



National Research and Development Centre
for adult literacy and numeracy

Quantitative research into entry-point levels of Skills for Life learners

Final Report

For the Department for Business, Innovation & Skills

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1. Executive Summary

The Department for Business, Innovation and Skills (BIS) has Public Service Agreement (PSA) targets to raise the level of basic skills in England such that by 2020, 95% of the population have literacy skills at Level 1 or above, and 95% of the population have numeracy skills at Entry level 3 or above. These targets are known as threshold targets to denote that these are the minimum basic skills levels required.

As a contribution towards estimating the number of course achievements required to meet these threshold targets, this study set out to estimate the proportion of learners who achieve a literacy or numeracy qualification higher than the threshold level, and who have done so from a starting point of skills below the threshold target.

Earlier exploratory work carried out by the National Research and Development Centre for Adult Literacy and Numeracy (NRDC) identified that small numbers of learners were achieving at more than one level higher than that indicated by their initial assessment. Where this 'skipping a level' in achievement terms occurs across the threshold level the term 'jumper' is used to describe learners. These 'jumpers' who have levels of skills below the threshold level on entry to programme but who subsequently achieve above the threshold target can be:

- in literacy, initially assessed as Entry level 3 and achieve at Level 2;
- in numeracy, initially assessed at Entry level 2 and achieve at Level 1; or
- in numeracy, initially assessed at Entry level 2 and achieve at Level 2.

Most providers do not currently collect and collate data on initial assessment and subsequent achievement, at least in a form that BIS would need to provide evidence for assumptions made about Skills for Life 'jumpers'. For this reason it is not possible to achieve a representative sample of providers, since the providers who do not store this information may behave differently from those that do. This study used data from a sample of ten large providers and included data on 9397 learners.

From the data NRDC collected on the initial assessment levels and subsequent achievements of literacy and numeracy learners we can observe that:

- 'jumpers' are more common in numeracy provision than literacy provision (6.6% for Level 1 numeracy compared to 2.7% for literacy).
- 'jumpers' to Level 2 numeracy were very rare (0.6%).
- the incidence of 'jumpers' in numeracy appear to be related to provider type: more private training providers report data on numeracy 'jumpers' than Further Education (FE) colleges.

- the occurrence of 'jumpers' in work based learning may be due to Apprenticeship Key Skills (KS) requirements (Level 1 Key Skills in Foundation Apprenticeships and Level 2 Key Skills in Modern Apprenticeships).
- the incidence of 'jumpers' varies between awards, with the Adult Numeracy Certificate more likely to provide 'jumpers' in numeracy, and GCSE English contributing most heavily in literacy.
- the incidence of 'jumpers' may relate not only to provider type but also to specific providers; organisational approach therefore has some bearing.

2. Introduction

The Department for Business, Innovation and Skills (BIS) has Public Sector Agreement (PSA) targets to raise the level of basic skills in England such that by 2020 95% of the population have literacy skills at Level 1 or above, and 95% of the population have numeracy skills at Entry level 3 or above. These targets are known as threshold targets to denote that these are the minimum basic skills levels required.

As a contribution towards estimating the number of course achievements required to meet these threshold targets, this study set out to estimate the proportion of learners achieving a literacy or numeracy qualification higher than the threshold level, and who have done so from a starting point of skills below the threshold target.

Earlier exploratory work carried out by the National Research and Development Centre for Adult Literacy and Numeracy (NRDC) in July 2009 looked at the role of initial assessment in deciding on what level programme a Skills for Life learner is enrolled. This work identified that small numbers of learners were achieving at more than one level higher than that indicated by their initial assessment. Where this 'skipping a level' in achievement terms occurs across the threshold level the term 'jumper' is used to describe learners. These 'jumpers' who have levels of skills below the threshold level on entry to programme but who subsequently achieve above the threshold target can be:

- in literacy, initially assessed as Entry level 3 and achieve at Level 2;
- in numeracy, initially assessed at Entry level 2 and achieve at Level 1; or
- in numeracy, initially assessed at Entry level 2 and achieve at Level 2.

