors also reported that the attainment of literacy and numeracy skills was also more effective when reinforced in the lessons.

3.3.4.2 Use of teaching tools

There were also a range of tools employed to support literacy and numeracy. Many case studies also used the NALA guide to integrating literacy and numeracy. However, some ETBs produced bespoke resources, particular to their ETB. In Cork ETB, a tutor produced a guide to integrating literacy and numeracy (which drew on materials developed by another ETB). In DDLETB, the development officer produced a comprehensive Toolkit for Language, Literacy and Numeracy (LLN) within Youthreach. This is provided to all Youthreach centres and serves as an up-to-date and wide-ranging resource for fulfilling each centre's strategic and reporting obligations for LLN.

The current resources for accessing literacy and numeracy, available in Ireland and internationally appear plentiful. Alongside the resources available through NALA there are also teaching materials and tools available through the Excellence Gateway in the UK and there are freely available tools through the Towes Test of Workplace Essential Skills in Canada. However, it would be reasonable to expect that ETBs would need to revise these tools to reflect their particular local context.

Across all the case studies, there was however limited use of technology in the delivery of literacy and numeracy. An exception was the GRETB apprenticeship programme, where the tutor used Quizlet[8] to produce electronic flash cards that contained common technical terminology and formulas. The benefit of Quizlet is that it is delivered via mobile phone, so can be checked and used regularly by students. The flash cards were designed by the ALO at GRETB and then provided to learners.

3.3.5 Monitoring, assessment and validation

There was relatively little formal assessment of literacy and numeracy skills at the end of respective programmes, although there is extensive course evaluation in ETBs. This reflects that, in all cases, the literacy and numeracy training did not lead

[8] Further information is available at: https://quizlet.com/en-gb

to a formal qualifications. The monitoring of learner progress was mostly conducted by tutors, who would assess whether learners were making sufficient progress in their literacy and numeracy.

For L5 and L6 courses, this approach seemed reasonable, as the 'success' of the literacy and numeracy support was based on whether it enabled learners to complete their FET programme. In some case studies, such as the GRETB apprenticeship programme and CDETB work with PLCs, it also led to a dynamic monitoring of the learners who require additional support. Some learners that were thought to have gained a good proficiency in literacy and numeracy were told they did not need to attend the sessions, while learners that fell behind were later invited to attend.

The risk with this approach is that it relies on tutors actively monitoring the performance of students. While this was found to work effectively in the case study examples described above, it may not work in all contexts. In the case studies, it was typically underpinned by tutors receiving awareness training or advice from specialist literacy and numeracy tutors to help them identify and support learners with literacy and numeracy needs.

An alternative model for monitoring learner progress is the use of an ILP to measure learner progress against their starting point. In the Newbridge Youthreach centre this was monitored by key workers. In Kylemore CTC, it was monitored by course tutors. This provides a systematic methodology for tracking learner progress. It would likely be more effective for embedded literacy and numeracy provision where it is difficult to measure progress.

3.3.6 Professional development

In the FET Professional Development Strategy 2017-2019 the development of skills for addressing learner literacy and numeracy issues is a key strategic priority. This reflects that less than half of learning practitioners responding the FET skills profile survey in late 2015 reported a high level of confidence in addressing literacy and numeracy in the learning environment.

In the case studies, the NALA literacy and numeracy awareness course was commonly reported as a key programme to upskill staff. In around half the case studies, some FET managers or subject-specific tutors received professional development in order to:

- Enable them to identify learners with literacy and numeracy needs;
- Help promote the need for learners to have appropriate literacy and numeracy skills in order to complete their programme;
- Encourage tutors to reflect on the terminology used in course handbooks and lessons to ensure they are accessible to learners with low-levels of literacy.

Relatively few providers reported providing any further professional development training to their staff. However, a number of ETBs plan to do so in future. One ETB stated that they planned to deliver a CPD day specifically focused on ILN. The provision of relevant PD training was also a core element of the LCETB Integrated literacy, language and numeracy framework.

The awareness training was considered effective for tutors, where literacy and numeracy was provided as discrete provision. Here, the tutor role is primarily to reinforce learning and identify literacy and numeracy needs. There may, however,

be the need for more formal support for tutors that are embedding literacy and numeracy provision and are not specialists (which takes place in some Youthreach programmes).

3.4 Enablers to effective integration

In the case studies, providers reported a range of factors that they believed enabled effective integration:

- The **co-location of specialist literacy tutors within FET providers:** Some centre managers reported that the visible presence of literacy and numeracy teachers helped learners accept that developing their literacy and numeracy skills was part of the programme. This reduced the stigma of participating in discrete literacy and numeracy provision. In a couple of case studies, the ALO reported that it also helped tutors understand the programmes, which helped them tailor their course accordingly.
- **Collaboration between FET and subject specialist tutors:** Although in most case studies, the literacy/numeracy and FET provision was delivered separately, it was most effective when specialist tutors contextualised the learning and subject tutors reinforced the literacy and numeracy learning. In some case studies, this was felt to be only possible if the subject and specialist tutors worked together. In some examples, this involved the specialist tutor discussing what content would be covered in the courses so that the literacy and numeracy session could dovetail. In another case study, this collaboration was used to develop tailored initial assessments and course handbooks. Neither of these activities would be as affective if FET and specialist teachers acted in isolation.
- **Aligning the timetable of programmes:** As FET providers aim to scale up pilot activities, there are likely to be increasing challenges in timetabling programmes that meet the needs of learners on different programmes at different locations. To address this issue, some training centres have set aside specific slots on the timetable for learners to receive literacy and numeracy support. In some cases, this may need to be coordinated with different local training centres, particularly if services are reliant on a limited number of tutors in the ALS.
- **Use of tailored screening tools:** The use of information on previous qualification achievement and application forms may provide a partial indication of skills gaps for learners on L3/4 courses. However, for level 5/6 programmes, it is likely that learners will have 'spiky profiles', which indicate they are strong at some elements of literacy and numeracy, but not as good at others. Moreover, some skills may have lapsed or, as one centre manager stated, *"they may be rusty"*. Identification of these skills gaps requires a comprehensive screening assessment tool, which is ideally adapted to reflect the skills learners require to undertake their FET programme.
- **Senior manager buy-in:** Implementing the proposals described above can require significant changes to programme delivery, including evolving the roles and responsibilities of tutors. Consequently, there needs to be significant leadership and support for integrating literacy and numeracy at a senior level to drive through new developments. Without this support, there is a risk that provision will be variable across the ETB area.

3.5 Barriers to effective integration

The case studies also identified some barriers that could inhibit the effective delivery of ILN in FET provision:

- **Challenges in leveraging FET tutor buy-in:** In a few case studies, ALOs and centre managers reported that some tutors are reluctant to integrate literacy and numeracy in their FET programmes, either because they do not believe the support is necessary or because they do not believe they have the skills to provide this support (or both). Although some of these issues may be addressed as ILN gains traction in the ETB area and becomes normalised, there is a risk that provision, if not effectively supported by awareness raising, could be patchy.
- **Lack of learner demand.** In the case studies, many programmes are voluntarily attended by learners. There may be a lack of demand from learners with a literacy or numeracy need, not seeking out support. Addressing this issue requires thoughtful promotion of the programme, that emphasises the benefits and 'normalises' the provision of literacy and numeracy.
- **Limited scalability of some of the case studies.** In over half of the case studies, and nearly all of those delivered in training centres and PLCs, the literacy and numeracy support is provided by specialist tutors in the ALS. However, there is likely to be limited capacity for ALS to support additional programmes. Most ALS have to balance the need to support other FET providers, while also ensuring they achieve their own performance targets. Some ETB providers may therefore need to consider alternative models for funding literacy and numeracy support, which could include recruiting/training in house staff or part-funding ALS tutors.

4 Impact and outcomes

4.1 Introduction

This chapter assesses the evidence on the outcomes and impacts of integrating literacy and numeracy across the ETBs. Drawing on the case studies and literature review, it explores how integrating literacy and numeracy can benefit learners and providers. It also reflects on the way in which benefits may vary for different groups of learners.

In doing this, the chapter assesses the potential value of integrating literacy and numeracy and where it should be targeted to achieve maximum impact and to inform FET policy and practice relating to literacy and numeracy.

