

Technical Note on measuring progress towards the 2010 Skills For Life PSA Target.

Summary

The 2010 Skills for Life (SfL) Public Sector Agreement (PSA) Target is for 2.25 million people to improve their basic skills by one level, by achieving a nationally approved SfL qualification between April 2001 and July 2010 for the first time. The target is measured by counting all the publicly-funded achievements of approved SfL qualifications in each year using administrative data mainly from the Individualised Learning Record (ILR).

Learners could achieve more than one SfL qualification, so an estimated adjustment needs to be made for learners who have already achieved in previous years, as this cannot be directly identified from the administrative data. In 2003, analysis of matched datasets found that around 10% of SfL achievers had previously attained an approved SfL qualification in a previous year

In early 2007, the National Audit Office (NAO) recommended that we should review this estimate of repeat learning. DfES commissioned work to match learners from datasets covering most of the relevant SfL learning routes between 2001/02¹ and 2006/07. The results showed that repeat learning has increased gradually from 7.9% in 2002/03 to 13.7% in 2006/07. Applying these discount rates to the numbers that achieved in the corresponding year, gives a cumulative total of 2.276m achievements by 2006/07, thus meeting the target 3 years early.

Using the matched datasets, the average discount factor for 2000/2001 to 2005/06 was 9.8%, this is slightly lower than the 10% repeat learning factor that has been used to estimate progress towards the SfL target in those years. Therefore previously used figures have slightly overestimated previous repeat learning and slightly underestimated progress towards the target. However given that the difference between the previous repeat learning adjustment and the revised average figure is small, it was agreed that the 10% discount factor would be used for data from 2000/01 to 2005/06 so that previously published figures would not need to be revised.

A new discount rate for 2006/07 was then calculated to ensure the final figure corresponded to final outturn.

The 13.7% repeat learning factor, which was calculated from the matched administration work for 2006/2007, will be used for future years up to 2010 to measure SfL achievements with respect to the 2010 target.

Introduction

The note sets out the background to measuring the progress towards the 2010 Skills for Life (SfL) PSA Target. It discusses in detail how learners are counted towards the target and how allowance is made for repeat learning in previous years. It then describes the new method used to recalculate the repeat learning factor by matching of

¹ This and subsequent years refers to the academic year, covering the period 1 August to 31 July

learners across different administration datasets, and it discusses the results produced. Finally, it describes how these results are applied to measuring the SfL target.

Background

The 2010 SfL PSA Target is for 2.25 million people to improve their skills by one level, by achieving a nationally approved SfL qualification² from April 2001 to July 2010 for the first time.

The target is measured by counting all the publicly-funded achievements of approved SfL qualifications at entry level 3, level 1 and level 2 (entry levels 1 and 2 are not counted) each year. Two adjustments are made to the figures to make sure any person who has achieved more than one approved SfL qualification at the relevant level is only counted towards the target once.

- First, only one qualification is counted per person in each academic year, and for most learning routes there is sufficient information in the administrative datasets to determine this exactly.
- Secondly, an allowance is made for people who have achieved a qualification in previous years. Learners are not currently routinely traced from year to year, instead we assume that 10% of learners who achieve each year had achieved in previous years. The 10% repeat learning factor was derived from 2003 matched administration data, and has been applied to all figures on reporting progress towards the target up to and including academic year 2005/6. In early 2007 it was decided to review this estimate of repeat learning,

In order to review the repeat learner factor, DfES commissioned analytical work to match data sets, looking at qualifications achieved by most of the learning routes between 2001/02 and 2006/07.

Note that repeat learning does not necessarily mean that a person has completed a same course more than once. It is more likely that they may have achieved separately in literacy, numeracy and/or ESOL; or they may have progressed from Entry level, to level 1 and to level 2 in the same subject.

Details of counting learners towards the target.

Only data on publicly-funded SfL qualifications count towards the target. Although theoretically, SfL qualifications obtained from privately-funded learning could be included in the target, the data on privately funded provision is relatively poor. Whilst it may now be possible to use data-matching to include some privately-funded achievements in SfL more accurately, this has not been included in producing these estimates of progress towards the 2010 target.

The publicly-funded learning routes which are counted towards the target are listed in Annex D. The four most important ones that make up more than 95% of SfL learners are: Further Education (FE), Work-based Learning (WBL), Train to Gain (TtG) and Ufi.

² The list of approved SfL qualifications is given in Annex D.

The administrative data for these sources (in most cases the Individualised Learner Record – ILR) is checked within each year to eliminate duplicate achievements. This is relatively straightforward and has been done since the beginning of the counting period.

A 10% discount factor has been applied to all the annual results from 2000/01 to 2005/06. This is applied across all learning routes, and takes account of the fact that some people may achieve an approved qualification in more than one year. The annual and cumulative results of using this repeat learning factor are shown in the table 1 below.

