

Literacy, Numeracy and Activation among the Unemployed

Elish Kelly
Seamus McGuinness
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National Adult Literacy Agency
Áisíneacht Náisiúnta Litearthachta do Aosaigh



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Whitaker Square, Sir John Rogerson's Quay, Dublin 2

National Adult Literacy Agency
Sandford Lodge, Sandford Close, Ranelagh, Dublin 6

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The Author

Elish Kelly is a Research Analyst, Seamus McGuinness is an Associate Research Professor and Philip J. O'Connell is a Research Professor and Head of Social Research at the Economic and Social Research Institute.

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Glossary

ALS:	Adult Literacy Service
CE:	Community Employment
CSO:	Central Statistics Office
DSP:	Department of Social Protection
DES:	Department of Education and Skills
DLS:	Distance Learning Service
ECDL:	European Computer Driving Licence
ESRI:	Economic and Social Research Institute
ETBs :	Education and Training Boards
FÁS:	Formally, Ireland's National Employment and Training Authority
FET:	Further Education and Training
JA:	Jobseeker's Allowance
JB:	Jobseeker's Benefit
JSA:	Job Search Assistance
IALS:	International Adult Literacy Survey
IBEC:	Irish Business and Employers Confederation
ICTU:	Irish Congress of Trade Unions
LTU:	Long-Term Unemployment
NALA:	National Adult Literacy Agency
NEAP:	National Employment Action Plan
NEES:	National Employment and Entitlements Service
PIAAC:	Programme for the International Assessment of Adult Competencies
PSM:	Propensity Score Matching
QNHS:	Quarterly National Household Survey
SJI:	Social Justice Ireland
SOLAS:	New National Further Education and Training Authority
VEC:	Vocational Education Committee
VECs:	Vocational Education Committees

Foreword

It is well established in research that people with weak literacy and numeracy skills are more likely to be unemployed. Therefore, it should follow that this issue is an important consideration in labour market policy and more particularly activation policy. However, the National Adult Literacy Agency (NALA) is of the view that this has not always been the case and is concerned that unemployed adults with literacy and numeracy needs, and those with low educational attainment, are not being adequately prioritised for labour market activation. This research puts forward an argument for this to be changed.

NALA has embarked on a campaign aimed at ensuring adult literacy and numeracy is fully taken into account by a range of policy stakeholders concerned with economic and social development in Ireland. This forms part of its work to realise its strategic plan. To date our work with the Irish Business and Employers Confederation (IBEC), Irish Congress of Trade Unions (ICTU) and Social Justice Ireland (SJI) has resulted in these organisations producing clear policy statements of the need to address the adult literacy and numeracy issue as part of Ireland's recovery. We hope this will lead to greater labour market activation opportunities for people with literacy and numeracy needs who are unemployed.

To inform our policy development, we made contact with the Economic and Social Research Institute (ESRI) in recognition of its role as a key informant of education and labour market policy in Ireland today, and because there is a dearth of research evidence in this area. In our discussions it became apparent there was a data-set containing information about the literacy and numeracy needs of people who were unemployed and that this could be the subject of a new analysis.

Specifically, the research exploits an existing data source, the DSP/ESRI Profiling Project data in a novel way to provide new information for policymakers. It includes an examination of access, participation and impact of training on exiting unemployment for people on the Live Register with literacy and/or numeracy difficulties. The research establishes literacy and numeracy as an issue in the context of unemployment and labour market activation. Individuals with such needs should be kept under ongoing review in terms of labour market activation policy and processes.

The findings are clear and informative and confirm our view that literacy and numeracy needs are not taken into consideration in a systematic way in activation measures. The research confirms that people who are unemployed with literacy and numeracy needs:

- are more likely to move into long-term unemployment, and
- are no more likely to receive a training intervention than people who do not have literacy and numeracy needs.
- However, when they do participate in a labour market training intervention, they benefit more than other recipients with no literacy and numeracy needs.

We outline what we consider to be the policy implications arising from the research in the following section.

The findings indicate that literacy and numeracy are not necessarily prerequisites for success on labour market activation programmes. This provides a further rationale for a national policy that seeks to integrate literacy and numeracy into all publicly-funded further education and training (FET). Furthermore, the research confirms that successful activation outcomes for this cohort are not dependent on participating in discreet literacy and numeracy programmes.

The research also highlights the value of investing in those with literacy and numeracy difficulties in labour market activation planning and programmes. This is in line with current policy, which states that those at risk of becoming long-term unemployed will be prioritised. In addition, the research shows that work specific training for people with literacy and numeracy needs helps enhance employment prospects – up to three times the average. This provides a new perspective to the recent *Comprehensive Review of Expenditure*¹ as it demonstrates that groups, such as those with literacy and numeracy needs, show highly successful activation outcomes.

Given the findings in the study, there is need for comprehensive collection and analysis of data on unemployed people with literacy and numeracy needs in order to inform policy and decision making on labour market activation. In addition, further research is needed to connect this to other sources of data, such as Central Statistics Office (CSO) data around educational attainment levels.

¹ Central Expenditure Evaluation Unit and Department of Public Expenditure and Reform (2012), *Comprehensive Review of Expenditure* Thematic Evaluation Series, Labour Market Activation and Training.

This information comes at a vital stage in the establishment of the National Employment and Entitlements Service (NEES) and current reform of the further education and training (FET) sector, which will see the creation of SOLAS and local education and training boards (ETBs) in 2013. Whilst welcoming these developments, this research highlights the challenges which lie ahead with regard to better serving people who are unemployed and have literacy and numeracy needs. For example:

- There is no standardised system of identifying people with literacy and numeracy needs common to the Department of Social Protection (DSP) and the FET system.
- FÁS does not appear to have a systematic policy on adult literacy and numeracy.
- Acknowledging initial work in FÁS and the Vocational Education Committees (VECs) on the integration of literacy and numeracy across the curriculum, we are some way off its systematic adoption across all FET programmes.

The forthcoming SOLAS Implementation Plan should address how these challenges will be overcome. In addition, the national roll out of referral protocols between the DSP and ETBs should ensure coordination and delivery of appropriate responses. DSP and NEES will determine the cohorts to be prioritised for training interventions by providers including the ETBs and we believe this research adds to the body of knowledge required to make these developments and decisions more effective. In short, it should result in more unemployed people with literacy and numeracy needs benefiting from mainstream labour market activation programmes.

We outline a number of recommendations based on the findings of this research. These are:

1. Adopt a clear policy approach to addressing the needs of unemployed people with literacy and numeracy difficulties in the context of new FET structures and systems.
2. Adopt a policy to ensure scarce resources for training interventions follow those who are most likely to benefit, including people with literacy and numeracy difficulties and with low educational attainment.
3. Agree and implement a standardised system of identification of people with literacy and numeracy needs which will operate between the DSP, NEES, SOLAS and the ETBs.
4. Following profiling by the NEES, the provider should carry out a learning assessment of needs to ensure appropriate education

and training placement. As part of this, every client would be helped to identify course related literacy, numeracy and other needs in relation to their intended programme.

5. Ensure that the roll out of the national profiling system is applied to both new and existing claimants, in order to ensure that all individuals facing substantial barriers to employment receive suitable interventions.
6. Ensure the system of eligibility is simplified by allowing anyone who is identified through profiling at being at high risk and having literacy and numeracy difficulties and low education attainment immediate access to an education and training programme.
7. Ensure planning and resources take account of regional differences of incidences of people with literacy and numeracy needs, as well as those related to age and gender where relevant.
8. In general, where possible, adopt a train first² approach to enable people who are unemployed to address their basic education needs, as part of a vocational specific skills training programme and combined with workplace experience.
9. Include the raising of adult literacy and numeracy standards as part of all FET programmes. This could result in a higher return on state investment and contribute to preventing long-term unemployment.
10. SOLAS should adopt an integrating literacy policy and make literacy and numeracy development a success criteria of public funded FET.
11. Ensure comprehensive collection and analysis of data on unemployed people with literacy and numeracy needs particularly in relation to access and participation in activation training programmes and the resulting outcomes.
12. All FET structures, systems and programmes should be closely monitored and systematically evaluated, with a particular emphasis on people with literacy and numeracy needs and low educational attainment.

We are grateful to the authors for their efforts in carrying out this research. We anticipate if the recommendations are acted upon, this will lead to unemployed people with literacy and numeracy needs being better served.

² Train first means you are offered a training programme linked to labour market activation initially before a work programme is offered.

It will also mean the state will get better value for money and ultimately a reduction in the numbers of people moving into long-term unemployment.

Inez Bailey

Director

NALA

Executive Summary

Literacy and numeracy are key factors shaping individual life chances and their impact is particularly critical in the labour market. Large-scale sweeping changes in the organisation of work, including the shift from manufacturing to services and the spread of information technology in the knowledge economy, have progressively increased the importance of basic skills, including literacy and numeracy. The recent unemployment crisis in Ireland is likely to have exacerbated this long-run trend by increasing the competition for scarce jobs.

It is well known that individuals with literacy and numeracy difficulties are more likely to be unemployed (see, for example, Robinson, 1998; Bynner, 2004; and Parsons and Bynner, 2007). Furthermore, in the course of the development of a national profiling system to identify individuals at risk of becoming long-term unemployed,³ research by the Economic and Social Research Institute (ESRI) found that literacy and numeracy difficulties were critical factors that increased the likelihood of long-term unemployment (O’Connell, McGuinness, Kelly and Walsh, 2009). Given this, it should follow that basic literacy and numeracy skill development should be a key component of any country’s labour market policy, and in particular policies associated with unemployment.

Apart from the O’Connell *et al.* (2009) research, very little is known about the experiences of unemployed individuals with literacy and/or numeracy difficulties in Ireland. Specifically, we lack evidence on the assistance that such individuals receive through the National Employment Action Plan (NEAP), which is Ireland’s main activation policy for assisting those that are unemployed to reintegrate back into the labour market. This study uses data from the DSP/ESRI Profiling Project, which is described below, and builds on the earlier ESRI research to address four questions related specifically to unemployed individuals with literacy and/or numeracy difficulties:⁴

1. What effect does age, educational attainment, health status and geographic location have on a newly registered unemployed person’s likelihood of having a literacy and/or numeracy difficulty?
2. What impact does literacy and/or numeracy difficulties have on an unemployed individual’s likelihood of exiting unemployment to employment

³ This system is currently being rolled out in Ireland, and is a key component of the government’s *Pathways to Work* initiative, which is a new plan that has been devised to assist unemployed individuals back to work.

⁴ It is not possible to examine the wider issue of those with literacy and/or numeracy difficulties not entering the labour force with the profiling data that is used in this study.

within 12 months? Preventing people from falling into long-term unemployment (LTU)⁵ is a key objective of policymakers because of the negative implications that it has for both the individual (e.g. deskilling, scarring,⁶ poverty, etc.) and society as a whole (e.g. social welfare costs, lost revenue, crime, etc.).

3. What effect does having a literacy and/or numeracy difficulty have on the likelihood of an individual accessing government-sponsored training programmes? Specifically, what are the types of labour market programmes to which individuals with numeracy and/or literacy difficulties are generally assigned?
4. Finally, what is the relative effectiveness of labour market training among claimants reporting literacy and/or numeracy difficulties in achieving successful exits from the Live Register?⁷

The study uses data from the DSP/ESRI Profiling Project. The Profiling Project consisted of an amalgamation of data from:

1. a profiling questionnaire that was issued by the DSP to all individuals that registered a new unemployment claim in the Republic of Ireland between September and December 2006,
2. weekly Live Register records of all profiled individuals for the period September 2006 to June 2008,⁸ and
3. FÁS customer event files, which detailed the nature and timing of all contacts between FÁS, Ireland's National Employment and Training Authority, and the profiled claimants up to and including June 2008.

Data from the Profiling Project was used to undertake this study because it captured information on claimant's literacy and/or numeracy levels, along with a rich array of socio-economic data, information on claimant's employment/unemployment/job history and participation on public job schemes. The literacy and/or numeracy information contained in the dataset are based on self-assessment in which respondents were asked to indicate if they ever had any

⁵ Twelve months is selected as the cut-off time point because once a person is continuously on the Live Register for 12 months or more they are classified as being long-term unemployed.