4.2 Understanding impact

Figure 4.1 presents our analytical framework on potential short, medium and long-term outcomes and impacts from integrating literacy and numeracy into FET programmes. It distinguishes between:

- **Learner outcomes and impact,** including on motivation/interest in studying literacy and numeracy, learner attainment of the numeracy and literacy skills required for work and life, and progression to further learning and work;
- **FET delivery outcomes and impacts,** including benefits in learner retention and achievement, the financial costs/benefits that this brings and any increase in the number of learners that continue their learning with the provider;
- **Society/economic benefits,** including increasing literacy and numeracy levels in the population, impacts on wages and productivity and any perceived improvements on social mobility and reducing the attainment gap.

Outcomes and impacts are measured against the status quo – i.e. that learners not undertaking ILN programmes can access standalone provision delivered by the ALS. However, it also considers the likelihood that learners would access this support were it not integrated within their programme, and the potential advantages and disadvantages of integrated programmes compared to standalone literacy and numeracy interventions.

The literature review examined evidence across all measures. The primary research elements (interviews and cases studies) collected qualitative and, where available, quantitative information on how these measures do/could relate to the Irish context.

Figure 4.1 Analytical Framework: Outcomes/Impact Measures

Short-term outcomes	Medium term-outcomes	Longer term impacts
Learners	**Learners**	**Learners**
■ More motivation and interest in learning literacy and numeracy ■ Perform better on their vocational programme as a consequence of gaining underpinning literacy and	■ Improved success rates for literacy/numeracy and/or vocational programmes ■ Increased learner retention ■ Improved competence in	■ Increased employment rates ■ Increased job retention ■ Increased progression in employment ■ Increased progression to higher level learning

Short-term outcomes	Medium term-outcomes	Longer term impacts
numeracy skills ■ Learners acquire more work-relevant literacy and numeracy skills ■ More confidence to apply literacy/numeracy skills in a vocational area ■ Learners are more able to undertake everyday tasks that require literacy and numeracy skills ■ Better participation in class teaching ■ Increased competence gained in literacy and numeracy **Delivery** ■ Better co-ordinated approach to literacy/numeracy delivery across vocational programmes ■ More efficient teaching of literacy and numeracy ■ Improved attendance for literacy and numeracy programmes ■ Improved the quality and relevance of literacy and numeracy provision	literacy and numeracy ■ Greater ability to apply literacy and numeracy to the labour market context. ■ Greater ability to function in society **Delivery** ■ Reduced costs associated with repeated learning ■ Reduced cost of delivering teaching in literacy/numeracy (i.e. cost effectiveness) ■ Teachers have increased capability to teach literacy/numeracy effectively	■ Increased social cohesion **Society/economy** ■ Increased wage levels ■ Improved productivity ■ Reduced long-term unemployment ■ The gaps between attainments of advantaged/disadvantaged groups narrowed ■ Reduced social security costs ■ Increased literacy/numeracy levels (population)

Source: ICF

4.3 Short-term outcomes

4.3.1 Changes to learner motivation and confidence

Most tutors reported that integration helped improve learner motivation for literacy and numeracy learning. Much of the evidence is anecdotal or qualitative, but it is credibly argued and consistent across settings. For higher level FET qualifications (at NQF level 5-6), learners were motivated to engage with literacy and numeracy support as they believed it would help them achieve their FET course. On Level 3-4 courses, where literacy and numeracy is commonly embedded, tutors felt that learners more actively participated in the literacy and numeracy learning as it was contextualised for real-world activities.

This largely tallied with the feedback from learners. In the case studies, most learners on Level 5 and 6 courses believed the literacy and numeracy support was relevant to their course. As a consequence, they valued the support they received. This reflects that, in most cases, the learning programme was designed around their occupation-specific learning.

In courses at Level 4, there was a less tangible link between the value of the course and learners' career aspirations. In some cases, this was due to the learner themselves not having a clear view on the sector they would wish to enter. However, the literacy and numeracy provision was seen as more relevant to their future careers than school-based provision, as it focused more on the practical application of Maths and English. As one learner stated: *"It is better because it is done on better topics, taught by better staff and in smaller groups".* The delivery mode therefore appears critical to effectively meeting literacy and numeracy needs at Level 4. The anecdotal evidence suggests that it is within these Level 4 learner cohorts that the greatest barriers to and need for literacy and numeracy support is to be found. Therefore, support targeted at learners at this level is likely to be valuable in helping future progression, although it may not be immediately apparent to the learner.

Even where the literacy and numeracy support may not be particularly relevant to an FET area (which was particularly common in programmes such as Youthreach), learners were widely cognisant of its importance for future work and life. Some reported that being able to write a letter, for example, was important for applying for jobs. Others stated that they believed the learning would help them use IT and communicate to friends through Skype and social media. These benefits motivated learners to attend literacy and numeracy courses.

Although learners largely valued the literacy and numeracy support they received, most tutors believed it would be unlikely that learners would have accessed this support independently. This was because a significant number of learners had negative experiences of literacy and numeracy learning from schools and, for many, the benefits only became apparent once they commenced the course. Positioning ILN support as a 'means to an end', in terms of it making success on the programme easier to achieve, was crucial to effective learner engagement.

From the wider literature, Hegarty and Feeley (2009) reported that, across studies in Ireland, US, Australia and UK, there was widespread consensus that integrating learning makes provision more relevant to learners, which consequently increases motivation and participation. In the UK, Vorhaus et al (2011), Evans and Waite (2008) and Casey et al (2006) found that integrating literacy and numeracy reduced the 'stigma' of undertaking literacy and numeracy, which meant that more individuals were willing to participate. In Australia, McKenna and Fitzpatrick (2007) reported that embedded programmes were observed to be more inclusive for learners. However, none of these studies quantified this behaviour change.

Most tutors also reported that the programmes improved learner confidence. This was a particular benefit for learners with low level of literacy, where a lack of confidence in their literacy and numeracy abilities (and particularly writing) could be inhibiting them from participating in activities in work and in their community. Learners similarly reported that they felt more confident in undertaking literacy and numeracy tasks since completing their training. Some learners reported that it made them more likely to volunteer for tasks in their course, while another stated that they took on a more senior role in a local community group.

4.3.2 Changes to the delivery of FET provision

Some tutors reported that having literacy and numeracy support helped improve the delivery of their FET programmes. Without the support, tutors reported that they would have to slow the pace of the course, having to revisit topics to prevent some learners falling behind, or provide 1-2-1 support to certain individuals. However,

these issues can now be addressed through the literacy and numeracy sessions. Where teachers and tutors are faced with challenges in the learning environment associated with some learners having additional literacy and numeracy needs, it appears from multiple case studies and ETB interviews that this is a key driver for creating openness to introducing an integrated approach –there is explicit demand from teachers and tutors themselves.

A few FET tutors also reported that the provision of ILN improved the learning environment. The provision of small group sessions on literacy and numeracy helped foster peer-learning, which then continued when learners were undertaking their studies. Moreover, learners felt supported and fewer were falling behind, appeared less stressed or less dissatisfied.

Tutors generally did not believe that integrating literacy and numeracy had any negative or unintended consequences on the teaching of their programme. This was, in part, because the learning, when linked to the requirements of their area, was not seen as an add-on to the course. As one tutor stated *"I do not see it as extra learning, I see it as the literacy tutors teaching part of the course".* As a consequence, they believed it needed to be covered anyway in the FET course, and the developments that took place to integrate literacy and numeracy were largely to formalise this.

The only exception was that some tutors reported that when full-time learners undertook evening classes, they could be less effective the next morning (and similarly, some specialist tutors would report that learners had more difficulty concentrating in evening or Friday afternoon sessions). However, most FET providers were able to address this issue by running lunchtime sessions or timetabling a free period in the course (in some cases by expanding the study hours of the course).

4.4 Medium and long-term impacts

4.4.1 Achievement of FET qualifications

4.4.1.1 Learner performance on their course

Providers generally believed that delivering literacy and numeracy alongside the programme improved overall learner achievement. Tutors reported that it helped improve the quality of written assignments. The most commonly reported benefit was that it *"made them present information clearly and explain their answers"*. One tutor reported that this meant that learners that received literacy and numeracy support sometimes gained higher marks in assignments than learners that were not felt to require literacy and numeracy support. These benefits were reported for courses at all Levels from 4 to 6.