The results from the earlier work suggested that further research should be carried out to gain evidence about the frequency of 'jumpers' occurring.

This research aims to add to the knowledge about Skills for Life learners and their level of literacy and numeracy qualifications, and to provide evidence that will support the process of collecting data for the PSA targets.

The research seeks to address the question of what assumptions can be made about the contribution of achievements above the threshold levels that make up the PSA targets; that is, Level 1 and Level 2 numeracy achievements, and Level 2 literacy achievements. The PSA targets for number and literacy acquisition are based on people progressing to the target threshold (to Entry level 3 in numeracy and to Level 1 in literacy); the main assumption about achievement at levels above

the threshold is that such achievement does not count (being that it is progression beyond the threshold target level). However some account needs to be taken of the small proportion of learners who have levels of skills below the threshold target level on entry to programme but who move directly to achievement at a level above the threshold target.

3. Method

The findings in this report are based on data on the initial assessment and achievement levels of Skills for Life (SfL) learners collected from ten large provider organisations for the 2008-09 academic year.

3.1 Sampling

This research aimed at a sample of 15 providers, chosen to represent the nine regions and the different provider types (FE colleges, private training providers, Adult and Community Learning) within the five-week fieldwork period of this short project.

The Learning and Skills Council (LSC) regional SfL leads were asked to identify the largest providers in terms of Skills for Life numeracy achievements. We drew up an initial sample of 30 providers, including three to four providers per region and six in London. We supplemented this initial list with a core list of providers from our previous qualitative research, providers we knew to have computerised systems holding data about initial assessment existed.

We made initial contact with a total of 37 providers. Fourteen providers from this initial list were unable to provide the requested data. For the most part this was either because initial assessment data were held only in individual learner files and not on a centralised system, or because the provider's existing Management Information Systems (MIS) /departments were unable to supply data in the time or in the format that was required. As the earlier phase of work, showed many providers are in the process of updating their MIS so that such data will be accessible in the future, but there are no requirements on providers to keep these data, and many MIS are currently in development. A further 13 failed to provide data although Skills for Life managers were often initially confident that they could contribute to this research. In total, we received data from ten providers.

Table 1: Summary of providers contacted by region

	No. of providers contacted	Willing to supply data	Not able to provide	Data received
NW	5	3	2	1
EE	3	1	2	1
SE	4	3	1	1
LON	8	6	2	3
NE	4	3	1	1
EM	3	1	2	0
WM	3	3	0	1
YH	3	1	2	0
SW	4	2	2	2
Total	37	23	14	10

The realised sample consisted of six FE colleges, one Adult and Community Learning (ACL) provider, and three private training providers.

Table 2: Summary of providers contacted by type

	No. of providers contacted	Willing to supply data	Not able to provide	Data received
FE college	30	0	0	6
Sixth Form FE college	1	0	1	0
ACL	2	1	0	1
Private training provider	4	4	0	3
Total	37	23	14	10

3.2 Data returns

Skills for Life providers were asked to provide summary data for learners aged 16 and above who achieved the following English and mathematics qualifications in 2008-9:

Table 3: Qualifications collected in sample

Mathematics	English
Adult Numeracy Certificate	Adult Literacy Certificate
Key Skill Application of Number	Key Skill Communication
GCSE Mathematics	GCSE English Language
Functional Mathematics (if relevant)	Functional English (if relevant)

Providers were supplied with tables into which data on these learners could be entered. Providers were asked for total numbers of literacy and numeracy achievers by the level of their achieved qualification in relation to their initial assessment level for all cohorts of eligible learners where they were able to do so.

Data were received on a total of 9,397 learners.

4. Findings

Data were received on a total of 9,397 learners: 3,920 literacy learners and 5,477 numeracy learners. Table 4 and Table 5 present the results for literacy and numeracy when data on all learners in each subject are combined.