⁶ Scarring refers to the long-term negative consequences that experiencing long-term unemployment has on an individual's future career, life-time earnings, health, social well-being, etc.

⁷ Administrative data-set that contains information on all individuals in receipt of unemployment benefits in Ireland.

⁸ The profiled claimants were tracked from entry onto the Live Register out to June 2008.

difficulty with reading or writing or numbers. Based on the Profiling Project data, 7 per cent of those individuals that registered a new unemployment claim between September and December 2006 indicated that they had a literacy and/or numeracy difficulty, with the rate being much higher among male claimants (8.9 per cent) than females (4.2 per cent).

The main findings from the study are as follows:

1. The likelihood that an unemployed person, whether male or female, has a literacy and/or numeracy difficulty falls with age, educational attainment and good health.
2. Newly registered unemployed males that report having a literacy and/or numeracy difficulty were 7.6 per cent less likely to have exited the Live Register to employment within 12 months compared to unemployed males with no literacy and/or numeracy difficulties. The corresponding figure for females was 7.3 per cent. Thus, having a literacy and/or numeracy difficulty increases the likelihood that an unemployed person will become long-term unemployed.
3. Despite experiencing substantial barriers to a successful labour market exit, individuals with literacy and/or numeracy difficulties are no more likely to be in receipt of government-sponsored training under the NEAP.
4. However, the research also shows that, relative to the claimant population as a whole, when those with literacy and/or numeracy difficulties do receive training, they benefit by much more than average: they are 29 per cent more likely to exit the Live Register compared to 11 per cent for the full unemployment population. In essence, the research shows that individuals with literacy and/or numeracy difficulties can be effectively activated within the mainstream NEAP system. This means that literacy and/or numeracy difficulties, in themselves, do not substantially restrict an individual's ability to benefit from both mainstream general and medium skills training programmes.

Chapter 1

Introduction

Literacy and numeracy are key factors shaping individual life chances and their impact is particularly critical in the labour market. Large-scale sweeping changes in the organisation of work, including the shift from manufacturing to services and the spread of information technology in the knowledge economy, have progressively increased the importance of basic skills, including literacy and numeracy. The recent unemployment crisis in Ireland is likely to have exacerbated this long-run trend by increasing the competition for scarce jobs.

It is well known that individuals with literacy and numeracy difficulties are more likely to be unemployed (see, for example, Robinson, 1998; Bynner, 2004; and Parsons and Bynner, 2007). Furthermore, in the course of the development of a national profiling system to identify individuals at risk of becoming long-term unemployed, research by the Economic and Social Research Institute (ESRI) found that literacy and numeracy difficulties were critical factors that increased the likelihood of long-term unemployment (O'Connell, McGuinness, Kelly and Walsh, 2009). Given this, it should follow that basic literacy and numeracy skill development should be a key component of any country's labour market policy, and in particular policies associated with unemployment.

Apart from the O'Connell *et al.* (2009) study, very little is known about the experiences of unemployed individuals with literacy and/or numeracy difficulties in Ireland. Specifically, there is a lack of evidence on the assistance that such individuals receive through the National Employment Action Plan (NEAP), which is Ireland's main activation policy for assisting those that are unemployed to reintegrate back into the labour market. Given the scarcity of research in this area, this current study uses data from the DSP/ESRI Profiling Project, which is described in Chapter 3, and builds on the earlier ESRI research to address questions related specifically to unemployed individuals with literacy and/or numeracy difficulties. Data from the Profiling Project was used to undertake this study because it captured information on claimant's literacy and/or numeracy levels, along with a rich array of socio-economic data, information on claimant's employment/unemployment/job history and participation on public job schemes. The literacy and/or numeracy information contained in the dataset is measured

through the following self-assessed question: “have you ever had any difficulty with reading or writing or numbers?”⁹

Data on literacy and numeracy issues are not collected on a regular basis in Ireland: the last survey that was carried out on adult literacy was the International Adult Literacy Survey (IALS), which was undertaken in 1995 (results published in 1997).¹⁰ Given the limited nature of adult literacy and numeracy data collection in Ireland, the profiling data allows us the opportunity to investigate the issue of literacy and numeracy difficulties amongst the unemployed. Furthermore, the issue is of relevance given the apparent absence of any specific labour market activation programmes aimed at unemployment claimants with literacy and/or numeracy difficulties. The Department of Education and Skills (DES) is responsible for policy on literacy and numeracy for adults in Ireland.¹¹ The first national policy on adult education, which included literacy, was published in 2000. In relation to labour market policy, the Department of Enterprise, Trade and Employment used to have responsibility for this policy area, but the DES is now in charge. FÁS, Ireland’s National Employment and Training Authority, also has labour market policy responsibility but to date this organisation has not had an explicit adult literacy policy. In relation to the existence of specific labour market policies to assist those with literacy and/or numeracy difficulties, there are currently no specific interventions for adults with literacy and numeracy needs, or with low educational attainment either.¹²

In this study, we focus specifically on training programmes provided by FÁS to all unemployed individuals. However, it is important to note that the DES provides funding for a range of part-time back to education programmes aimed at people with less than a Junior Certificate, recording 130,000 participants in 2008. These participants include 50,000 adult literacy students¹³ served by the Vocational

⁹ The International Adult Literacy Survey (IALS) defines literacy as “the ability to understand and employ printed information in daily activities, at home, at work, and in the community – to achieve one’s goals and to develop one’s knowledge and potential” (OECD and Statistics Canada, 2000, page x).

¹⁰ Ireland is currently participating in the Programme for the International Assessment of Adult Competencies (PIAAC), and the results from this study are due to be published in October 2013. Every year each Vocational Education Committee (VEC) sends information to the Department of Education and Skills (DES) on the adult literacy service courses that they provide. In 2011, NALA compiled a report on this data, which gave a profile of adult literacy participants in VEC adult literacy services from 2000 to 2009, along with tuition trends (see Daverth and Drew (2011) for more details).

¹¹ In 2011, the DES published a national strategy to improve literacy and numeracy among children and young people, but this was not complemented with an adult literacy strategy.

¹² Support to people with literacy difficulties is provided through the Vocational Education Committee (VEC) Adult Literacy Service. The budget for this service is approximately €30 million (which covers 33 VECs), and 55,000 adults attended the service in 2010. NALA provides a Distance Learning Service (DLS) to adults with literacy and/or numeracy difficulties all over Ireland.

¹³ On average these students receive 2 hours literacy tuition per week .

Education Committee (VEC) adult literacy services, of which approximately one-third are unemployed. The effectiveness of the VEC's adult literacy and basic skill courses in assisting unemployed individuals to re-integrate into the labour market is unknown as the courses have not been evaluated previously, and these VEC courses do not form part of the evaluation conducted in this study either.

Following a review of the literature in this area (Chapter 2), the report begins by assessing the effect that various characteristics have on an unemployed person's likelihood of having a literacy and/or numeracy difficulty (Section 5.1). In doing this, we separately identify the impact that factors such as age, educational attainment, health status and geographic location have on this outcome. As is standard within the labour economic literature in recognition that males and females behave differently in the labour market, this analysis is conducted separately by gender.

We then move on to identify the impact that literacy and/or numeracy difficulties have on an unemployed individual's likelihood of exiting unemployment to employment within 12 months (Section 5.2). We select 12 months as the cut-off point because once a person is continuously on the Live Register for 12 months or more they are then classified as being long-term unemployed. Preventing people from falling into long-term unemployment (LTU) is a key objective of policymakers, because of the negative implications that it has for both the individual (e.g. deskilling, scarring, poverty, etc.) and society at large (social welfare costs, lost revenue, crime, etc.).

The next issue that we investigate in the report is to assess the impact of literacy and/or numeracy difficulties on the likelihood of individuals accessing training programmes. Here we use the profiling data to assess the extent to which literacy and/or numeracy difficulties impact on the probability that an individual will receive activation related labour market training. We extend this analysis to assess the specific type of labour market programmes to which individuals with literacy and/or numeracy difficulties are generally assigned.

Finally, we identify the relative effectiveness of labour market training on claimants reporting literacy and/or numeracy difficulties in achieving successful exits from the Live Register.

Chapter 2

Literature

International evidence shows that there is a strong link between literacy and numeracy skills and both employment and unemployment. Finnie and Meng (2006) investigate the effects of literacy and numeracy skills, or lack thereof, on the employability and income of high school dropouts in Canada. They show that enhanced literacy and numeracy skills can improve labour market outcomes independently of formal educational attainment. Similarly, Marks and Fleming (1998) in Australia and Rivera-Batiz (1992) in the USA, show the importance of literacy and numeracy for labour market outcomes.

Bynner (2004) in his review of UK research shows the significance of literacy and numeracy skills not only in gaining employment on leaving school, but in retaining and progressing in employment. He also notes that, of the two basic skills, poor numeracy may carry a larger penalty in the labour market. Given that men and women tend to occupy different sectors of the workforce, we can also expect to find that the effects of literacy and numeracy difficulties may differ by gender, as Bynner (2004) notes in relation to the UK.

Irish research on the impact of literacy and numeracy on employment is limited and this research is intended to make a contribution toward filling that gap. The 1995 International Adult Literacy Survey (IALS) showed that a significant proportion of the Irish population had problems with basic tasks in literacy and numeracy (Department of Education and Educational Research Centre, 1997). IALS classed about 25 per cent of the Irish population at Level 1, the lowest of a five-point scale in respect of document, prose and quantitative literacy skills: this was one of the highest percentages in the lowest category in this survey of 22 countries. Dorgan (2009), using IALS data, shows that the aggregate level of functional literacy, which is based on the average of three subscales (prose, document and quantitative), is positively related to employment. This suggests that an increase in functional literacy is associated with increased employment chances, even when other relevant variables are controlled for. Dorgan (2009) also shows that the positive effect of literacy on employment is greater for women than men. Daverth and Drew (2011), in their descriptive profile of participants in adult literacy programmes in Ireland, argue that participants in literacy programmes show higher-than-average rates of unemployment and lower-than-average rates of labour force participation. They also note that the

number of participants in literacy programmes that were unemployed increased by 30 per cent between 2008 and 2009, although it should be noted that the total number unemployed in Ireland doubled during that period. They also note that the number of literacy programme participants who were employed fell by over 15 per cent between 2008 and 2009, during which total employment fell by about 8 per cent.

We also have some evidence on the impact of literacy on earnings among those at work. Denny, Harmon and O'Sullivan (2003), also using the IALS data, analyse the impact of education and functional literacy on earnings across the IALS countries. This allows them to compare the relative returns to functional literacy and education across different national contexts. Denny *et al.* (2003) found that an increase of 100 points in the IALS functional literacy score is associated with a 32 per cent increase in earnings, when controlling for years of education. The Irish effect of functional literacy was the second largest such effect across the IALS sample of countries: the largest effect, 33 per cent, was found in the Netherlands. They also found that inclusion of literacy in the equation reduced the estimated impact of education, suggesting that education and literacy are positively correlated.

De Coulon, Marcenaro-Gutierrez and Vignoles (2007) analyse the impact of literacy on employment and earnings using longitudinal data from the British Cohort Studies. Exploiting the longitudinal dimension of these data, they find positive effects on both employment and earnings even when a very wide range of potentially confounding factors are controlled for. Their findings also suggest that the positive effects of literacy on earnings may be underestimated due to errors of measurement of literacy levels, and these underestimates may also characterise the Irish findings (Dorgan, 2009). Other UK research also points to substantial gains from literacy and numeracy training. Patrignani and Conlon (2011) analyse the long-term impact of undertaking and completing literacy and numeracy training within the *Skills for Life* programme. They find strong positive employment gains to literacy and numeracy learning in both the short and longer term. Literacy learning, particularly at the lower levels leads to sizeable short-to-medium term earnings' increases, while earnings' gains associated with numeracy training increase steadily over time.

Dorgan (2009) combines analysis of the 1995 IALS data for Ireland with income and employment data from the EU *Survey of Income and Living Conditions* to estimate the costs and benefits of adult literacy training. His results suggest that investment in literacy training generates substantial economic returns to both individuals in the form of higher employment probability and earnings, and to the state through higher taxes and lower welfare expenditures.