Centre managers did, however, believe integration was particularly valuable to learners undertaking apprenticeships at Level 6 that had a major literacy and numeracy component (such as Electrical for numeracy and Childcare for literacy). Many of these learners had more practically-orientated skills and may not have undertaken a significant amount of literacy and numeracy learning in their previous studies. Consequently, they found the 'step-up' in the literacy and numeracy requirements challenging.

ALOs and FET managers also reported that ILN was particularly useful for learners who had been out of education for over five years. These learners may have learnt English and maths at school, but subsequently have not used them in their day-to-day job and consequently their skills lapsed. However, some tutors believed that these learners only needed relatively light-touch support: *"more a refresher on areas where they were rusty"*. Most tutors also believed the support needed to be packaged around wider study skills.

Learners in this category who were returning to study were particularly positive about having this support upfront – especially where it was framed in terms of the application of literacy and numeracy in a learning context (e.g. work on learning styles, note taking and essay writing, using tools such as mind maps). Avoiding a deficit model approach to the provision of literacy and numeracy support at Levels 5 and 6, and focusing instead on providing tools to help the learner thrive in their subject, seems to be an effective positioning of ILN to help ensure positive engagement.

For learners on Level 4 programmes, there was a sense that literacy and numeracy was less essential for the completion of their course. However, here tutors believed that it was an essential skill that would improve their life skills and also help them progress to further learning.

Learners were generally satisfied with the support they received, regardless of how it was delivered (tutorials, classes or 1-2-1 support). The elements of support for effective delivery were:

- The learning being contextualised to the FET course;
- The opportunity to bring in assignments/course work, so support could be framed around 'real life' challenges that learners were struggling with;
- Using more of a 'workshop' format where learners can learn at different paces, rather than a taught classroom environment.

Most of these elements can be taught in any of the three models for integrating literacy and numeracy (discrete classes, embedded into the main course or informal support). However, for embedded provision, it suggests there may be a need for complementary workshop support for learners at risk of falling behind the main group.

4.4.1.2 Impact on learner achievement

In the case studies, few providers were however able to provide tangible data on the impact of ILN on qualification achievement. This is unsurprising, as it reflects that, in most cases, the provision has only been delivered for a short-period of time.

However, one ETB collected data on the performance of a cohort of apprenticeship learners that received ILN support, and compared this to performance in previous years. It found that:

- The number of apprentices having to repeat their exam dropped drastically. None of the learners participating in an ILN course had a referral, compared to around 3-4 in previous years.
- A higher proportion of learners achieved the highest mark (a merit). Around a third of the class of 20 did so, compared to 2-3 in previous years.

The provider believed this was largely due to the ILN programme. The reduction in referrals was largely due to the support provided to learners that would have otherwise struggled in their course. The increase in learners achieving merits was attributed to the increased focus on literacy and numeracy support in the course raising overall standards.

The literature review identified only one study that quantified how integrating literacy and numeracy affected learner retention and achievement. Casey et al (2006) conducted research on the success and retention rates of vocational programmes that included embedded literacy and numeracy and compared them with non-embedded vocational programmes in similar subjects and similar levels. In total, the study examined the performance of 1,916 learners on 79 vocational programmes in the UK (at Ireland NFQ Levels 3 and 4). The study found that:

- The percentage of learners completing embedded courses was 77.4%, compared to 61.6% for non-embedded programmes (a differences of 15.8 percentage points).
- There was some variation by the level of learning. For the equivalent of NFQ Level 3 programmes, 73.1% of learners on embedded programmes completed their studies, compared to 66.1% of learners on non-embedded programmes (a difference of 7 percentage points). For the equivalent of NFQ Level 4/5 programmes, 81.7% of learners on embedded programmes completed their studies, compared to 53.3% of learners on non-embedded programmes (a difference of 28.4 percentage points).
- Learner achievement of literacy and numeracy qualifications also improved as a result of embedding. In total, 93.4% of numeracy learners and 92.8% of literacy learners on a fully-embedded programme achieved a literacy or numeracy qualification. For non-embedded programmes, only 50% of literacy students and 69.6% of numeracy students achieved a literacy or numeracy qualification.

Zeidenberg et al, 2010 (cited in Vorhaus et al. 2011) observed similar findings from its research on the I-Best programme in the US. I-Best provides supplementary basic skills training for learners on vocational programmes. Difference in Difference[9] analysis showed that beneficiaries were 7.5% more likely to achieve a certificate within three years and 10 percentage points more likely to obtain college credits than their peers.

These studies all appear to demonstrate that integrating literacy and numeracy has a positive impact on learner achievement. Collectively, they appear to cover programmes from Levels 3 to 6. However, the studies focus on a small number of programmes or initiatives that have taken place outside Ireland. It is therefore unwise to conclude that these impacts would be felt on the same scale across all FET programmes in Ireland. The results do, though, chime with the qualitative evidence from the case studies in terms of the particular benefits arising from some form of structured literacy and numeracy support at Levels 4 and 5. It also hints at potential spin-off benefits associated with having a learner-centred approach generally – which may or may not relate to literacy and numeracy support specifically, but which are embodied by integration activities.

[9] Difference in Difference is a statistical technique used in econometrics and quantitative research in the social sciences that attempts to mimic a randomised control trial (RCT) design. The outcomes of learners that benefited from the programme are compared to those in a comparator group consistent of learners that did not access the programme.

4.4.2 Achievement of literacy and numeracy skills

Providers did not generally measure the extent to which learners' literacy and numeracy skills increased after receiving support. None undertook a formal assessment at the end of their course. Even when some literacy and numeracy provision was in the communications module of the QQI module, learner achievement was not monitored.

This reflects that, for courses at Level 5 or 6, the primary purpose of the course was not to develop literacy and numeracy skills *per se*, but rather to develop skills necessary for completing learners' programme. Consequently, the literacy and numeracy provision does not cover the breadth of learning that a learner would cover in school.

Some centre managers and tutors believed it would therefore be likely that learners would continue to have literacy and numeracy skills needs as they progress to higher level courses or different phases of their apprenticeship. This is potentially a limitation of integrating literacy and numeracy – it only partly tackles literacy and numeracy deficits. This suggests that, where it is integrated, it needs to cover multiple levels as learner literacy and numeracy needs evolve.

In the literature review, there were a range of studies indicating that contextualisation of literacy and numeracy helped improve attainment. In Australia, O'Neill and Gish (2001) state that integrating literacy and numeracy skills ensures they are addressed in context, which they argue is essential for the learning to be relevant. Jurma (2004) also found in her evaluation of the US National Workforce Literacy Programme that contextualisation enabled learners to better use literacy and numeracy in their job.

However, Evans and Waite (2008) reported that some researchers argue there is a need for learners to undertake academic learning on the 'basics' before they can apply literacy and numeracy to real-world contexts. This suggests a need for more standalone, non-integrated learning for learners on lower level programmes such as Youthreach. This linked to wider debates mentioned throughout the interviews about the potential tension between supporting access to learning and ensuring that learners have a sufficient grounding in core skills at the start of a programme of study in order to succeed.

4.4.3 Learner progression to further learning and employment

In the case studies, none of the providers had information on learner progression once they completed their programme. However, for Youthreach programmes, a few specialist tutors provided anecdotal evidence that the literacy and numeracy support had enabled more of their learners to progress to higher-level learning courses. The tutor of a BTEI course that embedded literacy and numeracy also reported that, after completing their course, a few learners had progressed to undertake a standalone course at the ALS. CTC tutors reported a significant progression of learners to PLC courses, but noted that it was not uncommon for learners to return informally to the CTC for help with assignments because the class-sizes, pace and culture of the PLC course could make it difficult for people to ask for help.

The literature review did identify a range of studies that found providing literacy and numeracy training can improve progression to further learning. In the UK, Cutter et al (2004) and Hamilton and Wilson (2005) (cited by Macleod and Straw, 2010) reported improved learner progression compared to a control group (although

neither study quantified this impact). Evans and Waite (2008) also reported that studies in a range of countries found beneficiaries gained increased confidence to engage in learning.

Vorhaus et al (2011), citing Bynner and Parsons (2006), reported that better numeracy skills generally resulted in individual's undertaking more work-based learning. The study found that only 17-18% of individuals with low literacy skills undertook work-based training, compared to 38% of men and 26% of women with numeracy skills at NFQ level 3.