Table 4: Literacy: Initial assessment and subsequent achievement

Literacy		Initial assessment of skill		% 'Jumpers'
Total learners	Level achieved	Below L1	L1 or above	
648	EL3	581	67	
1,841	L1	621	1,220	
1,431	L2	39	1,392	2.7%
3,920				

Table 5: Numeracy: Initial assessment and subsequent achievement

Numeracy		Initial assessment of skill		% 'Jumpers'
Total learners	Level achieved	Below EL3	EL3 or above	
1,153	EL3	567	586	
2,799	L1	185	2,614	6.6%
1,525	L2	9	1,516	0.6%
5,477				

The shaded boxes indicate those learners whose skills were assessed below the Leitch threshold value at initial assessment but who achieved higher than the threshold level learners known as 'jumpers'. Thirty-nine of the 3,920 literacy learners on whom we received data be classified as 'jumpers', representing 2.7% (39 out of 1,431) of all Level 2 achievements in our sample. This represents less than 1% of all literacy learners whose results we received.

The situation in numeracy is more complex. 185 of the 5,477 numeracy learners were 'jumpers', assessed at below Entry level 3 but achieving Level 1. This represents 6.6% of all the Level 1 numeracy results we collated. A further nine numeracy learners 'jumped' to Level 2, representing 0.6% of the Level 2 numeracy results.

These combined results for all literacy and all numeracy learners can be analysed by provider type: FE college/ACL or private training provider.

Table 6: Literacy: Initial assessment and subsequent achievement by provider type

Literacy			Initial assessment of skill		% 'Jumpers'
Provider type	Total learners	Level achieved	Below L1	L1 or above	
FE college	648	EL3	581	67	
Private provider	0	EL3	0	0	
FE college	1,841	L1	621	1,220	
Private provider	0	L1	0	0	
FE college	1,299	L2	39	1,261	3.0%
Private provider	132	L2	0	132	0%
Total learners	3,920				

Table 7: Numeracy: Initial assessment and subsequent achievement by provider type

Numeracy			Initial assessment of skill		% 'Jumpers'
Provider type	Total learners	Level achieved	Below EL3	EL3 or above	
FE college	234	EL3	58	176	
Private provider	919	EL3	509	410	
FE college	1,854	L1	61	1,793	3.30%
Private provider	945	L1	124	821	13.10%
FE college	1,399	L2	9	1,390	0.60%
Private provider	126	L2	0	126	0%
Total learners	5,477				

Our sample suggests that there may be differences in the relationship between initial assessment and subsequent achievement depending on provider type. Private training providers contributed **no literacy 'jumpers'** at all; the small number we noted above all came from FE college provision. By contrast, in numeracy, 13.1% of learners assessed below Entry level 3 at private training providers 'jumped' to Level 1 compared to 3.3% from colleges.

While the majority of data we received related to the Adult Numeracy Certificate and the Adult Literacy Certificate, some providers were able to break down their results to isolate learners with achievements in Key Skills, Functional Mathematics and English, and GCSE Mathematics and English. Analysing data by award illustrates differences in the incidence of 'jumpers' between different Skills for Life courses.

Table 8: Literacy: Initial assessment and subsequent achievement by qualification type

Literacy		Initial assessment of skill		% 'Jumpers'
Total learners	Level achieved	Below L1	L1 or above	
Adult Literacy Certificate				
647	EL3	580	67	
1,221	L1	481	740	
943	L2	17	926	1.8%
KS Communications				
0	EL3	0	0	
581	L1	136	445	
383	L2	14	369	3.7%
Functional English				
1	EL3	1	0	
22	L1	4	18	
2	L2	0	2	0%
GCSE				
n/a	EL3	n/a	n/a	
0	L1	0	0	
85	L2	8	77	9.4%
Total no. of learners: 3,855				

Note: 35 literacy learners were excluded from this analysis, since it was unclear what course they had achieved in.