Chapter 3

Data

The study uses data from the DSP/ESRI Profiling Project. The Profiling Project consisted of an amalgamation of data from:

1. a profiling questionnaire that was issued by the DSP to all individuals that registered a new unemployment claim in the Republic of Ireland between September and December 2006,
2. weekly Live Register records of all profiled individuals for the period September 2006 to June 2008,¹⁴ and
3. FÁS customer event files, which detailed the nature and timing of all contacts between FÁS, Ireland's national employment and training authority, and the profiled claimants up to and including June 2008.

Thus, the sample of unemployed people being assessed in this study consists of individuals that registered a new unemployment claim in the Republic of Ireland between September and December 2006. These individuals were subsequently tracked until June 2008.¹⁵ Depending on when the claim was made between weeks 1 and 13 (September to December 2006), this implies that the maximum duration of any individual within the study will lie between 78 and 91 weeks. A specially devised questionnaire, which was developed in collaboration between the DSP and the ESRI, was administered to this group by the DSP.¹⁶ This questionnaire captured information on claimants' educational attainment, literacy and/or numeracy levels, health, access to transport, employment/unemployment/job history, and participation on public job schemes, specifically the Community Employment (CE) scheme. We supplement this information with additional data from the Live Register on these profiled individuals relating to marital status, children, spousal earnings and geographic location. The literacy and/or numeracy information that is captured in the Profiling data-set is based on self-assessment in which respondents were asked to indicate if they ever had any difficulty with reading or writing or numbers.¹⁷ Research exists to support the validity of self-assessed measures, and the literacy

¹⁴ The profiled claimants were tracked from entry onto the Live Register out to June 2008.

¹⁵ Ninety-one weeks represent the total time scale of this study (September 2006 until June 2008).

¹⁶ The questionnaire was self-completed, but assistance would have been provided by the claims officer in the event of the claimant having difficulty in completing the questionnaire.

¹⁷ A 'yes/no' response was requested in response to the following question: "Have you any difficulty with reading or writing or numbers?"

and/or numeracy data captured in the Profiling data-set has been used extensively already in other published work (see, for example, O’Connell, et al., 2009; O’Connell, McGuinness and Kelly, 2012; Kelly, McGuinness and O’Connell, 2012). It is also worth noting that the OECD, Human Resource Development Canada and Statistics Canada (1997) highlight that “...adults with low literacy skills do not consider that their lack of skills presents them with any difficulties. When asked if their reading skills were sufficient to meet everyday needs, respondents replied overwhelmingly that they were, regardless of tested skills levels” (OECD, Human Resource Development Canada and Statistics Canada, 1997, p.18). Thus, individuals with literacy difficulties tend to over assess their ability in comparison to formal tests, i.e. they under assess their literacy difficulties.

The initial profiling population data-base consisted of 60,189 benefit recipients. However, duplicate records (1,164), claimants that had not registered for Jobseeker’s Allowance (JA) or Jobseeker’s Benefit (JB) (1,533),¹⁸ individuals that did not have their claims awarded (12,760), those that did not complete the survey questionnaire (10,978),¹⁹ individuals whose reason for signing off the Live Register was unknown (2,992) and part-time/casual workers in receipt of unemployment benefits (3,741) had to be eliminated; thus, the final sample used in the study consisted of 27,021 unemployment claimants. Of this, 16,340 were males and 10,681 females.

Given the growth in unemployment that has taken place over the course of the current recession, with the rate increasing from 4.4 per cent in 2006 to 14.4 per cent in 2011 (Central Statistic Office, 2011 and 2012),²⁰ we would expect that the composition of those unemployed now to differ from people that were unemployed in 2006. Table 3.1 presents the education profile for both unemployed cohorts, separately by gender, which has been derived from the Central Statistic Office’s *Quarterly National Household Survey (QNHS)*. In the absence of an official direct measure of literacy and/or numeracy difficulties, an individual’s educational attainment is a good alternative indicator, with the

¹⁸ JA is a means-tested payment and JB is based on social insurance contributions.

¹⁹ Checks undertaken on the survey non-respondents (using data from the Live Register) to ensure that they did not differ significantly from those that answered the questionnaire revealed that both samples were almost identical: a slightly higher proportion of non-respondents were non-Irish but the difference was minor and we are confident that our sample is representative of the total unemployment benefit claimant population (see O’Connell *et al.* (2009) for more details on this sensitivity check).

²⁰ These unemployment figures come from the Live Register, which includes part-time workers (those that work up to 3 days a week), seasonal and casual workers entitled to Jobseeker’s Benefit or Jobseeker’s Allowance in its definition of unemployment. Based on the *Quarterly National Household Survey (QNHS)*, which is specifically designed to measure unemployment, the rates of unemployment in Quarters 4 2006 and 2011 were 4.3 per cent and 14.6 per cent respectively.

hypothesis being that those with lower levels of educational attainment are more likely to have literacy and/or numeracy difficulties. However, we might also expect that some individuals with Post-Leaving Certificate (PLC) qualifications will have literacy and/or numeracy difficulties as having a Leaving Certificate is not a pre-requisite for obtaining this accreditation. When we look at the education profile of those unemployed in 2006 and 2011 (Table 3.1), we can see that there has been a shift in composition. Specifically, over half of all males that were unemployed in 2006 were early school leavers, suggesting that a high proportion of this group had literacy and/or numeracy difficulties, whereas just over a third of those unemployed in 2011 have a Junior Certificate or less qualification. In fact, a much greater proportion of males that are currently unemployed have a Leaving Certificate or Post-Leaving Certificate qualification. A similar pattern exists for females. However, one interesting difference is that a considerably higher proportion of females that are currently unemployed have a Third-level Degree or higher qualification. Thus, there is a degree of uncertainty regarding the extent to which the incidence of literacy and/or numeracy difficulties among the current unemployment stock has changed compared to the 2006 population. Nevertheless, we would not expect their profiles (i.e. those with literacy and/or numeracy difficulties) to have changed significantly over time.

Table 3.1: Education Profile of those Unemployed in 2006 and 2011 (Per Cent)

	Males		Females	
	2006 (Q4)	2011 (Q2)	2006 (Q4)	2011 (Q2)
Education:				
No Formal Education	23.4	12.2	12.1	6.0
Junior Certificate	27.3	23.9	21.0	15.3
Leaving Certificate	25.4	29.4	30.1	31.8
Post Leaving Certificate	7.7	18.0	10.3	16.1
Third-Level Non-Degree	6.4	7.7	13.5	13.4
Third-Level Degree	9.7	8.8	13.0	17.4

Source: Quarterly National Household Survey, Q4 2006 and Q2 2011, (Central Statistics Office).

Chapter 4

Characteristics of the Unemployed with Literacy and/or Numeracy Difficulties

Table 4.1 examines the incidence of literacy and/or numeracy difficulties among new-entrants to unemployment between September and December 2006, both overall and separately for males and females. In addition to assessing the overall incidence of literacy and/or numeracy difficulties, separate results are presented by:

- educational attainment,
- age,
- health status, and
- geographic location.²¹

Overall, 7 per cent of individuals that registered a new unemployment claim between September and December 2006 indicated that they had a literacy and/or numeracy difficulty, with the rate being much higher among unemployed males (8.9 per cent) than females (4.2 per cent).

When we look at the rate of literacy and/or numeracy difficulties by *educational attainment*, we can see that those with no formal education (that is primary or less) have much higher rates of literacy and/or numeracy difficulties than those with a formal qualification, with the incidence being the lowest among those with a degree (2.6 per cent compared to 24.8 per cent with no formal education). A higher proportion of males with a primary or less qualification, a Junior Certificate or Leaving Certificate report literacy and/or numeracy difficulties compared to their female counterparts, but the incidence of literacy and/or numeracy difficulties is similar among both genders with a degree.

Interesting, when we look at the incidence of literacy and/or numeracy difficulties across the *age distribution*, we can see that it declines with age, with the rate being 8.9 per cent among unemployed individuals aged 18-24 and 4.6

²¹ Sligo is excluded from the results due to a coding issue with this county's data.

per cent among those aged 55 and above.²² Similar to the education distribution, the rates of literacy and/or numeracy difficulties for each age category are again much higher among males than females.

In relation to *health status*, as one might expect, the incidence of literacy and/or numeracy difficulties is much higher among newly registered unemployed individuals that report having bad or very bad health, 21.4 per cent compared to 6.2 per cent for those that report good or very good health.

Finally, some interesting results emerge when we look at the distribution of literacy and/or numeracy difficulties by *geographic location*. At 3.6 per cent, the lowest incidence of literacy and/or numeracy difficulties was reported by new entrants to unemployment in Laois, with the rate also being low (i.e. 5 per cent or less) for newly registered unemployed individuals in Cork, Kildare, Leitrim, Meath, Kerry and Clare. The highest rate of literacy and/or numeracy difficulties was reported by new entrants to unemployment in both Dublin and Monaghan (9.3 per cent each). In terms of gender, the highest rates of male literacy and/or numeracy difficulties were reported by new entrants to unemployment in Longford (11.4 per cent), Dublin (11.3 per cent), Carlow (10.6 per cent), Tipperary, Westmeath (10.2 per cent each), Cavan, Kilkenny and Monaghan (10.1 per cent each). The lowest rate for unemployed males was recorded in Laois (4.9 per cent). In relation to females, the highest incidences of literacy and/or numeracy needs were reported by newly registered unemployed individuals in Monaghan (8.1 per cent), Offaly (6.8 per cent) and Dublin (5.8 per cent), with the lowest number in Laois (1.3 per cent).

²² It should be noted that the dataset relates to the flow of individuals onto the Live Register within a three month timeframe. The relationship between age and literacy and/or numeracy difficulties among the flow onto the Live Register is likely to look very different to that of the total unemployed group. Among this group we would expect literacy and/or numeracy difficulties to rise with age.

Table 4.1: Incidence of Literacy and/or Numeracy Difficulties among New Entrants to Unemployment (Per cent)

	All	Male	Female
Overall	7.0	8.9	4.2
Educational Attainment:			
Primary or Less	24.8	27.6	17.1
Junior Certificate	7.1	8.2	4.5
Leaving Certificate	3.8	4.7	2.6
Third-level	2.6	2.7	2.6
Age:			
Age 18-24	8.9	11.0	5.4
Age 25-34	6.5	8.2	3.8
Age 35-44	6.9	8.9	4.0
Age 45-54	7.3	9.4	4.6
Age 55 Plus	4.6	5.8	2.9
Health Status:			
Very Good/Good	6.2	7.7	3.8
Fair	17.5	22.1	8.7
Very Bad/Bad	21.4	29.7	13.3
County*:			
Carlow	8.0	10.6	3.2
Cavan	7.5	10.1	4.2
Clare	5.0	6.8	2.9
Cork	4.7	6.0	2.7
Donegal	6.8	9.6	3.0
Dublin	9.3	11.3	5.8
Galway	5.2	6.8	3.3
Kerry	4.9	6.3	3.3
Kildare	4.7	6.6	2.1
Kilkenny	8.2	10.1	4.2
Laois	3.6	4.9	1.3
Leitrim	4.7	6.4	1.5
Limerick	7.3	9.4	3.8
Longford	8.1	11.4	2.3
Louth	7.7	9.1	5.5
Mayo	6.5	8.6	3.3
Meath	4.9	6.1	3.2
Monaghan	9.3	10.1	8.1
Offaly	8.4	9.4	6.8
Roscommon	6.1	7.8	2.8
Tipperary	7.9	10.2	4.2
Waterford	5.3	6.5	3.2
Westmeath	7.7	10.2	4.1
Wexford	6.4	8.2	3.7
Wicklow	6.9	8.8	4.0

Note: * Results for Sligo are not reported due to a coding issue with the Sligo data.

Chapter 5

Econometric Analysis²³

5.1 DETERMINANTS OF LITERACY AND/OR NUMERACY DIFFICULTIES

In this section of the report we use multivariate analysis to identify the individual impact of various characteristics on the likelihood that a newly registered unemployed individual will have a literacy and/or numeracy difficulty. We focus specifically on age, educational attainment, health status and geographic location, and undertake the analysis separately for males and females. The bivariate analysis²⁴ indicated that the incidence of literacy and/or numeracy difficulties was lower among highly educated unemployed individuals, and among older age groups, and greater among those with bad health. However, the benefit of adopting a multivariate regression approach is that it allows us to identify the separate impact of each characteristic (age, educational attainment, etc.) on the likelihood that a new entrant to unemployment has a literacy and/or numeracy difficulty, while holding the other factors that can influence this outcome constant. At this stage, the approach adopted does not entail a causality assumption. Instead, in using regression analysis in this section of the study we are noting the relationship between having a literacy and/or numeracy difficulty and the factors that we include in our models.