There is more mixed information on the impact of improved literacy and numeracy on employment. Macleod and Straw (2010) found that there were a range of positive job search outcomes attributed to improved literacy and numeracy. These include increased confidence in applying for jobs and increased motivation for seeking employment. However, Vorhaus et al (2011) found the impacts to be modest (learners with literacy and numeracy at level 2 being 1.4% more likely to be in employment) and other studies cited by Macleod and Straw (2010) found the impacts were not statistically significant.

None of these studies provide a compelling case that integrating literacy and numeracy will increase progression to further learning or employment. It is likely to have most impact on programmes at Level 4, as these are generally preparatory courses that aim to help individuals progress to qualifications that provide direct access to the labour market. However, the cohort of learners that undertake these courses (such as those undertaking CTC programmes or Youthreach) are anecdotally those more likely to be furthest from the labour market at the start of the programme. This includes over-representation of young people facing additional barriers to learning, including learning difficulties, and in some cases having chaotic home lives. Consequently, the potential impact on improving progression may be limited.

4.4.4 Efficiencies in the delivery of FET programmes

Most FET senior managers also reported that integrating literacy and numeracy programmes generated a range of efficiencies. These included:

- Fewer learners re-sitting exams. This means that tutors do not have to spend time invigilating the exams and learners do not have to pay the examination fees;
- Higher achievement rates, which increased the proportion of learners that would progress to further learning within the provider, and also makes the provider more attractive to future learners;
- Better functioning lessons due to learners that have dropped behind their peers being able to catch up and fully participate. This can enable learning to take place at a quicker pace. Moreover, it also potentially enables the tutor to spend less time in the long-run providing basic one-to-one support to particular learners during the lessons.

However, it is not clear if these efficiencies cover the initial upfront investment in integrating literacy and numeracy. These largely relate to the costs of developing new teaching materials and organising and planning sessions, which one provider estimated at costing around €120,000 over two years. It is, however, likely to offset the relatively low on-going costs of delivering ILN programmes. These are mostly the cost of specialist tutors to deliver the literacy and numeracy support.

The alternative (or perhaps parallel) approach discussed by a number of ETBs was to rollout targeted CPD to teachers and tutors to help ensure that they are better-able to ensure curriculum development and delivery is cognisant of literacy and numeracy needs. This is not the same as formally embedding literacy and numeracy within programmes, but many interviewees saw it is an important way to engender a cultural shift towards a soft ILN across all FET programmes in a cost-effective way.

There is little information from the literature review on the efficiencies generated from ILN. However, the increase in retention and achievement identified by Casey (2008), if replicated in Ireland, would likely result in significant potential efficiencies for FET providers.

4.5 Longer term impact

4.5.1 Impact on learner's job retention and progression

Unsurprisingly, none of the case study providers had data on the long-term impacts of improved literacy and numeracy. However, in the literature review Vorhaus et al (2011), cited a study in the US (Hollenbeck, 1996) which showed a work-based literacy programme had a significant impact on earnings. The study used data from the National Household Education Survey and the Current Population Survey to identify that participants on the literacy programme increased earnings by up to 13%. An Australian study (NRDC, 2009) similarly found a positive impact on literacy and numeracy training on earnings.

However, other studies such as Jenkins et al (2003) and Cameron and Heckman (1991) found no discernible differences between the earnings of those that hold literacy and numeracy qualifications and those that do not.

There is also little evidence on whether learners are more secure in their employment. Macleod and Straw (2010) cited research showing that low skilled adults frequently progress to unsteady or short-term employment. For learners on higher level FET programmes, there was no evidence on whether literacy and numeracy provision made them more secure in their employment.

4.5.2 Impact on employer productivity

There is little robust evidence on the long-term impact of ILN training on increasing learner productivity, which in turn provides economic benefits to employers. Most of the research reviewed in this study did not cover the topic, and providers did not collect this information as part of their learner tracking. Where there was information in the literature on employer benefits, most studies assumed that the skills gained by employees largely translated to impacts on employers (MacLeod and Shaw 2010).

Vorhaus et al (2011), reported that, in the US, Krueger and Rouse (1994 and 1998) tried to measure workers' perceptions of their productivity following a literacy and numeracy programme. The study found no discernible difference between beneficiaries and non-beneficiaries. Vorhaus et al (2011) did, however, highlight qualitative evidence that suggested employers benefited from improved staff retention and motivation following literacy and numeracy training.

Macleod and Straw (2010) reported a few studies examined the employer benefits when literacy and numeracy was integrated in work-based learning courses, which are likely to be more comparable to NFQ Level 4-6 FET programmes. In summary

the results are mixed. While some studies did not show a significant impact, others have largely concluded that the training has provided value for money to employers.

4.5.3 Impact on social cohesion

Tett, and Maclachlan's (2007) research in Scotland found some evidence of increased participation in social activities following literacy and numeracy training. The study found that learners were more out-going (63% stated they regularly went to pubs, clubs and/or similar after completing their training, compared to 54% before) and were also more likely to make telephone enquiries (27% did this after the training, compared to 24% before). Similar benefits were reported by Warner and Vorhaus (2008) and Frontline Consultants (2006).

In the UK Macleod and Straw (2010), citing Evans and Waite (2008), Frontline Consultants (2006) and Peters et al, (2003), also reported that learners felt more confident and capable of supporting their children with their homework and in conducting everyday tasks such as household budgeting, checking bills and using bus timetables.

In the case studies, some learners similarly reported feeling more confident in making enquiries and tutors believed that their learners acquired better life skills. However, these impacts were, in the main, reported by learners that initially had low levels of literacy, numeracy and language skills. The social benefits of ILN were less commonly reported for learners on FET courses at Levels 5 or 6, where learners could already be in employment (as is the case for apprenticeship and some learners on courses under BTEI).

5 Conclusions and areas for consideration

5.1 Conclusions

5.1.1 Effectiveness and impact of ILN

There is little quantitative evidence on the impact of ILN. This is perhaps to be expected given that there are inherent challenges in attributing impact specifically to the *integrated* aspect of literacy and numeracy provision, alongside a range of contextual factors. However, there are various factors that suggest it may be having an impact:

- In the case studies, learners generally believed the literacy and numeracy component was relevant to their FET programme and career aspirations;
- Tutors were generally positive about the inclusion of literacy and numeracy in their FET programme, with most seeing it as an enhancement to the FET curriculum;
- Learners generally believed the support had been delivered to a high quality.

While most FET providers recognised that literacy and numeracy skills were beneficial for all learners, it was perceived to be most valuable for learners transitioning to a Level 5 or 6 apprenticeship course, and particularly those such as electrical and motor vehicle that have a strong numeracy component. Here, learners may have strong practical skills, but could be unprepared for the significant step up in the literacy and numeracy requirements of the course.

Another key group of learners most likely to benefit most from ILN provision are those that have been out of education for over five years. These individuals may have good literacy and numeracy skills that may have lapsed as they have not used them in their day-to-day jobs. Here literacy and numeracy provision can act as a refresher to prepare them for re-entering learning, particularly if delivered alongside wider study skills support.

There is also a general consensus that learners on Level 4 (access and bridging) programmes also require underpinning literacy and numeracy skills. Here, the embedding of literacy and numeracy in programmes can increase learner interest as they can see the practical application of literacy and numeracy to real-world scenarios. This can engage learners who otherwise may not wish to study literacy and numeracy, as they have had negative experiences in school. Achieving these benefits, though, among learners with an instinctive reluctance to engage but with needs that go beyond minor development, is arguably the most difficult context to successfully deliver an integrated approach (outside of, for example, the Youthreach model, where integration is a core programme principle).

5.1.2 Coverage of ILN programmes

The study found that there is significant buy-in and support among ETBs for integrating literacy and numeracy. In part, this was due to ETBs responding to the FET Strategy (2014 – 2019) priorities for integrating literacy and numeracy. However, in nearly all cases, action was underpinned by a demonstrable need within the FET provider for improving retention and achievement rates or in ensuring

learners are equipped with the skills they need to progress to further learning. The extent of activity, including ad hoc and bottom up developments within providers, is testament to the clear perceived link between support for literacy and numeracy and more effective delivery (including better learner retention).

ETBs are currently at an early stage of integrating literacy and numeracy across their programmes. Most of the case study examples were pilot activities or part of a small scale rollout of activities. Some ETBs were also at the stage of developing strategies and plans for integrating literacy and numeracy, with only one having a firm framework in place.