Table 1. Achievement of approved Skills for Life qualifications by year

	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	Total
Undiscounted Annual figures	177	242	235	307	468	529	590	2,549
Annual figures discounted by 10%	159	218	211	277	421	476	531*	2,294
Cumulative achievements with 10% discount	159	377	589	865	1,287	1,763	2,294*	

* The 2006/7 data was not published with 10% discount rate, but all previous years were published with this discount rate.

As a result of a review by the National Audit Office it was decided to look again at the evidence for repeat learners. Fischer Family Trust was commissioned to carry out a matched data analysis. The work was completed at the end of May 2008.

Method –Data matching.

The contractor created a matched dataset containing all the Individual Learning record (ILR) data for the academic years: 2001/02 to 2006/07 inclusive. The datasets which were merged are listed in Annex B, and the learning routes that they cover are listed in Annex C. The learners on the matched datasets make up over 95% of those achievements that would count towards the SfL target.

At the time when the datasets were sent to the contractor, the final Work Based Learning (WBL) data for 2006/07 was not available. Analysis of previous years has shown that as WBL learners are less likely to be repeat learners, excluding WBL learners raises the repeat learning factor. So the calculated repeat learning factor from the matched datasets for 2006/07 is likely to be higher and therefore overestimate repeat learning than the actual repeat learning factor.

The National Information System for Vocational Qualifications (NISVQ) and Key Skills databases from academic year 2001/02 – 2005/06 were also matched but findings from these datasets were not used for the repeat learning calculation as they do not count towards the SfL 2010 target

Individuals across datasets were matched using geo-demographic information including name, postcode, gender and date of birth.

Method – Data analysis for repeat attainment of target qualifications

For each year, all learners who had achieved in that year were analysed (even if they

had achieved in previous years). All those who had achieved more than once in that year were recorded in the table, but they were not counted as repeat learners. Those who had previously achieved were recorded as a repeat learner in the column corresponding to the year of their latest previous achievement only. So consider, for example, a learner had achieved in 2006/07, 2005/06 and 2004/05.

- For 2006/07, he/she would be considered a repeat learner who had previously achieved in 2005/06.
- For 2005/06, he/she would be considered a repeat learner who had previously achieved in 2004/05.
- For 2004/05, he/she would not be considered a repeat learner.

When this had been done the total repeat learners for each year were added together to derive the repeat learner factor for each year.

Learners who achieved another SfL qualification in the same year were not counted as repeat learners for the purpose of this analysis, since they would only have been counted towards the target once for each year. However, if they had also achieved in previous years they would be recorded in both the “same year” and the most recent past year columns.

It is possible, but very uncommon that the same qualification achievement by a learner could be counted on two different datasets, and we were able to identify some of these occurrences. These were recorded as repeat learners (since even though they had not repeated the learning they would otherwise have been counted twice towards the SfL target).

Results

Table 2 below shows the results of the data matching exercise.

Table 2. Repeat learning and discount factors by year as determined by data matching work.

Year achieved approved SfL qual	Total Achieved approved SfL qual	Achieved another SfL qual in 2006/07	Achieved another SfL qual in 2005/06	Achieved another SfL qual in 2004/05	Achieved another SfL qual in 2003/04	Achieved another SfL qual in 2002/03	Achieved another SfL qual in 2001/02	Total achieved SFL qual in prev years	Percent who were Repeat Learner
2006/7	538585	223461	49655	13348	5591	3068	2174	73836	13.7%
2005/6	441939	0	186794	40042	8933	3506	2066	54547	12.3%
2004/5	366035	0	0	143095	28597	6116	2711	37424	10.2%
2003/4	270797	0	0	0	81283	19902	4435	24337	9.0%
2002/3	191050	0	0	0	0	41550	15089	15089	7.9%
2001/2	164083	0	0	0	0	0	39424		

Notes:

- The total achieved column includes those who studied through the following routes: FE, WBL, Ufi, ESF and TtG.
- The total achieved includes all those who achieved in that year regardless of whether they also achieved in other years.
- Learners who achieved another SfL qualification in the same year were not counted as repeat learners. So the shaded cells are not included in the repeat learner percentages.

- Those who had achieved in previous years were recorded as a repeat learner in the column corresponding to the year of their latest previous achievement only.
- All learners who did additional qualifications in the same year are shown
- Totals do not match those in table 1, because not all learners were included in matched admin datasets as discussed earlier.

The repeat learning factor increases with time. There are two reasons for this. Firstly, the number of people participating in SfL courses has increased considerably since 2000/01 so the probability of repeat learning has increased. Secondly, as qualifications were only defined as target-bearing from 2000/01, it was not impossible for there to be any repeat learners identified through administrative data in that year. However, as time has moved on from 2000/01 there is increased scope for repeat learning to take place.