The specific models that we estimate are called binary probit models²⁵ where our dependent variable equals one if a newly registered unemployed claimant has a literacy and/or numeracy difficulty and zero if not. We have selected this methodology because, through the calculation of marginal effects, the approach allows us to quantify the percentage change in the probability of the outcome occurring (i.e. on the likelihood of an unemployed person having a literacy and/or numeracy difficulty) in the event of a unit change in any of the independent variables examined (e.g. age, educational attainment, etc.). The same methodology is also adopted in other sections of the study.

²³ Econometric, multivariate and regression analysis are terms that are used interchangeably throughout the report. They refer to techniques that allow for the isolation of relationships between a dependent and independent variable, holding the effects of all other independent variables constant.

²⁴ An analysis of the relationship between two variables.

²⁵ An econometric technique used to estimate relationships where the dependent variable is binary in nature (0,1).

The results from our multivariate regression analysis are presented in Table 5.1.1. The marginal effects that are presented for each model indicate the impact that each covariate²⁶ (e.g. age, educational attainment, etc.) has on the probability of a newly registered claimant having a literacy and/or numeracy difficulty, whilst holding the other characteristics that are included in the specification constant. Overall, we can see that the descriptive examination in Chapter 4 is confirmed by our econometric model with the likelihood of a newly registered unemployed individual (regardless of gender) having a literacy and/or numeracy difficulty declining with age, educational attainment and good health.

Focusing first on the male results (Column 1), we can see that unemployed males aged 25-34 are 1.6 per cent less likely to have a literacy and/or numeracy difficulty compared to those aged 18-24: this effect increases with age, and rises to 6.1 per cent for those aged 55 and above. In relation to the impact of educational attainment, all unemployed males with a formal qualification (Junior Certificate and higher) are less likely to have a literacy and/or numeracy difficulty compared to those with primary or less education. Interestingly, the level of the formal education does not appear to matter considerably, with the results for unemployed males with a Junior Certificate (8.5 per cent), Leaving Certificate (10.5 per cent) and Degree (9.9 per cent) being within a similar range. Nevertheless, the higher the level of educational attainment, the less likely it is that an unemployed male will have a literacy and/or numeracy difficulty. Regarding an unemployed male's health status, we find that those that report having very good (7.9 per cent) or good (2.9 per cent) health are less likely to have a literacy and/or numeracy need compared to those with bad or very bad health, with there being no difference between unemployed males with fair and bad health. Finally, with respect to geographic location we find that newly registered unemployed males in Laois (4.8 per cent), Meath (3.6 per cent), Leitrim (3.3 per cent), Waterford (2.8 per cent), Kildare (2.8 per cent), Cork (2.7 per cent), Kerry (2.6 per cent), Wexford (2.5 per cent), Galway (2.2 per cent), Clare (2.1 per cent), Limerick, Louth, Mayo, Wicklow (1.8 per cent each) and Donegal (1.5 per cent) were all less likely to have a literacy and/or numeracy difficulty compared to those in Dublin. There is no difference between newly registered unemployed males in the remaining counties and those in Dublin.

²⁶ Term for independent variables within econometric models.

Table 5.1.1: Determinants of Literacy and/or Numeracy Difficulties among New Entrants to Unemployment (Marginal Effects)

	Males	Females
Age (Ref: Age 18-24)		
Age 25-34	-0.016*** (0.004)	-0.004 (0.004)
Age 35-44	-0.026*** (0.004)	-0.011*** (0.004)
Age 45-54	-0.040*** (0.004)	-0.016*** (0.003)
Age 55 Plus	-0.061*** (0.003)	-0.028*** (0.003)
Educational Attainment (Ref: Primary or Less)		
Junior Certificate	-0.085*** (0.004)	-0.034*** (0.003)
Leaving Certificate	-0.105*** (0.004)	-0.057*** (0.004)
Third-level	-0.099*** (0.003)	-0.059*** (0.004)
Health Status (Ref: Bad/Very Bad)		
Health Very Good	-0.079*** (0.015)	-0.044*** (0.013)
Health Good	-0.029** (0.013)	-0.014 (0.009)
Health Fair	0.019 (0.017)	-0.007 (0.009)
Location (Ref: Dublin)		
Carlow	-0.007 (0.013)	-0.014 (0.009)
Cavan	-0.008 (0.014)	-0.006 (0.010)
Clare	-0.021** (0.009)	-0.012* (0.007)
Cork	-0.027*** (0.005)	-0.014*** (0.004)
Donegal	-0.015** (0.007)	-0.015*** (0.004)
Galway	-0.022*** (0.007)	-0.010* (0.005)
Kerry	-0.026*** (0.006)	-0.011** (0.005)
Kildare	-0.028*** (0.008)	-0.018*** (0.005)
Kilkenny	-0.002 (0.014)	-0.006 (0.012)
Laois	-0.048*** (0.005)	-0.026*** (0.004)
Leitrim	-0.033*** (0.013)	-0.023*** (0.008)
Limerick	-0.018** (0.007)	-0.010* (0.006)
Longford	-0.006 (0.016)	-0.021*** (0.007)

Table 5.1.1: Determinants of Literacy and/or Numeracy Difficulties among New Entrants to Unemployment (Marginal Effects) Continued

	Males	Females
Location (Ref: Dublin)		
Louth	-0.018** (0.008)	-0.003 (0.008)
Mayo	-0.018** (0.008)	-0.012** (0.006)
Meath	-0.036*** (0.007)	-0.012* (0.007)
Monaghan	-0.009 (0.014)	0.023 (0.018)
Offaly	-0.019* (0.010)	0.004 (0.012)
Roscommon	-0.019 (0.016)	-0.007 (0.016)
Tipperary	-0.011 (0.008)	-0.008 (0.006)
Waterford	-0.028*** (0.007)	-0.012** (0.006)
Westmeath	-0.006 (0.010)	-0.011 (0.007)
Wexford	-0.025*** (0.006)	-0.010* (0.006)
Wicklow	-0.018** (0.009)	-0.008 (0.007)
Observations	16,340	10,681
Pseudo R-squared	0.157	0.132

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

In relation to unemployed females, we obtain similar results to males; however, the marginal effects for each of the characteristics (e.g. age, educational attainment, etc.) investigated are smaller in magnitude. Also, in relation to age we found that there is no difference in the likelihood of newly registered unemployed females aged 25-34 compared to those aged 18-24 having a literacy and/or numeracy difficulty, whereas those aged 35-44 and above this are less likely to have such difficulties compared to those aged 18-24. We also found that it is only those unemployed females that report having very good health that are less likely to have a literacy and/or numeracy difficulty compared to those that have bad/very bad health. This result suggests that the health impacts of having a literacy and/or numeracy difficulty are more severe for unemployed males. There are also county differences between unemployed males and females. The geographic locations where unemployed females were less likely to report having a literacy and/or numeracy difficulty compared to their equivalents in Dublin were Laois (2.6 per cent), Leitrim (2.3 per cent), Longford (2.1 per cent), Kildare (1.8 per cent), Donegal (1.5 per cent), Cork (1.4 per cent), Mayo, Meath, Waterford (1.2 per cent each), Clare (1.2 per cent), Kerry (1.1 per cent), Galway and Wexford (1.0 per cent each). Thus, among both males and females there are geographical variations in the incidence of literacy and/or numeracy difficulties;

however, it is not possible at this point to identify the underlying causes of such variations and, as such, the issue represents a potential future research question.

5.2 THE IMPACT OF LITERACY AND/OR NUMERACY DIFFICULTIES ON EXITING THE LIVE REGISTER TO EMPLOYMENT WITHIN 12 MONTHS

One of the objectives of this report is to identify the impact that literacy and/or numeracy difficulties has on an unemployed person's likelihood of exiting the Live Register to employment within 12 months. The reason for selecting 12 months is because once a person passes this time point on the Live Register then they are classified as being long-term unemployed. Preventing people from falling into LTU is a key objective of policymakers, because of the negative implications that it has for both the individual (e.g. deskilling, scarring, poverty, etc.) and wider society (social welfare costs, lost revenue, crime, etc.).

In order to identify the impact that literacy and/or numeracy difficulties have on an unemployed person's likelihood of becoming long-term unemployed, we again estimate binary probit models. This time our dependent variable equals one if a claimant had exited the Live Register to employment within 12 months (and did not have a subsequent unemployment application activated)²⁷ and zero otherwise. As indicated previously, we have chosen to use these models because they allow us to quantify the impact that the characteristics included in our specifications, and in particular literacy and/or numeracy difficulties, have on an unemployed person's likelihood of becoming long-term unemployed. This modelling strategy measures personal characteristics and other variables one year prior to the employment outcome and it does entail an assumption about causality.

In assessing the impact that literacy and/or numeracy difficulties may have on an unemployed person's likelihood of becoming long-term unemployed, we also control for a range of other factors that can influence this outcome. In particular, we include the following variables in our models: age; marital status; education; prior apprenticeship training; English proficiency; health; size of local labour market (city, town, etc.); geographic location (county); own transport; access to public transport; employment history; previous job duration; casual employment status; willingness to move for a job; previous unemployment claim history; participation in the CE scheme; benefit type (JA and JB); number of claims and

²⁷ Up until June 2008.

spousal earnings.²⁸ As indicated earlier, information on these factors came from a combination of both the profiling questionnaire and the Live Register data-base.

As with the analysis in Section 5.1, separate gender models are estimated in this section as well to examine whether the characteristics associated with long-term unemployment risk differ between males and females. The results from this work are presented in Table 5.2.1:²⁹ this time the marginal effects that are shown indicate the impact that each characteristic has on the probability of a claimant leaving the Live Register for employment within 12 months, holding the other variables that are included in the models constant.

In relation to our variable of interest, which equals one if an unemployed person indicated that they had a literacy and/or numeracy difficulty and zero otherwise, we can see that newly registered unemployed males that report having a literacy and/or numeracy need were 7.6 per cent less likely to have exited the Live Register to employment within 12 months compared to an unemployed male that does not have a literacy and/or numeracy difficulty, with the corresponding female figure being 7.3 per cent. Thus, having a literacy and/or numeracy difficulty increases the likelihood that an unemployed person will become long-term unemployed, which, as indicated previously, has severe negative consequences for both the individual and society in general.

The other covariates included in our specification behave as expected with higher levels of educational attainment, good health, previous apprenticeship training (males only), being recently attached to the labour market (employment history variable), willingness to move for a job, being in receipt of Jobseeker's Benefit, having a low earning spouse (males only) and having access to one's own transport increasing the likelihood that an unemployed person will exit unemployment to the labour market before becoming long-term unemployed. On the other hand, increasing age, cohabiting, being separated or married (females only), having children, poor English proficiency (males only), previous history of long-term unemployment, being on a CE scheme in the previous five years and/or being on the scheme for 12 months or more, being a casually employed Jobseeker Benefit recipient, living in an urban location (males only), having a high earning spouse (females only) and having access to public transport

²⁸ Descriptives for each of the covariates that are included in our models are presented in Appendix Table A: the descriptives are presented separately for i) all unemployed individuals, ii) those with literacy and/or numeracy difficulties and iii) unemployed individuals without such difficulties.

²⁹ A step-wise approach was adopted in which each of the sets of covariates (personal, human capital, employment history, unemployment and benefit history, and geographic location) included in Table 5.2.1 were added separately. This was undertaken to assess the stability of the models being estimated. Given that there was no considerable change in any of the covariates with each specification that was estimated, only the results from the final model, which included all controls, are presented in Table 5.2.1.

(females only) reduces the likelihood that an unemployed individual will exit the Live Register to employment within 12 months. The geographic location of a newly registered unemployed benefit recipient also impacts on their likelihood of becoming long-term unemployed (see Table 5.2.1).