As illustrated by the case studies, there was no consistent approach to integrating literacy and numeracy in FET provision, which is perhaps unsurprising given the diverse cohort of learners that undertake FET. However, some approaches were found to be particularly effective for certain groups of learners. For example:

- For Level 5 courses and apprenticeship programmes at Level 6, providers commonly delivered literacy and numeracy support as discrete classes alongside the programme. This allowed providers to target support at the minority of learners that lack the underpinning literacy and numeracy skills to complete their programme.
- For courses at Level 4 and some at Level 5, FET providers commonly embedded literacy and numeracy provision in the programme. Here the 'hook' of developing skills was seen as an effective method for ensuring learners acquire the literacy and numeracy skills they need to progress to employment or further learning.

Developments in integrating literacy and numeracy have largely grown organically, drawing on existing relationships between PLCs/training centres and local ALS and stakeholders. Relatively few have been developed through a top-down approach. This is not necessary problematic and likely reflects that initiatives need to reflect a particular ETB-level infrastructure and be reflective of the needs of a wide group of learners. For example, some ALS are based in a PLC college or a training centre where there are strong relationships that can be built on. It does, however, present the risk that provision will be inconsistent across an ETB area and there is anecdotal evidence that it makes it more difficult to sustain over time.

5.1.3 Systems and support that underpinned ILN provision

There are a range of underpinning systems that support ILN. For discrete programmes, a major enabler is collaboration between FET and specialist tutors. Both are often required to deliver ILN, but provision is particularly effective when the literacy and numeracy provision reflects what is being undertaken in the programme, and the learning is used to reinforce learners' literacy and numeracy skills.

Many programmes also require effective joint working between local FET providers and ALS to timetable provision and organise support. Effective practice includes the co-location of ALOs within training centres, and FET providers arranging free periods across all their programmes for literacy and numeracy learning. This helps to ensure that provision can be delivered in a way that is resource-efficient for both FET providers and ALS tutors.

Crucially, there also needs to be senior leadership 'buy-in' for delivering ILN, and a nominated lead to organise activities. This is essential to ensure there is sufficient leadership to drive forward developments. Moreover, in all of the case studies, there

seemed to be a need for an individual to build relationships with different partners and to promote the importance of integrating literacy and numeracy to tutors and programme leads. There are clear benefits to having a whole-organisation approach at provider level to ensuring that literacy and numeracy are supported by all staff and percolate through to the learning environment, curriculum development and having a joined-up approach. It is very difficult to measure the impact of this type of approach and it is more challenging to deliver than starting with a particular course or subject.

5.1.4 What is working well and what are the key barriers

Across the case study examples, what appears to be working well is that there is a strong FET focus and contextualisation of literacy and numeracy. This encourages take up and has resulted in widespread learner satisfaction with the support received, particularly when it is targeted at learners on Level 5 and 6 programmes. It also ensures that provision is effectively matched to the skills learners need to complete their FET programme.

The targeting of provision to particular learners on Level 5 and 6 programmes and most Level 4 programmes seems to reflect needs. These are the types of programmes in which learners are most likely to require literacy and numeracy support, especially as the learner cohort evolves in response to the growing FET role in tackling unemployment.

In most of the case studies, there was also a sense that they had individuals in place to drive forward ILN developments and that they were being supported to do so. In many cases, the effective implementation of ILN was largely due to this individual investing upfront time to develop new tools/materials and liaise with tutors to introduce new programmes. Importantly, these individuals were also supported by senior managers in the ETB, who also regarded ILN as a priority.

There are also strong working relationships between the ALS and FET providers in many cases. Significant efficiencies can be gained by some FET providers using ALS specialist tutors rather than contracting tutors themselves, particularly when the FET provider only has a small cohort of learners that require ILN support. Moreover, the strong partnership working allows the ILN to be tailored to particular learners' needs and reinforced in the occupation-specific learning.

Limited resources in ALS providers may, however, be a barrier to FET providers scaling up their existing provision. ALS services have their own delivery targets and some are already having difficulty engaging all the local providers that require support. These problems are only likely to increase if providers aim to integrate literacy and numeracy across a broader range of programmes – although in many areas, especially at Level 6, upskilling of FET teachers and tutors, to provide them with CPD/tools to help ensure awareness of literacy and numeracy informs provision, may in itself plug much of the gap that remains.

Another key barrier is the inconsistency in practice, particularly in the approaches that providers have adopted to identify whether learners require literacy and numeracy support. This could result in some learners missing out on support, or some enrolling on a course at an inappropriate level.

Some providers have also experienced challenges in gaining the 'buy-in' from all tutors to include ILN within their programmes. This is partly due to tutors being unclear on the implications and potential benefits of including ILN on their course. To some extent this may be resolved when there are more examples of ILN in a

local area and more substantial information on the impact of ILN on learner retention, achievement and progression.

5.2 Considerations for SOLAS

The research shows that there is already a base of existing practice in integrating literacy and numeracy that ETBs can build on. SOLAS should consider focusing on increasing the visibility of existing practice and providing tailored support to enhance the existing landscape. Specific areas to consider are:

- **Area 1:** Collating and sharing ILN resources developed by FET providers. This should include tools that could be re-used by other ETBs, such as the adapted course handbook and initial assessment produced by GRETB for apprenticeship programmes and the individual learning plans used by Newbridge Youthreach.
- **Area 2:** Providing training to leaders in ETBs and providers in relation to the organisational approaches to integrating literacy and numeracy. This will help raise senior manager awareness of the benefits of integrating literacy and numeracy and provide approaches for implementing it effectively across their organisations, supporting the further growth of a learning culture that does not stigmatise literacy and numeracy needs, and which makes improvement 'everybody's business'. This could build on the SOLAS-led programme run for CTC managers that was well-received by the sector.
- **Area 3:** Reviewing funding arrangements with ALS's to ensure they are sufficiently incentivised to work with FET providers to deliver ILN programmes. At present, ALS's are given limited targets for delivering off-site learning, which may not reflect local demand. At the same time, it is worth reflecting on whether other funding incentives support the tackling of literacy and numeracy needs (e.g. to assess whether any parts of the sector are incentivised to enrol learners who may need support, but are much less incentivised to provide that support).
- **Area 4:** Consider supporting the FET sector to employ a consistent approach to conducting initial learner screening. The work SOLAS is undertaking on initial assessment is likely to support this, but it will likely need to be supported by training to ensure providers are taking a consistent approach to interpreting the findings and applying appropriate thresholds for identifying whether learners require additional literacy and numeracy support.
- **Area 5:** Ensuring support for a plurality of models for integrating literacy and numeracy within FET. The study found there is no 'one-size-fits-all' approach to effectively integrating literacy and numeracy. Models are most effective when they reflect the needs of specific groups of learners, the characteristics of each programme and are rooted in the local context, building on existing infrastructure and capacity within the FET provider.
- **Area 6:** Across the various models for delivering ILN, there are features that are particularly effective and should therefore be promoted. These include:
  - Packaging literacy and numeracy support around wider study skills. This reduces the stigma of undertaking ILN, while also enabling learners to develop wider skills that would improve their performance on their FET programme.
  - Individualised ILN learning framed around the literacy and numeracy skills learners require to complete their FET programme. This helps ensure

provision meets the needs of learners at different starting points and improves the quality and relevance of the support provided.

- The use of specialist literacy and numeracy teachers to deliver provision to FET training centres and PLCs. This can add significant value to FET providers that have limited capacity to deliver ILN in-house. However, it is most effective when specialist literacy and numeracy tutors incorporate topics and examples from the vocational subject into their teaching, and the FET tutors reinforce learners' literacy and numeracy learning in the FET course.
- Specialist literacy and numeracy teachers having a presence within FET providers. This gives specialist tutors more opportunities to develop an understanding of the FET courses delivered by the provider and to promote the benefits of ILN to staff in the provider. Importantly, it also 'normalises' the delivery of ILN within FET courses.
- Organisational approaches to timetabling ILN courses. This helps ensure provision is accessible and can be delivered efficiently. This could include FET providers setting aside particular periods in the day or week for the delivery of literacy and numeracy provision.
- Literacy and numeracy awareness training for FET tutors. This was found to increase tutor buy-in on the value of ILN and helps them develop the tools to identify and support learners that require literacy and numeracy support, especially in delivering the informal support that can make a difference in the many contexts where a small number of learners required targeted help.