Table 9: Numeracy: Initial assessment and subsequent achievement by qualification type

Numeracy		Initial assessment of skill		% 'Jumpers'
Total learners	Level achieved	Below EL3	EL3 or above	
Adult Numeracy Certificate				
1,138	EL3	567	571	
2,044	L1	172	1,872	8.4%
1,051	L2	9	1,042	0.9%
KS Application of Number				
0	EL3	0	0	
570	L1	12	558	2.1%
296	L2	0	296	0%
Functional Mathematics				
5	EL3	0	0	
131	L1	1	130	0.8%
29	L2	0	29	0%
GCSE				
n/a	EL3	n/a	n/a	
37	L1	0	37	0%
118	L2	0	118	0%
Total no. of learners: 5,419				

Note: 58 numeracy learners were excluded from this analysis, since it was unclear what course they had achieved in.

The most striking result of this analysis is that 9.4% of our reported GCSE English results were 'jumpers'. While the actual numbers involved are small, this nonetheless appears to be a higher proportion than might be anticipated given the low incidence of 'jumpers' across literacy as a whole. The incidence of 'jumpers' in Key Skills Communications (3.7%) is also higher than the incidence in the Adult Literacy Certificate.

Similar patterns are not observed in numeracy, where most 'jumpers' come from the Adult Numeracy Certificate (8.4% for Level 1), with a perhaps surprisingly low 2.1% from Key Skills.

Table 10 and Table 11 below illustrate these differences by showing only the 'jumper' categories for each qualification type:

Table 10: Literacy: 'Jumpers' by qualification type

Literacy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
	Level achieved	Below L1	L1 or above		
Adult Literacy Certificate	L2	17	926	943	1.8%
KS Communication	L2	14	369	383	3.7%
Functional English	L2	0	2	2	0%
GCSE English	L2	8	77	85	9.4%
Total		39	1,374	1,413	2.3%

Table 11: Numeracy: 'Jumpers' by qualification type

Numeracy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
	Level achieved	Below EL3	EL3 or above		
Adult Numeracy Certificate	L1	172	1,872	2,044	8.4%
KS Application of Number	L1	12	670	682	1.8%
Functional Mathematics	L1	1	18	19	5.3%
GCSE Mathematics	L1	0	37	37	0%
Total		185	1,485	1,494	6.6%
Adult Numeracy Certificate	L2	9	1,042	1,051	0.9%
KS Application of Number	L2	0	322	322	0%
Functional Mathematics	L2	0	3	3	0%
GCSE Mathematics	L2	0	118	118	0%
Total		39	1,374	1,413	0.6%

There are a number of potential factors involved here. One private training provider gave data related to their Foundation Apprenticeship programme with Key Skills at Level 1. They do not run Modern Apprenticeships where the Key Skills would be at Level 2.

Another factor is that Train to Gain programmes usually deliver the Adult Certificates rather than Key Skills.

Looking at the data on an organisational basis, Tables 12 to 17 show where the 'jumpers' are coming from within the regions:

Table 12: Adult Numeracy Certificate Level 1 by provider

Numeracy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
Adult Numeracy Certificate L1	Level achieved	Below EL3	EL3 or above		
General Further Education College (GFE)/NW	L1	1	345	346	0.3%
Private providers/LON	L1	0	788	788	0%
GFE/LON	L1	0	183	183	0%
GFE/SW	L1	49	351	400	12.3%
GFE/LON	L1	0	5	5	0%
GFE/SE	L1	0	4	4	0%
Private providers/SW	L1	114	0	114	100%
GFE/NE	L1	8	195	203	3.9%
ACL/SE	L1	0	1	1	0%
Total		172	1,872	2,044	6.6%

As this illustrates, two providers contribute 163 of the 195 Level 1 numeracy 'jumpers' (about 88%). One private training provider accounted for 114 Level 1 numeracy 'jumpers'. If we remove these 114 'jumpers' from analysis, the overall percentage of Level 1 numeracy 'jumpers' falls from 6.6% to 3%.