Table 5.2.1: Determinants of Exiting Unemployment to Employment within 12 Months (Marginal Effects)

	Males	Females
Age		
(Ref: Age 18-24)		
Age 25-34	-0.029** (0.012)	-0.013 (0.017)
Age 35-44	-0.095*** (0.014)	-0.029 (0.020)
Age 45-54	-0.110*** (0.017)	0.036* (0.021)
Age 55 Plus	-0.220*** (0.020)	-0.071*** (0.025)
Marital Status		
(Ref: Single)		
Married	0.019 (0.014)	-0.096*** (0.020)
Cohabits	-0.053** (0.022)	-0.097*** (0.028)
Separated	-0.039* (0.023)	-0.121*** (0.028)
Widowed	0.031 (0.055)	-0.096* (0.050)
Children	-0.024*** (0.006)	-0.061*** (0.011)
Health Status		
(Ref: Bad/Very Bad)		
Very Good/Good	0.111*** (0.041)	0.289*** (0.049)
Fair	0.011 (0.042)	0.129*** (0.049)
Spousal Earnings		
(Ref: None)		
€250	0.069*** (0.024)	0.036 (0.029)
€251-€350	0.001 (0.048)	-0.057 (0.102)
€351 Plus	0.035* (0.018)	-0.106*** (0.019)
Educational Attainment		
(Ref: Primary or Less)		
Junior Certificate	0.005 (0.013)	0.028 (0.021)
Leaving Certificate	0.071*** (0.013)	0.072*** (0.020)
Third-Level	0.126*** (0.014)	0.170*** (0.020)
Apprenticeship	0.045*** (0.010)	-0.008 (0.020)
Literacy and/or Numeracy Difficulty	-0.076*** (0.016)	-0.073*** (0.028)
English Proficiency	-0.044* (0.025)	-0.004 (0.036)

**Table 5.2.1: Determinants of Exiting Unemployment to Employment within 12 Months (Marginal Effects)
(Continued)**

	Males	Females
Employment History (Ref: Never Employed)		
Employed in Last Month	0.155*** (0.028)	0.166*** (0.035)
Employed in Last Year	0.067** (0.027)	0.058* (0.035)
Employed in Last 5 Years	0.028 (0.029)	-0.031 (0.038)
Employed Over 5 Years Ago	-0.015 (0.037)	-0.134*** (0.051)
Previous Job Duration (Ref: Never Employed)		
Less than 1 Month	-0.002 (0.028)	0.072** (0.036)
1-6 Months	0.014 (0.024)	0.087*** (0.032)
6-12 Months	0.013 (0.025)	0.054 (0.033)
1-2 Years	-0.039 (0.026)	0.053 (0.034)
2 Years Plus	-0.079*** (0.025)	0.002 (0.033)
Would Move for a Job	0.036*** (0.009)	0.084*** (0.012)
UE Claim in Last 5 Years	0.028*** (0.010)	0.090*** (0.012)
Signing for 12 Months Plus	-0.144*** (0.013)	-0.169*** (0.018)
CE Scheme in Last 5 Years	-0.071** (0.028)	-0.055 (0.040)
On CE for 12 Months Plus	-0.074** (0.036)	-0.156*** (0.047)
Casually Employed – JB	-0.156*** (0.023)	-0.131*** (0.019)
Casually Employed – JA	-0.019 (0.035)	-0.039 (0.044)
Social Welfare Payment Type (Ref: UE Credits)		
Jobseeker's Allowance (JA)	0.016 (0.029)	-0.110*** (0.028)
Jobseeker's Benefit (JB)	0.194*** (0.028)	0.087*** (0.026)
Number of Claims	-0.071 (0.058)	-0.372*** (0.041)
Location (Ref: Rural)		
Village	-0.038** (0.015)	-0.022 (0.018)
Town	-0.046*** (0.014)	0.011 (0.017)
City	-0.054*** (0.014)	0.013 (0.017)
Own Transport	0.064*** (0.010)	0.030** (0.012)
Public Transport	0.015 (0.012)	-0.046*** (0.014)

**Table 5.2.1: Determinants of Exiting Unemployment to Employment within 12 Months (Marginal Effects)
(Continued)**

	Males	Females
County Location (Ref: Dublin)		
Carlow	-0.003 (0.035)	0.002 (0.050)
Cavan	-0.180*** (0.037)	-0.195*** (0.044)
Clare	-0.035 (0.028)	-0.050 (0.032)
Cork	-0.038** (0.016)	-0.025 (0.020)
Donegal	-0.046** (0.021)	-0.042 (0.026)
Galway	-0.089*** (0.021)	-0.024 (0.025)
Kerry	-0.036* (0.020)	0.030 (0.023)
Kildare	-0.030 (0.026)	-0.025 (0.032)
Kilkenny	0.011 (0.035)	-0.024 (0.051)
Laois	0.006 (0.032)	-0.025 (0.045)
Leitrim	-0.068 (0.050)	-0.072 (0.067)
Limerick	0.030 (0.021)	0.015 (0.027)
Longford	-0.193*** (0.043)	-0.163*** (0.059)
Louth	-0.021 (0.024)	-0.046 (0.031)
Mayo	-0.064** (0.025)	-0.003 (0.032)
Meath	-0.024 (0.028)	-0.037 (0.035)
Monaghan	0.009 (0.038)	-0.000 (0.050)
Offaly	-0.050 (0.032)	-0.133*** (0.043)
Roscommon	-0.086* (0.046)	-0.049 (0.065)
Tipperary	0.002 (0.022)	0.039 (0.028)
Waterford	-0.031 (0.023)	-0.039 (0.030)
Westmeath	-0.013 (0.027)	-0.070** (0.033)
Wexford	-0.045** (0.022)	-0.056** (0.028)
Wicklow	-0.021 (0.025)	-0.012 (0.033)
Observations	16,340	10,681
Pseudo R-squared	0.118	0.149

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

In the descriptive analysis in Chapter 4 and the multivariate analysis in Section 5.1 we found that younger people were more likely to have a literacy and/or numeracy difficulty. Given this, we used interactions to investigate the impact that literacy and/or numeracy difficulties had across the age distribution on the likelihood that those individuals with such needs exited unemployment to employment within 12 months. The results of this work are presented in Table 5.2.2 for males and in Table 5.2.3 for females.³⁰

In relation to unemployed males (Table 5.2.2), focusing first on the results in Column 1, we found that those aged 18-24 that have a literacy and/or numeracy issue were 11.6 per cent less likely to exit the Live Register to employment within 12 months compared to their peers that have no literacy and/or numeracy difficulties. On the other hand, we found that older unemployed males, specifically those aged between 45-54 and 55 plus, that had a literacy and/or numeracy need were marginally more likely to exit unemployment to employment within 12 months compared to young unemployed males aged 18-24 that had no literacy and/or numeracy difficulty. The reason for this result is most likely due to previous labour market experience factors that we were not able to control for within our models, such as previous occupation, economic sector, etc. Moving on to Column 2, where the base case is unemployed males aged 25-34 with no literacy and/or numeracy difficulties, we found that those aged 25-34 with a literacy and/or numeracy issue were 7.4 per cent less likely to exit the Live Register within 12 months compared to their counterparts with no literacy and/or numeracy difficulty. When we looked at unemployed males aged 35-44 with a literacy and/or numeracy need (Column 3), we found that they were 7.1 per cent less likely to have exited unemployment within 12 months compared to those in the same age group with no literacy and/or numeracy issues. We found that there was no difference in the likelihood of exiting unemployment to the labour market within 12 months between unemployed males with literacy and/or numeracy difficulties aged 45-54 and aged 55 plus and their peers that had no such issues (Columns 4 and 5 results respectively).

³⁰ We also tested to see if the impact of literacy and/or numeracy difficulties on exiting unemployment to employment varied by an unemployed person's health status: the results from this work were not significant and, therefore, are not included in the report.

Table 5.2.2: Determinants of Males Exiting Unemployment to Employment within 12 Months: Age Distribution Analysis (Marginal Effects)

Age Reference Category (No Literacy and/or Numeracy Difficulty)					
	(1)	(2)	(3)	(4)	(5)
	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55 Plus
"Age Group with L/N" ¹	-0.116*** (0.028)	-0.074*** (0.027)	-0.071** (0.033)	-0.038 (0.039)	-0.015 (0.054)
Age 18-24		-0.041 (0.038)	-0.044 (0.042)	-0.078 (0.048)	-0.101 (0.063)
Age 25-34	0.040 (0.035)		-0.003 (0.040)	-0.036 (0.046)	-0.059 (0.061)
Age 35-44	0.043 (0.039)	0.003 (0.040)		-0.033 (0.050)	-0.056 (0.064)
Age 45-54	0.074* (0.042)	0.035 (0.044)	0.032 (0.047)		-0.023 (0.066)
Age 55 Plus	0.094* (0.054)	0.057 (0.056)	0.054 (0.059)	0.022 (0.064)	
Observations	16,340	16,340	16,340	16,340	16,340
Pseudo R-squared	0.118	0.118	0.118	0.118	0.118

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

¹ Age category with the literacy and/or numeracy difficulty (L/N), which corresponds to the column heading associated with each result.

Turning to females, focusing first on the results in Column 1 (Table 5.2.3), we found that those aged 18-24 that had literacy and/or numeracy difficulties were 19.6 per cent less likely to exit unemployment within 12 months compared to those of the same age that did not have literacy and/or numeracy issues. However, unemployed females aged 25-34, 35-44 and 55 plus that had a literacy and/or numeracy difficulty were significantly more likely to exit the Live Register to employment within 12 months compared to those aged 18-24 that did not have issues with literacy and numeracy. When we looked at unemployed females aged 25-34 with literacy and/or numeracy needs (Column 2), we found that there was no difference between them and similarly aged unemployed females with no literacy and/or numeracy difficulties. However, females aged 18-24 with literacy and/or numeracy issues were 15.6 per cent less likely to have exited to employment within 12 months compared to those aged 25-34 with no literacy and/or numeracy difficulties. We also found that this was the case when this age group (aged 18-24) was compared with unemployed females aged 35-44 with no literacy and/or numeracy issues (Column 3) and those aged 55 plus (Column 5), with the impact being much greater when compared with the former age group. Furthermore, unemployed females aged 45-54 with literacy and/or numeracy difficulties were less likely to have exited unemployment to employment within 12 months when compared with those aged 34-44 with no literacy and/or numeracy needs (Column 3). With respect to those aged 45-54 (Column 4), we found that females in this age category with literacy and/or numeracy difficulties were 15.1 per cent less likely to have exited to employment within 12 months compared to those of the same age with no literacy and/or numeracy issues.

However, those aged 35-44 with literacy and/or numeracy difficulties were 19.5 per cent more likely to have left unemployment and entered employment within 12 months compared to unemployed females aged 45-54 with no literacy and/or numeracy needs.

5.3 ACCESS TO GOVERNMENT-SPONSORED TRAINING AMONG UNEMPLOYED INDIVIDUALS WITH LITERACY AND/OR NUMERACY DIFFICULTIES

In this section of the report, we assess the extent to which claimants indicating that they had literacy and/or numeracy difficulties were more or less likely to be assigned to a training programme and the relative effects of such training on exits from the Live Register.

Table 5.2.3: Determinants of Females Exiting Unemployment to Employment within 12 Months: Age Distribution Analysis (Marginal Effects)

	Age Reference Category (No Literacy and/or Numeracy Difficulty)				
	(1) Age 18-24	(2) Age 25-34	(3) Age 35-44	(4) Age 45-54	(5) Age 55 Plus
"Age Group with L/N" ¹	-0.196*** (0.054)	-0.040 (0.050)	0.070 (0.055)	-0.151** (0.065)	-0.001 (0.089)
Age 18-24		-0.156** (0.073)	-0.266*** (0.074)	-0.045 (0.084)	-0.195* (0.104)
Age 25-34	0.142** (0.061)		-0.114 (0.078)	0.103 (0.071)	-0.039 (0.103)
Age 35-44	0.227*** (0.053)	0.106 (0.067)		0.195*** (0.063)	0.071 (0.099)
Age 45-54	0.044 (0.079)	-0.111 (0.082)	-0.224*** (0.083)		-0.150 (0.111)
Age 55 Plus	0.173** (0.081)	0.038 (0.099)	-0.074 (0.109)	0.137 (0.092)	
Observations	10,681	10,681	10,681	10,681	10,681
Pseudo R-squared	0.150	0.150	0.150	0.150	0.150

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

¹ Age category with the literacy and/or numeracy difficulty (L/N), which corresponds to the column heading associated with each result.