Part A: ANNEXES

Annex 1 Bibliography

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Annex 2 Research Protocol: Literature Review

A2.1 Inclusion criteria

Characteristics of the literature	Inclusions
Time period	■ Post 1990
Language and geography	■ No exclusions
Type of publication	■ Peer reviewed journal articles ■ Un-peer reviewed academic research outputs (reports; working papers; discussion papers; conference papers) ■ Government/EC and government/EC commissioned research outputs ■ Publications of other research organisations / think tanks / advocacy bodies ■ Evidence provided by practitioners in conference/workshop settings
Population groups	■ 16 years old+
Settings	■ ISCED 3 and 4 ■ Formal teaching in further education, training, vocational education and technical education settings (compulsory and non-compulsory) – excluding higher education settings ■ Work-based learning / apprenticeships
Type of policies/ interventions in scope	■ Provider strategy and organisation to support integration of literacy/numeracy ■ Identification of and screening for literacy/numeracy gaps ■ Curriculum design, planning and development ■ Models for delivering literacy/numeracy informally within VET provision ■ Pedagogical developments for embedding literacy/numeracy ■ Teacher training and support for embedding literacy/numeracy
Types of outcome within scope (see also analytical framework in section 2)	■ Raising attainment ■ Tackling inequalities/promoting inclusion ■ Improving transitions into employment ■ Retaining employment / reskilling / deployment ■ Improving progression in employment ■ Improving progression to higher-level learning (higher education) ■ Improving the efficiency and effectiveness of the FET/VET system.
Study designs	■ No exclusions on design

A2.2 Search strategy

A2.2.1 Sources of material

Type of source	Sources to be consulted
Journal databases	EBSCO databases (includes the Education Resources Information Centre); Scopus
Specific journals	■ Educational Evaluation and Policy Analysis ■ Educational Review ■ European Journal of Education ■ Journal of Adult Learning ■ British Journal of Educational Technology ■ International Journal of Learning ■ International Review of Education ■ Research in Learning Technology
■ Research institutions and government departments and agencies	■ National Adult Literacy Agency (IE) ■ National Centre for Guidance in Education (IE) ■ ETBI ■ Department for Education ■ Organisation for Economic Co-operation and Development (OECD) ■ European Centre for the Development of Vocational Training (CEDEFOP) ■ European Basic Skills Network ■ European Commission ■ Eurydice ■ Skills for Life Network ■ National Research and Development Centre for Adult Literacy and Numeracy ■ CfB Education Trust ■ Education and Training Foundation ■ Institute of Education ■ Trinity College School of Education ■ Professional Education and Leadership research cluster, University of Stirling ■ Learning Sciences Research Institute, University of Nottingham
Website searches	Google Scholar

5.2.1 Search terms

Primary search term	AND	AND
Literacy	Teach*	Achieve*
Numeracy	Assess*	Impact
Basic skills	Intergrat*	Outcome
Key skills	Embed*	Retention
Skills for Life	Instruct*	Progress*
Maths	Pedagog*	Particip*
English	Support*	Skill
Core skills	Learn*	Confidence

Primary search term	AND	AND
Essential skills	Educat*	Attain*
Reading	Tuition	Competenc*
Writing	School*	Mobility
Application of number	Student*	Higher
Communication	Pupil*	Perform*
	Learner*	Motivat*
	Deliver*	Inequalit*
	Screen*	Inclus*
	Lesson*	Improv*
	Support*	Employ*
	Qual*	Efficien*
	Subject*	Effective*
	Provision	
	Program*	
	Curricul*	
	Strateg*	
	Plan*	

A2.3 Assessment of quality

[If added – edited from 3.4 of research framework report]

A2.4 Data extraction template

Reference	■ Study Title ■ Author ■ Year ■ Institution/ Journal ■ Country ■ Whether peer reviewed ■ Hyperlink	Study purpose	■ Study aims and objectives ■ Commissioning organisation ■ Coverage – thematic and geographic ■ Intended study outcomes
Models used for integrating literacy and numeracy	■ Initiative/activity name ■ Aims and objectives ■ Model of integration ■ Context within which set ■ Nature of integration activity/activities – key features ■ Target groups for activity ■ Costs and funding sources/other inputs	Quality assessment (strengths and weaknesses)	■ Evidence of methodological and statistical robustness ■ Evidence of bias ■ Use of study in data synthesis ■ Clarity of linkage between evidence presented and recommendations
Methodology	■ Methodology (e.g. Randomised Control Trials, empirical, survey, literature review, case studies) ■ Data ■ Sample sizes and	Research categories	■ Outputs and outcomes evidenced (against expectations/targets) ■ Impact of provision provided ■ Differential impact between different approaches, target

	sampling method ■ Analysis and assessment of impact – e.g. including net impact, counterfactual, deadweight etc ■ Cost and revenue effects e.g. Cost Benefit Analysis / SROI analyses ■ Analysis of comparative approaches		groups or contexts ■ Evidence gaps ■ Success factors (specify which) ■ Evidence of sustainability, scalability and transferability ■ Applicability and relevance to Ireland context
Effectiveness of the integration model	■ What worked well ■ What worked less well	Benefits of the integrated approach	■ Retention and success rates ■ Programme quality ■ Learner achievement ■ Learner progression and job-readiness ■ Labour market/societal benefits
Negative/ unintended consequences of integrating or embedding literacy and numeracy	■ Provider impacts ■ Learner impacts ■ Labour market/societal impacts	What was found to constitute good practice	■ Staff development and capacity building ■ Organisational approach ■ Learner screening ■ Delivery of learning ■ Progress monitoring ■ Measuring achievement

Annex 3 Topic guides and interview schedules

A3.1 Stakeholder interviews

Core set of questions adapted according to the individual stakeholder.

Introduction

We at ICF have been commissioned by SOLAS to undertake research on effective practice in integrating literacy and numeracy across all FET provision and how this affects learner take-up, retention, achievement and progression. As part of the research, we will be conducting:

- A review of international literature on effective practice in integrating literacy and numeracy and the impact of this approach;
- Qualitative interviews with stakeholders and ETBs to examine how literacy and numeracy is delivered alongside FET;
- Qualitative interviews with policy/funders to ascertain current/emerging policy thinking in relation to integrating Literacy or Numeracy into FET; and
- In depth case studies with a selection of FET providers to explore good practice and transferable lessons to inform the future delivery of literacy and numeracy.

This research is intended to support FET policy makers, practitioners, funders in relation to the migration of Literacy/Numeracy provision into all FET provision. It is being undertaken from July – December 2017.

We would like to ask you some questions about how literacy and numeracy is integrated by providers in your area, what you feel are the strengths and weaknesses of current provision and whether you have any suggestions for good practice approaches which we can explore in-depth in our case studies.[for all stakeholders expect for DES/ETBI/SOLAS] We would like to ask you some questions about how effectively you believe integrated literacy and numeracy is delivered by FET providers, what you feel are the advantages and disadvantages of an integrated approach and whether you can identify any examples of good practice which we can explore in depth in our case studies.

1. Confirm the role of the stakeholder in the delivery of FET and literacy and numeracy
2. Confirm the interviewee's role and responsibility within the organisation

Perceptions of embedded literacy and numeracy

1. In your opinion, to what extent do learners completing FET programmes have appropriate literacy and numeracy skills to function effectively in the labour market? *Explore what skills are covered well, and where there are key gaps*
2. Present our typology for classifying integrated literacy and numeracy. Do you believed the typologies reflects your understanding of integrated literacy and numeracy? If not, why?

3. What are your perceptions of the benefits of integrating literacy and numeracy in FET programmes? Prompt for:
    - Its potential impact on learners - e.g. motivation for improving their literacy and numeracy, changes to the accessibility, relevance and quality of their learning (both for the literacy/numeracy and their own course element)
    - Its potential impact on institutions (impact on organisational capacity and resources, access to funding, , reputation)
    - Its wider labour market/societal impacts (on labour market skills, improvements to job retention, improving social cohesion/citizenship, etc)

    Probe for the subjects/levels/types of learners where integration is felt to provide most value
4. What are the potential negative consequences or challenges associated with integrated approaches to delivering literacy and numeracy? Explore any negative financial implications as well as any unintended consequences that may be experienced by learners and providers.
5. What policies and processes, if any, have been put in place by your organisation or your partners to support the integration of literacy and numeracy? How effective have those policies been?