Table 13: Adult Numeracy Certificate Level 2 by provider

Numeracy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
Adult Numeracy Certificate L2	Level achieved	Below EL3	EL3 or above		
GFE/NW	L2	0	173	173	0%
Private providers/LON	L2	0	123	123	0%
GFE/LON	L2	0	135	135	0%
GFE/SW	L2	8	186	194	4.1%
GFE/LON	L2	0	2	2	0%
GFE/SE	L2	1	3	4	25%
Private providers/SW	L2	0	53	53	0%
GFE/NE	L2	0	360	360	0%
ACL/SE	L2	0	7	7	0%
Total		9	1,042	1,051	0.6%

With Level 2 numeracy 'jumpers', a single provider (a Further Education College) contributes the vast majority of 'jumpers' (eight out of nine).

Table 14: Numeracy Key Skills Level 1 by provider

Numeracy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
KS Application of Number L1	Level achieved	Below EL3	EL3 or above		
GFE/NW	L1	2	525	527	0.4%
GFE/SW	L1	0	112	112	0%
Private providers/MM	L1	10	33	43	23.3%
Total		12	670	682	2.1%

Only a small number of respondents provided data on Key Skills Application of Number, and although we have one provider contributing most of the data, two out of the three did report 'jumpers'. There was only one 'jumper' from a very small sample of Functional mathematics results, and no 'jumpers' for Key Skills level 2, Function Mathematics or GCSE mathematics.

Table 15: Adult Literacy Certificate Level 2 by provider

Literacy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
Adult Literacy Certificate L2	Level achieved	Below EL3	EL3 or above		
GFE/NW	L2	3	207	210	1.4%
Private providers/LON	L2	0	55	55	0%
GFE/LON	L2	0	8	8	0%
GFE/SW	L2	4	223	227	1.8%
GFE/SE	L2	6	4	10	60%
Private providers/SW	L2	0	73	73	0%
GFE/NE	L2	1	353	354	0.3%
ACL/SE	L2	3	3	6	50%
Total		17	926	943	2.3%

Although two organisations show high levels of literacy 'jumpers', overall these results are much more consistent, with 5 out of 8 registering at least one jumper.

Table 16: Literacy Key Skills Level 2 by provider

Literacy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
KS Communication L2	Level achieved	Below EL3	EL3 or above		
GFE/NW	L2	12	339	351	3.4%
GFE/SW	L2	2	27	29	6.9%
Private providers/WM	L2	0	3	3	0%
Total		14	369	383	3.7%

Table 17: GCSE English by provider

Literacy		Initial assessment of skill		Total no. of learners	% 'Jumpers'
GCSE English	Level achieved	Below EL3	EL3 or above		
GFE/NW	L2	2	65	67	3.0%
GFE/SW	L2	6	12	18	33.3%
Total		8	77	85	9.4%

Once again, although the numbers are small, these GCSE results contribute eight out of the overall total of 39 literacy 'jumpers'. The focus of this research was primarily on Skills for Life provision for those aged 19 and over, although we agreed that we would not exclude data on 16 to 19 year olds. The main SfL qualifications taken by adults are the Adult Literacy and Numeracy Certificates, and this explains the lack of GCSE data. GCSE provision is usually managed quite separately within organisations and may not use the same initial assessment processes.

Related research findings

Progression within Skills for Life

A recent project conducted by NRDC for the Learning and Skills Improvement Service (LSIS) analysed records from the Individual Learner Record (ILR) databases covering the years 2000/01 to 2006/07. That research made use of ‘fuzzy matching’¹ techniques to gain some insights into how long it takes Skills for Life (SfL) learners to progress by one level².

For that project, learner progression was based on achievement of a Skills for Life qualification at one level and subsequent achievement of a qualification at a higher level in the same Skills for Life subject. The fuzzy matching allows the identification of individual learners across different years of the ILR, so we can see individual journeys of progression. Although this research does not consider actual skills held as identified through initial assessment scores, it does show learner progress between levels and identifies individual learners who ‘jump’ levels.

Table 18: Intervals* between achievements for numeracy learners

Transition path to higher-level achievement in numeracy	No of learners	% of total level 2 achievements
Entry level → Level 2	5,569	15%
Level 1 → Level 2	31,475	85%
Total	37,044	

Table 19: Intervals* between achievements for literacy learners

Transition path to higher-level achievement in numeracy	No of learners	% of total level 2 achievements
Entry level → Level 2	4,874	11.3%
Level 1 → Level 2	38,316	88.7%
Total level 2 achievements	43,190	

*These tables do not include the intervals for these learners, but does show the number of learners who progressed from Entry level to Level 1 and from Entry level direct to Level 2 without an intervening Level 1 qualification between 2000/01 and 2006/7.