With respect to assessing the incidence of training, the data approach is broadly in line with the previous Sections (5.1 and 5.2). However, there are a number of differences and, as such, the samples will not match. As before, the total number of unemployment benefit claimants within the initial Live Register data-base was 60,189. When account was taken of those failing to complete the questionnaire, duplicates and claim types ineligible for NEAP assistance, the sample fell to 27,328. We also excluded those claimants who were still employed at the commencement of their claim and those who had previously participated on the Community Employment (CE) scheme during a previous unemployment spell,

which reduced our sample to 24,292. The CE scheme is Ireland's main public sector employment scheme. Within the data we can identify if, and when, individuals exited the Live Register to take up a place on the CE scheme or a FÁS training course. As such we have information on 282 individuals who signed-off to the CE scheme and 1,351 that signed-off to FÁS training courses.

Table 5.3.1 shows the proportions of all claimants and those with literacy and/or numeracy difficulties accessing FÁS courses or CE programmes over the period of the study. Initially, no restrictions were placed on the sample with respect to time spent on the Live Register; thus, the rates reported are likely to be underestimates of the true incidence as individuals tend not to commence programmes until they have been on the Live Register for some weeks. However, it is the relative incidence that interests us. The results from Table 5.3.1 indicate that claimants with literacy and/or numeracy difficulties and those without have broadly similar likelihoods of commencing either a FÁS training programme or a CE scheme. Nevertheless, the analyses of such bivariate relationships are highly unreliable as they can mask substantial differences in the characteristics of both groups, which are also possibly related to selection into training. Consequently, a multivariate analysis is required.

Table 5.3.1: The Relative Incidence of Training among Claimants (Per Cent)

	All Claimants	Literacy and/or Numeracy Difficulties
Community Employment (CE) Scheme	1.5	1.8
FÁS Training Course	5.5	6.3
Sample	27,367	2,001

Table 5.3.2 shows the determinants of being selected for either a FÁS training programme or the CE scheme.³¹ There are a few factors common to both types of programme. Males had a lower probability of commencing either programme, while claimants in receipt of Jobseeker's Allowance (JA), which is a means-tested unemployment payment, were more likely to be offered a place relative to those on Jobseeker's Benefit (JB), which is a payment based on social insurance contributions. Younger claimants were more likely to commence a FÁS training programme while older individuals were more likely to be placed on a CE scheme. With respect to education, relative to those with no formal education, individuals with Junior or Leaving Certificates were more likely to commence FÁS training

³¹ Results are based on two separate binary probit models.

programmes, while graduates and Leaving Certificate holders were less likely to commence CE programmes. Perhaps not surprisingly, claimants who had previously undertaken apprenticeship training also had a lower probability of commencing a FÁS training programme. Claimants with a previous history of long-term unemployment were more likely to enter FÁS programmes, while individuals stating that they were willing to move for employment purposes were less likely to commence CE programmes. Crucially, claimants who indicated that they had literacy and/or numeracy difficulties were no more likely to enter either form of training. This is a finding of some concern as it suggests that unemployed individuals with the most substantial barriers to employment were not being more heavily allocated towards training initiatives.

Table 5.3.2: Characteristics of Claimants in Receipt of Training (Marginal Effects)

	FÁS	CE Scheme
Male	-0.02*** (0.003)	-0.00*** (0.001)
Age: (Ref: Age 18-24)		
Age 25-34	-0.02*** (0.004)	0.01*** (0.003)
Age 35-44	-0.01** (0.004)	0.02*** (0.005)
Age 45-54	0.01 (0.006)	0.02*** (0.006)
Age 55 Plus	-0.00 (0.006)	0.02*** (0.007)
Marital Status (Ref: Single)		
Married	0.01 (0.005)	-0.00 (0.002)
Cohabits	0.00 (0.008)	-0.00 (0.002)
Separated	-0.01 (0.007)	0.00 (0.002)
Divorced /Widowed	0.01 (0.019)	-0.00 (0.004)
Children	-0.00 (0.002)	0.00 (0.001)
Educational Attainment (Ref: Primary or Less)		
Junior Certificate	0.02*** (0.006)	-0.00 (0.001)
Leaving Certificate	0.03*** (0.006)	-0.00** (0.001)
Third-level	0.00 (0.005)	-0.00*** (0.001)
Apprenticeship	-0.01** (0.004)	-0.00 (0.001)
Literacy and/or Numeracy Difficulty	-0.00 (0.005)	-0.00 (0.002)
English Proficiency	-0.00 (0.008)	0.00 (0.003)

Table 5.3.2: Characteristics of Claimants in Receipt of Training (Marginal Effects) (Continued)

	FÁS	CE Scheme
Location (Ref: Rural):		
Village	-0.00 (0.005)	0.00 (0.002)
Town	0.01** (0.005)	0.00 (0.002)
City	0.01*** (0.005)	-0.00 (0.002)
Own Transport	-0.01*** (0.003)	0.00 (0.001)
Public Transport	-0.00 (0.004)	-0.00 (0.001)
Employment History (Ref: Never Employed)		
Employed in Last Month	-0.02** (0.009)	-0.00 (0.003)
Employed in Last Year	-0.01* (0.007)	0.00 (0.003)
Employed in Last 5 Years	-0.00 (0.009)	0.01 (0.005)
Employed Over 5 Years Ago	-0.02** (0.008)	0.00 (0.005)
Job Duration (Ref: Never Employed)		
Less than 1 Month	0.01 (0.010)	-0.00 (0.003)
1-6 Months	0.00 (0.008)	-0.00 (0.002)
1-12 Months	-0.01* (0.007)	-0.00 (0.002)
1-2 Years	-0.01 (0.008)	-0.00 (0.002)
2 Years Plus	0.01 (0.008)	0.00 (0.003)
Would Move for a Job	-0.00 (0.003)	-0.00*** (0.001)
Social Welfare Payment Type (Ref: UE Credits)		
Jobseeker's Assistance (JA)	0.02*** (0.004)	0.00*** (0.002)
Signed on for 12 Months Plus	0.01*** (0.005)	0.00 (0.002)
Spousal Earnings (Ref: None)		
Spousal Earnings €250	0.00 (0.008)	-0.00 (0.002)
Spousal Earnings €251-350	-0.02 (0.017)	-0.00 (0.005)
Spousal Earnings €351+	-0.00 (0.005)	0.00 (0.002)
Historic FÁS Client	-0.00 (0.003)	0.00** (0.001)
Observations	24,048	24,048
Pseudo R-squared	0.0502	0.0913

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

5.4 IMPACT OF TRAINING ON EXITING THE LIVE REGISTER FOR UNEMPLOYED INDIVIDUALS WITH LITERACY AND/OR NUMERACY DIFFICULTIES

Next we assess the impact of training among individuals reporting literacy and/or numeracy difficulties relative to the population of unemployed individuals as a whole. With respect to the data, the approach is somewhat different from that undertaken in Section 5.3. We evaluate the impact of training in terms of an absence from the Live Register at one point in time, specifically 21 months, which is 91 weeks from the beginning of the profiling data capture. As we must allow for the possibility that individuals will return to the Live Register following training, re-entrants to the Live Register are no longer excluded from the data.

With respect to the CE scheme, individuals generally do not enter the CE programme until, on average, week 45. Thus, the longitudinal aspect of our data is insufficient to allow an assessment of the CE scheme's impact on exiting unemployment as CE schemes typically exceed 52 weeks duration. Consequently, the impacts of the CE programme are not explicitly considered in this aspect of the study.

FÁS training courses typically last less than six months; thus, we restrict our training participants, which we refer to as our treatment group,³² to individuals who exited the Live Register for such a programme prior to week 35 on the Live Register to allow adequate time for individuals that participated in training and failed to secure employment to have re-entered the Live Register. Given our data restrictions, we are unable to assess the medium or long-term effects of training. However, from a public policy perspective, whereby the objective of the training strategy is to achieve an immediate reduction in unemployment, the short-run effects are clearly important.

The control group³³ for the study relates to individuals who had received a FÁS interview during the study period but no training. Generally speaking, a FÁS interview will be a pre-requisite step for receiving FÁS training.³⁴ During a FÁS interview, recipients receive what is known as Job Search Assistance (JSA). We restrict our control group to individuals with minimum unemployment duration of 20 weeks, on the grounds that the treatment group would generally have been

³² The treatment group refers to a group of individuals that have been exposed to an intervention, in this case FÁS training.

³³ The control group relates to a group of individuals who qualify for an intervention (e.g. FÁS training) but have not been exposed.

³⁴ It is not feasible to use as a control group individuals who receive no interventions whatsoever as the treatment effect in that instance would incorporate both the impacts of job search assistance and training.

on the Live Register for at least this period before exiting to training. The sample size of our control group is 8,088. Within the more restricted data we have information of 768 individuals who reported literacy and/or numeracy difficulties who meet the criteria of either the control or treatment groups and, as such, we have a sufficient number of observations to estimate separate models for this grouping, which will allow us to measure any differential impacts of training relative to the claimant population as a whole. On the grounds that individuals with literacy and/or numeracy difficulties do not appear to have been filtered out for intervention in any systematic way, we are confident that such an approach is justified and unlikely to be affected by selection bias. The general empirical approach for eradicating the impact of selection bias would be to use Propensity Score Modelling (PSM). However, sample size issues prevent us from undertaking this strategy within the current study. Nevertheless, within the larger sample substantial checks have been previously carried out and these have confirmed that assignment to various forms of training was non-systematic (see McGuinness, O’Connell, Kelly and Walsh, 2011).

When we apply the restriction that the training intervention had to occur at or before week 35 on the Live Register, our treatment group is reduced from 1,505 to 754 individuals. Information on these 754 individuals was then sent to FÁS to provide more detailed information on the nature of the training courses attended. When we linked the data with the detailed training information provided to us by FÁS, the number of valid matches falls to 621³⁵ individuals, which represents our key treatment sample. The sample size of 621 is sufficient to support the analysis. However, of greater concern is the possibility that assignment to training was more (or less) concentrated towards individuals possessing literacy and/or numeracy difficulties relative to those who did not, as such a scenario would generate biased estimates of the impact of training. Nevertheless, a quick consistency check reveals that after all restrictions, treated individuals accounted for 7.1 per cent of the total claimant sample (treated plus control groups) compared to 6.4 per cent within the literacy and/or numeracy sub-group, suggesting that our assumption of random assignment is valid.

Based on the course descriptions provided to us by FÁS, we categorised training episodes of the 621 individuals into the following five groups: i) Job search training, ii) General training, iii) Low-level specific skills training, iv) Medium-level specific skills training and v) High-level specific skills training (Table 5.4.1). Job-search training refers to short training programmes in job seeking, application

³⁵ We were forced to make further exclusions as some individuals received more than one period of training; thus, we concentrated on the final training episode and excluded individuals whose final training episode ended close to June 2008.

and interview techniques. General training captures vocational skills training, but without a strong linkage to the labour market or to a particular occupation; for example, training for the European Computer Driving Licence (ECDL). We distinguished between three levels of Specific Skills training from Low-level (e.g. *Introduction to Warehousing and Distribution*) to High (e.g. *Computer Aided Drafting and Design*).

Table 5.4.1: Government-Sponsored Training Programmes

Type of training	Description	Example
1 Job Search Training	Training in job search techniques	<i>Preparing for Work</i>
2 General Training	General purpose training without specific link to labour market	<i>European Computer Driving Licence</i>
Specific Skills Training	Training for specific occupational position	
4 – Low-Level		<i>Introduction to Warehousing and Distribution</i>
5 – Medium-Level		<i>Computerised Accounts and Payroll</i>
6 – High-Level		<i>Computer Aided Drafting and Design</i>

As can be seen from Table 5.4.2, the bulk of training programmes relate to general and low skilled courses while high skilled programmes and those focused around job-search training account for a relatively low proportion of the overall share.