How literacy and numeracy is integrated in FET programmes

6. From your experience, to what extent do FET providers integrate literacy and numeracy provision in their FET programmes? Prompt for different types of FET programmes (second chance learning, apprenticeships, traineeships,). Explore variations by type of FET providers
7. How is literacy and numeracy commonly integrated? What models and approaches are used? How can the integrated approach be characterised in practice? Prompt for whether it is commonly contextualised for certain sectors. Also probe for the extent to which provision is:
    - Included as standalone qualifications within a formal programme
    - Included as an optional qualification, but not considered a core part of the programme
    - Embedded within the teaching of the level 4 - 6 qualification
8. How, if at all, has the provision of integrated literacy and numeracy changed in the last three years? What have been the main reasons for these changes?
9. What approaches do FET providers take to assess learner literacy and numeracy skills at the start and end of their programme? *Probe for assessments undertaken by literacy organisers and by other staff within the FET provider*
10. Are there any common barriers that make it difficult for providers to integrate literacy and numeracy in their level 4 - 6l programmes? Prompt for issues related to:
    - manager buy-in
    - Teacher/trainer capacity
    - Resources and facilities
    - Perceived lack of student demand

Identification of good or effective practice

11. What kind of information, data or evidence is available (either nationally, regionally or locally) to help understand the benefits and impact of integrated approaches to literacy and numeracy?
12. Are you aware of any particular examples of good practice in effectively integrating literacy and numeracy provision in their vocational programmes? If so, please describe. *Prompt for how it has been integrated, support to tutors, teachers, instructors, practitioners delivering the courses, why the approach is particularly effective and any lessons learnt, why is it considered to be particularly good or effective practice*
13. Please provide the contact details of an appropriate individual in the organisation who we can speak to in order to discuss the good practice example in more depth.

A3.2 ETB scoping interviews

Introduction

We at ICF have been commissioned by SOLAS to undertake research on effective practice in integrating literacy and numeracy across all FET programmes including levels 4 - 6 and how this affects take-up, retention, achievement and progression. As part of the research, we will be conducting:

- A review of international literature on effective practice in integrating literacy and numeracy and the impact of this approach;
- Qualitative interviews with stakeholders and ETBs to examine how literacy and numeracy is delivered alongside vocational programmes;
- In depth case studies with a selection of FET providers to explore good practice and transferable lessons to inform the future delivery of literacy and numeracy; and
- In depth case studies with a selection of FET providers to explore good practice and transferable lessons to inform the future delivery of literacy and numeracy.

This research is intended to support FET policy makers, practitioners, funders in relation to the migration of Literacy/Numeracy provision into all FET provision. It is being undertaken from July – December 2017.

We would like to ask you some questions about how literacy and numeracy is integrated by providers in your area, what you feel are the strengths and weaknesses of current provision and whether you have any suggestions for good practice approaches which we can explore in-depth in our case studies.

Background information

1. Confirm the geographical coverage of the ETB and the FET providers that they currently fund
2. Confirm the interviewee's role and responsibility within the ETB

ETB strategy and plans regarding literacy and numeracy

3. To what extent is the provision of literacy and numeracy to support effective delivery of vocational/technical/training programmes considered to be a priority across the ETB? Is the integration of literacy and numeracy within these programmes something that some or all providers have actively pursued? *Explore in relation to the approaches/models used and any variations by programme or type of provider*.
4. What strategies and plans, if any, do you have in place for ensuring that the delivery of literacy and numeracy is in line with the strategic objectives of the FET Strategy (2014 – 2019) and DES adult literacy implementation plan 2013? Prompt for:
    - ETB funding commitments for literacy and numeracy
    - ETB targets for the number of learners to undertake literacy and numeracy programmes in the current year
    - Any requirements on how literacy and numeracy is to be delivered by FET providers

5. What types of literacy and numeracy programmes do you fund for learners on the following programmes that have a labour market focus:
    - PLC, specific skills, BTEI, VTOS Apprenticeships
    - Traineeships
    - Other

    For each, explore whether provision is mandatory or at the discretion of the provider.
6. What changes, if any, do you plan to make in the next few years on how you commission literacy and numeracy provision?

Delivery of literacy and numeracy provision by FET providers

7. [*Building on Question 1, as necessary to reinforce/gain further detail*] To what extent do providers integrate literacy and numeracy provision in their FET programmes? Is it possible to quantify this in terms of the overall volume of provision? *Prompt for each of the types of FET programmes listed in Q4. Explore variations by type of FET providers*
8. How is literacy and numeracy commonly integrated? *Prompt for whether it is commonly contextualised for certain sectors. Also probe for the extent to which provision is:*
    - Included as standalone qualifications within a formal programme
    - Included as an optional qualification, but not considered a core part of the programme
    - Embedded within the teaching of the FET programmes
9. What are the characteristics of teachers that deliver embedded literacy and numeracy? *Prompt for how commonly it is delivered by FET practitioners and how often it is delivered by literacy and numeracy specialists, the amount of time in the curricula typically allocated to literacy and numeracy provision, and whether it is delivered as standalone 'blocks' or delivered throughout the programme.*
10. How do FET providers identify the literacy and numeracy needs of learners before they start their programme?
11. How, if at all, has the provision of integrated literacy and numeracy changed in the last three years? What have been the main reasons for these changes?
12. What do you perceive to be the strengths and weaknesses of integrating literacy and numeracy within FET programmes? Prompt for the each of the three models for integration.

Factors influencing the delivery of integrated literacy and numeracy

13. In your opinion, what are the main reasons why FET providers choose to deliver integrated literacy and numeracy? *Prompt for any issues with their literacy and numeracy provision that they hope to overcome through integration, and any efficiencies or benefits they expect to achieve*
14. What are the common barriers that may be inhibiting providers from integrating literacy and numeracy in their FET programmes? Prompt for issues related to:
    - Management buy-in
    - FET practitioner capacity

- Resources and facilities
- Perceived lack of learner demand

Identifying of good and effective practice

15. In your area, are there any particular good practice examples of FET providers effectively integrating literacy and numeracy provision in their FET programmes? If so, please describe. *Prompt for how it has been integrated, support providers to tutors delivering the courses, why the approach is particularly effective and any lessons learnt, why is it considered to be particularly good or effective practice*
16. What benefits, if any, have these providers experienced from integrating literacy and numeracy in their FET programmes? Prompt for:
    - Changes to retention and success rates (for both literacy and numeracy qualifications and for the vocational programmes
    - Improvements to the job outcomes of learners
    - Increased student demand/take-up of literacy and numeracy provision
    - Improved learner preparedness for work
    - Other social benefits
17. How do you (could you) measure success? What kind of information, data or evidence is available to help understand the benefits and impact of integrated approaches to literacy and numeracy?
18. Please provide the contact details of an appropriate individual in the organisation who we can speak to in order to discuss the case study example in more depth.

Thank you and close

A3.3 Case study topic guides

A3.3.1 FET provider managers and Adult Literacy Organisers

Introduction

We at ICF have been commissioned by SOLAS to undertake independent and confidential research on effective practice in integrating literacy and numeracy across all FET provision and how it affects learner take-up, retention, achievement and progression. As part of the research, we are conducting 16 case studies with a selection of ETB providers to explore good practice and transferable lessons to inform the future delivery of literacy and numeracy.

This research is intended to provide intelligence that supports FET policy makers, practitioners, with regards to best practice in Literacy/Numeracy within FET. The research is being undertaken from July – December 2017.

We would like to ask you about how your organisation integrates literacy and numeracy, including any implementation challenges you encountered and how you overcame them. We would also like to discuss with you what you perceive to be the strengths and weaknesses of the integrated approach and what benefits it has brought learners and your organisation.