Although that research differed from this current project in the following aspects:

¹ ‘Fuzzy Matching’ is a technique developed at Sheffield University allowing individual identities to be assigned to entries within datasets such as the ILR.

² ‘Progression within Skills for Life’, Adams, Brooks, Kings, Creese (2010)

- It had a different objective(to measure time taken to progress)
- All data was drawn from the ILR
- It was conducted over a different timeframe ie 2000/01 – 2006/7 as opposed to 2008/09.,

Nevertheless it provides an interesting correlation to the findings of this project in terms of the numbers of learners who achieve at Entry level and then progress to achieve at Level 2 in both literacy and numeracy. The figure of 11.3% literacy jumpers is higher than that produced by our analysis of the quantitative data gathered on the current project, and the numeracy figure of jumpers to level 2 (15%) is considerably higher than we found by analysing the initial assessment.

As ILR data does not record differences between entry levels, it is impossible to use this data to identify those jumping from below EL3 straight to level 1. The amount of data used in that former research was obviously much greater than the quantitative sample used in this project and included all SfL qualifications. It must be recognised however, that there was no breakdown by year to indicate whether the pattern of jumpers was consistent across the period analysed or whether it increased or decreased over time.

5. Conclusions

The data collected on over 9,000 learners indicates the following:

- That 6.6% of those attaining Level 1 numeracy qualifications are 'jumpers' i.e. started with an initial assessment of below Entry level 3.
- A further 0.6% of numeracy learners 'jumped' to numeracy Level 2.
- 2.3% of literacy learners 'jumped' to a Level 2 qualification from an initial assessment of below Level 1.
- These percentages of 'jumpers' are less than was indicated in the qualitative survey carried out by NRDC last year, which suggest 8.5% of Skills for Life learners were 'jumpers'. This figure did not distinguish between literacy and numeracy.
- There was some evidence that private training providers and work based providers contribute proportionately more to the Level 1 numeracy 'jumpers' than FE colleges, though this may be explained by bias in our sample.
- The very small sample of GCSE results suggests potential 'jumpers' in literacy, though not in numeracy.
- An historical survey based on results between 2000/01 and 2005/6 suggests that higher proportions of learners having once achieved below the threshold 'jumped' to achieve beyond the threshold.

Appendix A: Guidance sent to providers

Quantitative study on the level of Skills for Life learners' initial assessments and achievements

At its simplest we are requesting the following data as raw numbers:

Numeracy

Level Achieved – number of learners	Initial Assessment of Skills - no. of learners		
	Below EL3	EL3	Above EL3
EL3			
L1			
L2			

Literacy

Level Achieved – no of learners	Initial Assessment of Skills – no. of learners		
	Below L1	L1	L2
Below L1			
L1			
L2			

So for example all achievers of L1 numeracy broken down into those whose initial assessment was below E3/ at E3/ above E3

Ideally we would like this by qualification (ie Adult Numeracy Certificate, Key Skills Application of Number, GCSE Mathematics) if that is possible.

Which learners are we collecting for?

We are collecting data for all 16+ learners who studied during the year 2008-09. This includes both learner responsive and employer responsive, full time and part time courses.

Initial Assessment levels:

Ideally we would like to collect IA scores normalised to EL1 EL2 EL3 L1 or L2. If you only have raw scores collected, then we would also request a key to the scores

Qualifications included:

We would like to collect data on the achievements in all of the following courses:

Mathematics	English
Adult Numeracy Certificate	Adult Literacy Certificate
Key Skill Application of Number	Key Skill Communication
GCSE Mathematics	GCSE English Language
Functional Mathematics	Functional English

We fully understand that you may not hold this data for all your 08-09 cohorts and will be happy to collect for those cohorts which you can supply.