Table 5.4.2: Distribution of Government-Sponsored Training Programmes by Duration and Level

	Average Duration (Weeks)	Number of Individuals	Percent of Individuals
Programme Type:			
Job Search Training	8	63	8
General Training	17	256	41
Specific Skills – Low	18	179	29
Specific Skills – Medium	19	98	16
Specific Skills – High	40	25	4
Total		621	100*

Note: * Due to rounding, the figure does not sum exactly to 100.

While it is clear that individuals with literacy and/or numeracy needs were no more likely to obtain training per se, it may well be the case that those that were activated were more heavily channelled towards particular forms of training such

as low-skilled or general programmes. To measure this, we estimate the probability of receiving each form of training and the results are reported in Table 5.4.3. Given the relatively small size of the job-skills grouping it was not possible to estimate a separate model for each category. Specifically, we could not estimate an individual job search training model, while high-skill programmes were merged in with the medium skills category. The results show that general

Table 5.4.3: Characteristics of Claimants in Receipt of Specific Forms of Training (Marginal Effects)

	General	Low-Skilled	Medium/ High-Skilled
Male	-0.01*** (0.001)	-0.00** (0.001)	-0.00 (0.001)
Age: (Ref: Age 18-24)			
Age 25-34	-0.00** (0.001)	-0.00** (0.001)	-0.00 (0.001)
Age 35-44	-0.00 (0.002)	-0.00 (0.001)	0.00 (0.001)
Age 45-54	0.00 (0.002)	0.00 (0.002)	-0.00 (0.001)
Age 55 Plus	0.00 (0.003)	-0.00*** (0.001)	0.00 (0.002)
Marital Status (Ref: Single)			
Married	-0.00 (0.002)	0.00 (0.002)	-0.00 (0.001)
Cohabits	-0.00 (0.002)	0.00 (0.003)	-0.00 (0.002)
Separated	-0.00 (0.002)	-0.00 (0.002)	0.00 (0.002)
Divorced /Widowed	0.00 (0.006)	- -	- -
Children	0.00 (0.001)	-0.00 (0.001)	-0.00 (0.001)
Educational Attainment (Ref: Primary or Less)			
Junior Certificate	0.00 (0.002)	0.00 (0.002)	0.01** (0.006)
Leaving Certificate	0.00* (0.002)	0.00 (0.002)	0.01** (0.006)
Third-level	-0.00 (0.002)	-0.00 (0.002)	0.02** (0.007)
Apprenticeship	-0.00* (0.001)	0.00 (0.002)	-0.00 (0.001)
Literacy and/or Numeracy Difficulty	0.00 (0.002)	-0.00 (0.002)	-0.00 (0.002)
English Proficiency	-0.00** (0.002)	-0.00 (0.002)	0.00 (0.004)
Location (Ref: Rural):			
Village	0.00 (0.002)	-0.00*** (0.001)	-0.00*** (0.001)
Town	0.00* (0.002)	-0.00 (0.001)	0.00 (0.001)
City	0.00** (0.002)	-0.00 (0.002)	-0.00 (0.001)

Table 5.4.3: Characteristics of Claimants in Receipt of Specific Forms of Training (Marginal Effects) (Continued)

	General	Low-Skilled	Medium/High-Skilled
Own Transport	-0.00 (0.001)	-0.00 (0.001)	0.00 (0.001)
Public Transport	-0.00 (0.001)	0.00 (0.001)	0.00 (0.001)
Employment History (Ref: Never Employed)			
Employed in Last Month	-0.00 (0.003)	0.00 (0.003)	-0.00 (0.003)
Employed in Last Year	-0.00 (0.002)	0.00 (0.003)	-0.00 (0.002)
Employed in Last 5 Years	-0.00 (0.002)	0.00 (0.004)	-0.00 (0.002)
Employed Over 5 Years Ago	-0.00*** (0.001)	0.00 (0.004)	-0.00 (0.002)
Job Duration (Ref: Never Employed)			
Less than 1 Month	-0.00 (0.003)	-0.00 (0.002)	0.01 (0.006)
1-6 Months	-0.00 (0.002)	-0.00 (0.002)	0.00 (0.003)
1-12 Months	-0.00 (0.002)	-0.00*** (0.001)	0.00 (0.003)
1-2 Years	-0.00 (0.003)	-0.00*** (0.001)	0.01 (0.005)
2 Years Plus	0.00 (0.003)	-0.00 (0.002)	0.00 (0.003)
Would Move for a Job	-0.00 (0.001)	-0.00 (0.001)	0.00 (0.001)
Social Welfare Payment Type (Ref: Jobseeker's Benefit)			
Jobseeker's Assistance	0.00*** (0.001)	0.00 (0.001)	-0.00 (0.001)
Signed on for 12 Months Plus	-0.00 (0.002)	0.00* (0.002)	0.00** (0.002)
Spousal Earnings (Ref: None)			
Spousal Earnings €250	0.00 (0.003)	-0.00 (0.003)	0.00 (0.002)
Spousal Earnings €351+	0.00 (0.002)	-0.00 (0.002)	-0.00* (0.001)
Historic FÁS Client	-0.00* (0.001)	-0.00* (0.001)	0.00 (0.001)
Observations	23,714	22,904	22,972
Pseudo R-squared	0.097	0.056	0.055

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

These models were estimated using three separate binary probit models. We also estimated the relations using a multinomial logit model; however, the results were unchanged using this approach.

training was more commonly assigned to females, individuals who were proficient in English, those living in cities and unemployed individuals who had not been in employment for more than five years. Low-skilled training was more heavily allocated towards female claimants, unemployed individuals that did not reside in villages and claimants that had relatively long durations in their previous

employment. Finally, high-skill training was more common among claimants with more advanced levels of education, who lived in a non-village location and those that had a previous history of long-term unemployment. Once again, we find no evidence that individuals reporting literacy or numeracy difficulties had a higher likelihood of being assigned to any particular form of training.

The impact of FÁS training, irrespective of the type of training received, on exits from the Live Register is reported in Table 5.4.4. We see that for the total sample (Column 1), attending a FÁS course raises the likelihood that the claimant will have exited the Live Register by the 21 month point by 11 per cent. The model also indicates that an exit from the Live Register is positively related to educational attainment, being in receipt of JB, recent employment, having one's own transport and a wage earning spouse, while it is negatively associated with being aged 45 or over, having literacy and/or numeracy difficulties, dependent children and a history of long-term unemployment. The model restricted to claimants with literacy and/or numeracy difficulties (Column 2) reveals that this grouping receives an improved likelihood of exit from the Live Register following training, almost three times that of the general population. This is a remarkable finding and suggests that there are potentially large pay-offs to targeting interventions towards this grouping.³⁶ Moreover, it demonstrates that the existence of literacy and/or numeracy issues does not act as a barrier to effective training and that individuals possessing such skill gaps can be effectively activated within the mainstream system in the absence of prior literacy and/or numeracy training. Some of the remaining coefficients in the model are also informative as they suggest that the literacy/numeracy grouping has much higher marginal effects associated with cohabiting status, dependent children and a wage earning spouse implying that domestic related factors act as a more substantial barrier within this grouping.

³⁶ Due to small sample numbers, it is not possible to test whether this training effect might vary by gender or educational attainment.

Table 5.4.4: Impacts of All Training on Exits from the Live Register (Marginal Effects)

	Full Sample	Literacy and/or Numeracy Sample
Training Type:		
FÁS Training	0.11*** (0.021)	0.29*** (0.080)
Male	-0.01 (0.013)	-0.03 (0.049)
Age (Ref: Age 18-24)		
Age 25-34	0.01 (0.017)	-0.01 (0.053)
Age 35-44	-0.02 (0.020)	0.06 (0.070)
Age 45-54	-0.05** (0.023)	-0.12* (0.067)
Age 55 Plus	-0.08*** (0.027)	0.03 (0.098)
Marital Status (Ref: Single)		
Married	0.04* (0.020)	0.00 (0.061)
Cohabits	-0.02 (0.028)	-0.24*** (0.063)
Separated	0.04 (0.030)	0.04 (0.101)
Divorced /Widowed	0.17** (0.070)	0.07 (0.223)
Children	-0.04*** (0.009)	-0.07*** (0.026)
Educational Attainment (Ref: Primary or Less)		
Junior Certificate	-0.02 (0.019)	-0.06 (0.047)
Leaving Certificate	0.03 (0.019)	0.03 (0.057)
Third-level	0.11*** (0.020)	0.13 (0.080)
Apprenticeship	-0.00 (0.017)	0.01 (0.070)
Literacy and/or Numeracy Difficulty	-0.04** (0.022)	- -
English Proficiency	0.01 (0.031)	0.03 (0.059)
Location (Ref: Rural)		
Village	0.02 (0.021)	0.09 (0.083)
Town	0.01 (0.019)	0.10 (0.076)
City	-0.01 (0.019)	0.03 (0.073)

Table 5.4.4: Impacts of All Training on Exits from the Live Register (Marginal Effects) (Continued)

	Full Sample	Literacy and/or Numeracy Sample
Own Transport	0.03** (0.013)	0.05 (0.052)
Public Transport	-0.00 (0.017)	0.03 (0.060)
Employment History (Ref: Never Employed)		
Employed in last Month	0.07** (0.036)	0.04 (0.095)
Employed in last Year	0.07** (0.035)	-0.03 (0.092)
Employed in last 5 Years	0.04 (0.037)	-0.03 (0.095)
Employed Over 5 Years Ago	-0.01 (0.044)	0.00 (0.106)
Job Duration (Ref: Never Employed)		
Less than 1 Month	-0.03 (0.039)	0.08 (0.110)
1-6 Months	0.02 (0.033)	0.18* (0.093)
1-12 Months	0.02 (0.034)	0.21** (0.102)
1-2 Years	0.02 (0.035)	0.18 (0.112)
2 Years Plus	0.02 (0.033)	0.10 (0.099)
Would Move for a Job	0.03*** (0.012)	0.05 (0.042)
Social Welfare Payment Type (Ref: Jobseeker's Benefit)		
Jobseeker's Assistance (JA)	-0.17*** (0.014)	-0.15** (0.059)
Signed on for 12 Months Plus	-0.07*** (0.018)	-0.01 (0.055)
Weekly Spousal Earnings (Ref: None)		
Spousal Earnings €250	0.14*** (0.031)	0.40*** (0.110)
Spousal Earnings €251-350	0.09 (0.082)	0.13 (0.345)
Spousal Earnings €351+	0.09*** (0.023)	0.07 (0.115)
Historic FÁS Client	-0.06*** (0.015)	-0.04 (0.048)
Observations	8,636	765
Pseudo R-squared	0.086	0.141

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Finally, Table 5.4.5 separates out the impact of interventions by training type. No effects were estimated for either job-skills or high-skill training, presumably due to small cell sizes. Nevertheless, the results clearly show that individuals with literacy and/or numeracy difficulties benefit substantially from both general and medium-skill training. The impact of general training is approximately four times the population average, while those in receipt of medium-skills training

experience an improved likelihood of exit from the Live Register over three times the average. ECDL programmes and basic computing courses cover the bulk of general training initiatives, while medium skills training covers programmes such as intermediate welding, hairdressing, heavy goods driving, machine tools operating, etc. Thus, it is clear that individuals possessing literacy and/or numeracy difficulties can efficiently acquire job related skills even in the presence of such difficulties. The analysis clearly demonstrates the benefits of using statistical profiling³⁷ to filter individuals with literacy and/or numeracy difficulties into appropriate training paths.

Table 5.4.5: Impacts of Training Type on Exits from the Live Register (Marginal Effects)

	Full Sample	Literacy and/or Numeracy Sample
Training Type:		
JS Training	0.16*** (0.060)	- -
General	0.07** (0.033)	0.27** (0.120)
Specific Skills – Low	0.09** (0.038)	0.02 (0.145)
Specific Skills – Medium	0.16*** (0.051)	0.52*** (0.149)
Specific Skills – High	0.21*** (0.074)	- -
Male	-0.01 (0.013)	-0.02 (0.049)
Age (Ref: Age 18-24)		
Age 25-34	0.01 (0.017)	-0.01 (0.053)
Age 35-44	-0.02 (0.020)	0.05 (0.070)
Age 45-54	-0.05** (0.023)	-0.13* (0.066)
Age 55 Plus	-0.08*** (0.027)	0.03 (0.098)
Marital Status (Ref: Single)		
Married	0.04* (0.020)	0.00 (0.061)
Cohabits	-0.02 (0.028)	-0.22*** (0.066)
Separated	0.04 (0.030)	0.05 (0.102)
Divorced /Widowed	0.17** (0.070)	0.05 (0.228)
Children	-0.04*** (0.009)	-0.06** (0.027)

³⁷ See O'Connell, McGuinness, Kelly and Walsh (2009) for more details on statistical profiling.