Background information

5. Confirm the role and responsibilities of the interviewee

Description of the delivery of integrated literacy and numeracy

6. Please describe how you deliver integrated literacy and numeracy as part of the [case study example] Prompt for:
   - When it was introduced
   - What courses it is included in
   - In which training venues is it delivered
   - Length and time spent per week undertaking literacy and numeracy learning
   - What topics were taught
   - How are learners literacy and numeracy needs identified? Prompt for details on any screening tool they use, any observation-based assessments or other methods (e.g. previous school attainment)
   - What support (if any) if provided to learners that require more intensive support
   - What provision is delivered by specialist literacy and numeracy teachers and what is delivered by vocational tutors
   - How are the courses timetabled around learners' vocational learning
   - Where is the training delivered
   - Supporting policy/frameworks informing the provision
   - How it was funded

- How many learners have benefited
- How it differed from what you delivered previously

7. Why did you decide to integrate literacy and numeracy in the [case study programme]? Probe for how it was expected to address limitations with the previous literacy and numeracy support provided to learners, as well as any other national, ETB-level or local drivers that also affected their decision.

How the integrated literacy and numeracy programme was implemented

In the next set of questions we would like you to describe how you managed to integrate literacy and numeracy within your [case study programme]

8. How were the changes implemented? Prompt for:
   - What training (if any) was provided to tutors to enable them to deliver the integrated programmes effectively
   - What changes (if any) were made to the timetabling or organisation of programmes
   - Which staff members were responsible for introducing the changes
   - How staff in the organisation and other ETB providers such as DSP, Youth Service were informed of the changes
9. What further organisational changes (if any) are you considering implementing to further support the delivery of integrated literacy and numeracy? Prompt for any changes to:
   - Staff development, including the delivery of internal or external training
   - Changes to the planning and organisation of local programmes
   - Enhancements to course marketing, promotion and learner careers guidance
10. What challenges, if any, did you experience in delivering the integrated literacy and numeracy programme? Prompt for:
    - Any issues with gaining learner buy-in with the programme?
    - Challenges in ensuring suitably skilled tutors were available to deliver the training (this includes issues in ensuring tutors are available and also ensuring they have the right skills to deliver programme the programme)
    - Any challenges in motivating learners to participate in the programme
    - Any issues with ensuring there were sufficient facilities in FET venues to deliver the training effectively.

    How, if at all, were these issues resolved?
11. What worked well in the delivery of the courses and what lessons did you learn that could inform the integration of literacy and numeracy in other programmes?
12. What would you have done differently were you to roll out the project again?

Impact of the integrated approach

13. How many learners have undertaken additional literacy and numeracy training as a consequence of the new courses? What proportion is that of the overall cohort? How many of these learners would have undertaken literacy and numeracy training without the programme?
14. How do you intend to sustain and build on the programme? Prompt for:

- Whether the programme will continue, and if so, how will it be funded
- Whether they have any plans to roll out the approach to other programmes, and if so, when/how they intend to do it
- What investment, if any, they plan to commit to support the workforce to deliver integrated literacy and numeracy, including any planned staff development training

15. What feedback have learners given on the programme? Prompt for:
    - The extent to which they felt the training was useful to the area they wanted to work in
    - Whether students were motivated to undertake the literacy and numeracy training
    - Whether the students felt it had encouraged them to continue to develop their learning
16. What impact did the programme have on student performance? Prompt for:
    - Any increase in learner success rates on their course
    - Any impact on learner progression to further learning or work
    - Any social impacts that could be attributed to the programme (e.g. playing more active roles in their communities, better confidence and motivation, better capability to undertake everyday tasks)
17. What information is available to track performance and resources? Prompt for:
    - Monitoring information
    - Programme budget information
    - Learner performance and destination data

    Explore whether they have any data/research to evidence any of these impacts
18. What other benefits has the programme provided your organisation and your local area?
19. Overall, what do you believe to be the strengths and weaknesses of integrating literacy and numeracy?

A3.3.2 Tutors

Introduction

We at ICF have been commissioned by SOLAS to undertake independent and confidential research on effective practice in integrating literacy and numeracy across all FET provision and how it affects learner take-up, retention, achievement and progression. As part of the research, we are conducting 16 case studies with a selection of ETB providers to explore good practice and transferable lessons to inform the future delivery of literacy and numeracy.

This research is intended to provide intelligence that supports FET policy makers, practitioners, with regards to best practice in Literacy/Numeracy within FET. The research is being undertaken from July – December 2017.

We would like to ask you about how you have integrated literacy and numeracy in vocational programme, including any implementation challenges you encountered and how you overcame them. We would also like to discuss with you what you perceive to be the strengths and weaknesses of the integrated approach and what benefits it has brought learners and your organisation.

Background information

1. Confirm the role and responsibilities of the interviewee

Delivery of integrating literacy and numeracy

2. How do you identify learners' literacy and numeracy needs and whether they would benefit from integrating literacy and numeracy in programme? Prompt for details on any screening tool they use, any observation-based assessments or other methods (e.g. previous school attainment)
3. How accurate are these measures in gauging learners' 'starting point'? Are there any ways that this approach could be improved?
4. How is the literacy and numeracy element to your programme delivered? Prompt for:
   - Who is responsible for delivering the training
   - The amount of time allocated for literacy and numeracy
   - How the study is organised (whether through 1-2-1, small group or classroom teaching, and the extent to which online/blended/self-study learning is used)
5. Have there been any challenges in delivering the literacy and numeracy context?
6. Have you had to make changes to the teaching of your subject? If so, please describe. *Prompt for any changes to the length and content of the vocational programme, including anything that has been removed.* What (if any) have been the impact of these changes on the vocational learning (both positive and negative)?
7. What preparation did you undertake to deliver the [case study programme name]? Prompt for:
   - Training organised by their ETB/provider
   - Self-directed learning (e.g. background reading, observing lessons, etc)
   - Any work with local partners for recruitment and delivery (e.g. voluntary sector organisations)
   - Any work with careers advisors / DSP Case Officers so they can update the information they hold on the vocational programme
8. Where there any challenges to delivering the [case study programme name]. If so, please describe?
9. What you would consider to be good practice from the delivery of the [case study topic]?
10. What would you have done differently were you to roll out the project again?

Impact of the integrated approach

11. How many learners have undertaken additional literacy and numeracy training as a consequence of the new programme? What proportion is that of the overall cohort? How many of these learners would have undertaken literacy and numeracy training without the programme?
12. What feedback have learners given on the programme? Prompt for:
    - The extent to which they felt the training was useful to the area they wanted to work in
    - Whether students were motivated to undertake the literacy and numeracy training
    - Whether the students felt it had encouraged them to continue to develop their learning

13. What types of learners have benefited most from the programme? Prompt for where certain approaches to integration work better for particular cohorts./groups of learners, and any issues with addressing this diversity in learner needs
14. What impact did the programme have on student performance? Prompt for:
    - Any increase in learner success rates on their programme
    - Any impact on learner progression to further learning or work
    - Any social impacts that could be attributed to the programme (e.g. playing more active roles in their communities, better confidence and motivation, better capability to undertake everyday tasks)

    Explore whether they have any data/research to evidence any of these impacts
15. What do you believe to be the strengths and weaknesses of integrating literacy and numeracy?

A3.3.3 Learners

We at ICF have been commissioned by SOLAS, the Further Education and Training agency, to carry out independent and confidential research on integrating literacy and numeracy across all Further Education and Training Courses and the benefits this brings.

We would like to ask you about your experiences on [add relevant programme]. We understand that your tutors have been working to integrate literacy and numeracy within your programme and therefore would like to ask you about your experiences of the course you are on, including what worked well and what could be improved.

Background information

1. Confirm when the learners started their course and when they are due to complete

Perceptions of the integrated literacy and numeracy programme

2. Tell us about your experience of the course so far
3. To what extent do you believe literacy and numeracy skills are important for working in the sector or type of job you are interested in? Is this different from the literacy and numeracy taught in schools?
4. Have there been parts of the course/programme that challenged you in terms of the theoretical nature of the topic or teaching from a literacy or numeracy perspective (e.g. the use of technical terms or new mathematical approaches)?
5. Do you think that, since starting your course, your literacy and/or numeracy skills have improved? If so, in what way? If not, why not?
6. When you undertook learning activities that include content on writing or maths, did you understand how it related to your vocational area? Do you have any specific examples where you learnt something that you did not think was relevant?

7. Did you experience any difficulties in participating in the training? Explore any issues relating to travelling to a separate centre to access literacy and numeracy, or any issues in juggling standalone literacy and numeracy provision alongside vocational learning

Benefits of integrated literacy and numeracy training

8. Do you believe the programme enabled you to gain a good grounding in the literacy and numeracy skills you need for your chosen career? If so, it what way, if not, why not?
9. Do you believe there are any ways that the delivery of the programme could be improved?