Table 5.4.5: Impacts of Training Type on Exits from the Live Register (Marginal Effects) (Continued)

	Full Sample	Literacy and/or Numeracy Sample
Educational Attainment (Ref: Primary or Less)		
Junior Certificate	-0.02 (0.019)	-0.07 (0.047)
Leaving Certificate	0.03 (0.019)	0.04 (0.058)
Third-level	0.11*** (0.021)	0.13 (0.081)
Apprenticeship	-0.00 (0.017)	0.02 (0.070)
Literacy and/or Numeracy Difficulty	-0.04** (0.022)	- -
English Proficiency	0.00 (0.031)	0.02 (0.059)
Location (Ref: Rural)		
Village	0.02 (0.021)	0.09 (0.084)
Town	0.01 (0.019)	0.09 (0.076)
City	-0.00 (0.019)	0.03 (0.073)
Own Transport	0.03** (0.013)	0.05 (0.053)
Public Transport	-0.00 (0.017)	0.02 (0.060)
Employment History (Ref: Never Employed)		
Employed in Last Month	0.07** (0.036)	0.04 (0.096)
Employed in Last Year	0.07** (0.036)	-0.01 (0.094)
Employed in Last 5 Years	0.04 (0.037)	-0.02 (0.097)
Employed Over 5 Years Ago	-0.01 (0.044)	-0.00 (0.107)
Job Duration (Ref: Never Employed)		
Less than 1 Month	-0.03 (0.039)	0.07 (0.110)
1-6 Months	0.02 (0.033)	0.18* (0.093)
1-12 Months	0.02 (0.034)	0.20** (0.103)
1- 2 Years	0.02 (0.035)	0.18 (0.113)
2 Years Plus	0.02 (0.033)	0.09 (0.099)
Would Move for a Job	0.03*** (0.012)	0.04 (0.042)
Social Welfare Payment Type (Ref: Jobseeker's Benefit)		
Jobseeker's Assistance (JA)	-0.17*** (0.014)	-0.15*** (0.060)
Signed on for 12 Months Plus	-0.07*** (0.019)	-0.02 (0.055)

Table 5.4.5: Impacts of Training Type on Exits from the Live Register (Marginal Effects) (Continued)

	Full Sample	Literacy and/or Numeracy Sample
Weekly Spousal Earnings (Ref: None)		
Spousal Earnings €250	0.14*** (0.031)	0.38*** (0.118)
Spousal Earnings €251-350	0.09 (0.082)	0.11 (0.342)
Spousal Earnings €351+	0.09*** (0.023)	0.08 (0.115)
Historic FÁS Client	-0.06*** (0.015)	-0.05 (0.048)
Observations	8,636	765
Pseudo R-squared	0.086	0.136

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Chapter 6

Summary, Conclusions and Policy Implications

Using data from the Profiling data-set, which contains information on new entrants to unemployment between September and December 2006, this report investigates the determinants of literacy and/or numeracy difficulties among unemployed individuals. It also looks at the impact that literacy and/or numeracy difficulties have on unemployed individuals' likelihood of leaving the Live Register to employment before 12 months, which is the time point at which an unemployed person becomes classified as being long-term unemployed. In addition, the study assesses the impact of literacy and/or numeracy difficulties on access to training programmes, and it also identifies the relative effectiveness of labour market training among claimants reporting literacy and/or numeracy needs in achieving successful exits from the Live Register.

Although the economic context between the present time and when the data used in this report was captured has changed dramatically, and in particular the unemployment situation, we do not expect the profiles of claimants with literacy and/or numeracy difficulties to have altered significantly over the time period. Thus, the results derived in this report are not dependent on the time period examined. Furthermore, we do not expect that the use of a self-reported literacy/numeracy difficulty measure in this study to have a significant impact on the results derived. If anything, the results may be underestimated because according to the OECD *et al.* (1997), individuals with literacy difficulties tend to over assess their ability in comparison to formal tests; thus, the subjective measure around which this study is based will, if anything, tend to underestimate the incidence of literacy and/or numeracy difficulties among the unemployed. Another important point that needs to be reiterated before summarising the results is that the approach adopted in this report does not imply a causal relationship; instead, we have focused on identifying the relationships of having a literacy and/or numeracy difficulty with the various outcomes that are investigated in the study.

The results from Section 5.1 indicate that the likelihood of an unemployed person, whether male or female, having a literacy and/or numeracy difficulty declines with age, educational attainment and good health. In Section 5.2 we found that newly registered unemployed males that report having a literacy and/or numeracy issue were 7.6 per cent less likely to have exited the Live

Register to employment before 12 months compared to an unemployed male with no literacy and/or numeracy difficulty. The corresponding figure for females was 7.3 per cent. Thus, having a literacy and/or numeracy difficulty increases the likelihood that an unemployed person will become long-term unemployed, which, has severe implications for the individual and wider society as a whole.

The results from Sections 5.3 and 5.4 demonstrate that despite experiencing substantial barriers to a successful labour market exit, individuals with literacy and/or numeracy difficulties are no more likely to be in receipt of government-sponsored training under the NEAP. However, the research also shows that, relative to the claimant population as a whole, when those with literacy and/or numeracy difficulties do receive training, they benefit by much more than average. In essence, the findings suggest that individuals with literacy and/or numeracy difficulties can be efficiently activated within the mainstream NEAP system and that the existence of literacy and/or numeracy difficulties, in themselves, do not substantially restrict an individual's ability to benefit from both mainstream general and medium skills training programmes. Furthermore, the results indicate that literacy and/or numeracy training is not necessarily a pre-requisite for effective job skills training among individuals reporting literacy and/or numeracy difficulties.

There is research that indicates that numeracy difficulties carry a greater penalty in the labour market (e.g. Bynner, 2004). However, it was not possible for us to identify the separate effects of both literacy and numeracy difficulties in this study, due to both issues being combined in the one question in the profiling questionnaire. For Ireland, this would be an interesting area for future research if data could be collected to allow for the distinction between literacy and numeracy difficulties.

In conclusion, the research carried out in this study provides evidence which will assist key policy stakeholders, including the DSP, DES and SOLAS, in the formulation of relevant policies and programmes. It also provides evidence to NALA and other interested stakeholders to support their policy influencing work.

Policy Implications:

The research undertaken in this report provides new information for policymakers' on literacy and numeracy issues in the context of unemployment and labour market activation through the NEAP. The research indicates that literacy and numeracy are not necessarily prerequisites for successful

mainstream labour market activation programmes. Furthermore, the study confirms that successful activation outcomes for people with literacy and/or numeracy difficulties are not wholly dependent on participating in discreet literacy and numeracy programmes.

The findings also highlight the value of investing in those with literacy and numeracy difficulties through labour market activation programmes. Specifically, the research shows that market-orientated training for people with literacy and numeracy needs helps enhance employment prospects – by up to three times the average.

Given the findings from the study, data on unemployed people with literacy and numeracy difficulties needs to be collected and analysed on a regular basis, which is something that can be achieved with the roll out of the national profiling system.

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Appendix Table

Appendix Table A: Characteristic Information on New Entrants to Unemployment between September and December 2006

	All Unemployed	Without Literacy and/or Numeracy Difficulty	With Literacy and/or Numeracy Difficulty
Males	60.5	59.3	76.5
Females	39.5	40.7	23.5
Age:			
Age 18-24	22.1	21.7	28.0
Age 25-34	31.9	32.1	29.6
Age 35-44	20.5	20.5	20.2
Age 45-54	14.6	14.5	15.1
Age 55 Plus	10.9	11.2	7.1
Marital Status:			
Single	56.9	56.7	59.5
Married	32.4	32.8	26.8
Cohabits	4.5	4.5	5.0
Separated/Divorced	4.0	3.8	5.5
Widowed	0.8	0.8	0.7
Number of Children	2.2	2.1	3.7
Health Status:			
Very Good/Good Health	92.4	93.2	80.8
Fair Health	6.5	5.7	16.1
Very Bad/Bad Health	0.9	0.7	2.7
Spousal Earnings:			
≤ €250.00	3.1	3.2	2.6
€251.00 - €350.00	0.5	0.5	0.4
€351.00 and Above	15.2	15.9	6.3
No Spousal Earnings	81.2	80.4	90.7
Educational Attainment:			
Primary or Less	12.2	9.9	43.2
Junior Certificate	26.9	26.9	27.3
Leaving Certificate	32.7	33.9	17.8
Third-level	27.5	28.8	10.3
Apprenticeship	14.3	14.6	10.7
Literacy and/or Numeracy Difficulty	7.0	-	-
English Proficiency	2.7	1.9	14.1

Appendix Table A: Characteristic Information on New Entrants to Unemployment between September and December 2006 (Continued)

	All Unemployed	Without Literacy and/or Numeracy Difficulty	With Literacy and/or Numeracy Difficulty
Employment History:			
Never Employed	3.8	3.0	15.0
Employed in Last Month	62.4	63.5	48.1
Employed in Last Year	21.6	21.8	18.9
Employed in Last 5 Years	9.1	8.9	11.7
Employed Over 5 Years Ago	2.1	1.9	5.3
Previous Job Duration:			
Less than Month	6.1	6.0	7.8
1-6 Months	30.1	30.3	26.9
6-12 Months	14.8	15.0	13.0
1-2 Years	11.5	11.6	10.5
2 Years Plus	31.0	31.6	23.2
Would Consider Moving for a Job	40.1	40.4	36.7
Unemployment Benefit:			
Unemployment Claim in Last 5 Years	61.7	61.5	64.3
Signing on for 12 Months Plus	14.5	13.7	24.5
CE Scheme:			
On CE Scheme in Last 5 Years	5.6	5.2	10.1
On CE Scheme for 12 Months Plus	3.7	3.4	7.0
Casually Employed - JB	5.4	5.6	2.5
Casually Employed - JA	1.4	1.3	1.7
Unemployment Benefit Type:			
Jobseeker's Assistance	35.2	33.4	58.5
Jobseeker's Benefit	61.1	62.7	39.3
Number of Claims	0.9	0.8	1.2
Location Size:			
Rural	25.3	26.0	16.6
Village	12.3	12.4	10.7
Town	22.2	22.1	24.2
City	39.9	39.2	48.1
Own Transport	58.3	59.8	37.9
Public Transport	73.7	73.4	78.3

Appendix Table A: Characteristic Information on New Entrants to Unemployment between September and December 2006 (Continued)

	All Unemployed	Without Literacy and/or Numeracy Difficulty	With Literacy and/or Numeracy Difficulty
Geographic Location:			
Carlow	1.3	1.3	1.5
Cavan	1.4	1.4	1.5
Clare	2.8	2.9	2.0
Cork	11.0	11.3	7.3
Donegal	5.6	5.7	5.4
Dublin	21.1	20.6	27.8
Galway	5.4	5.6	4.1
Kerry	6.3	6.4	4.3
Kildare	2.9	3.0	1.9
Kilkenny	1.3	1.3	1.5
Laois	1.6	1.7	0.8
Leitrim	0.7	0.7	0.5
Limerick	4.5	4.5	4.6
Longford	0.9	0.9	1.1
Louth	3.3	3.3	3.7
Mayo	3.4	3.4	3.1
Meath	2.5	2.6	1.8
Monaghan	1.2	1.2	1.6
Offaly	1.8	1.7	2.1
Roscommon	0.8	0.8	0.7
Sligo	1.4	1.2	4.6
Tipperary	4.4	4.4	5.0
Waterford	3.9	3.9	2.9
Westmeath	2.8	2.8	3.1
Wexford	4.5	4.6	4.1
Wicklow	2.9	2.9	2.9

Source: Constructed with Data from the DSP/ESRI Profiling Data-set.



The Economic & Social Research Institute
Whitaker Square
Sir John Rogerson's Quay
Dublin 2, Ireland
+ 353 1 863 2000 www.esri.ie
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