When these discount factors are applied to the annual attainment volumes, the outcome is shown in table 3 below. Note that we have applied the 2002/03 discount rate to 2000/01 and 2001/02, whilst this is likely to over-state repeat learning, there is insufficient data for these years to calculate any estimates for repeat learners

Table 3. Number of learners achieving approved Skills for Life qualifications by year with variable discount factors applied.

	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	Total
Undiscounted Annual achievements	177	242	235	307	468	529	590	2,549
Discount rates from dataset matching work	7.9%	7.9%	7.9%	9.0%	10.2%	12.3%	13.7%	
Application of these discount rates applied to annual undiscounted achievements	163	223	216	280	421	464	509	2,276

Application of Results

We considered a number of options for applying the results to the data which included the following.

- Leave the past calculations from 2000/01 to 2005/06 at 10% (as the average actual repeat learner factor was very close to 10% over this period) and apply a new discount rate to 2006/7 which leads to a cumulative total of 2.276 million for 2006/07 as derived by the method in the second bullet point³.
- Use the actual figures for each year as found by research. This leads to 2.276 million learners counting towards the target (Table 3). This is equivalent to using a discount for repeat learners of 10.7% for all years. This would involve changing published data for all previous years. There would be a cost to the FE Data Service for the work to tabulate and publish year by year, and also the cost to any users who use or publish the past time series
- Leave the past calculations from 2000/01 to 2005/06 at 10%, and apply the new higher figure (13.7%) for 2006/07 from the latest matching and analysis. This leads to 2.272 million achievements. This does not involve amending published data, but would give a slight under-estimate of the cumulative total.

³ Requires a discount factor of 12.9% for 2006/7.

- Ignore the findings of the research, and use the 10% discount for all years. This leads to 2.294 million learners counting towards the target (see Table 1)

In all cases the 2010 target of 2.25 million learners would have been achieved by 2006/7 (and in fact exceeded by at least 20,000).

After discussion with key DIUS and LSC stakeholders, the first option was implemented. The resulting final SfL values are shown in Table 4 below. This approach has the benefit that cumulative progress against the target from 2000/01 - 2006/07 will be accurate at 2006/07, and published data will not need to be changed. The 13.7% repeat learning factor derived for 2006/07 will be used for future years.

Table 4. Number of learners achieving approved Skills for Life qualifications by year with variable discount factors applied.

	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	TOTAL
Undiscounted annual SfL achievements	177	242	235	307	468	529	590	2,549
Repeat learner discount rate applied	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	12.9%	
Discounted Annual SfL achievements	159	218	212	276	421	476	514	2,276
Cumulative SfL achievements	159	377	589	865	1286	1762	2276	

Annex A: NQF Level of Skills for Life Achievements

NQF Level	Basic Skills ¹	Key Skills	GCSE ²
Entry	Entry Level 1 Entry Level 2 Entry Level 3		
1	Level 1	Level 1	D-G
2	Level 2	Level 2	A-C

1. Data does not always distinguish between Entry Levels. ESOL is included within Basic Skills

2. GCSEs should be treated as a Level 2 aim, but achievements classified as shown based on grade achieved

Annex B: Datasets used in the Matched Administration Analysis

The datasets which were matched are listed in the table below. The NISVQ and the KS datasets were not used to derive the repeat learning factors.

FFT File Name	Dataset	
	Year	Collection
0102 FE LEARNER	2001/2002	FE
0102 FE AIMS	2001/2002	FE
0102 WBL LEARNER	2001/2002	WBL
0102 WBL AIMS	2001/2002	WBL
ILR_F05_0203_AIMS	2002/2003	FE
ILR_F05_0203_ESF	2002/2003	FE
ILR_F05_0203_LEARNER	2002/2003	FE
ILR_F05_0304_ADMIN	2003/2004	FE
ILR_F05_0304_AIMS	2003/2004	FE
ILR_F05_0304_ESF	2003/2004	FE
ILR_F05_0304_LEARNER	2003/2004	FE
ILR_F05_0405_ADMIN	2004/2005	FE
ILR_F05_0405_AIMS	2004/2005	FE
ILR_F05_0405_ESF	2004/2005	FE
ILR_F05_0405_LEARNER	2004/2005	FE
ILR_F05_0506_ADMIN	2005/2006	FE
ILR_F05_0506_AIMS	2005/2006	FE
ILR_F05_0506_ESF	2005/2006	FE
ILR_F05_0506_LEARNER	2005/2006	FE
ILR_S_0304_AIMS	2003/2004	ESF
ILR_S_0304_ESF	2003/2004	ESF
ILR_S_0304_LEARNER	2003/2004	ESF
ILR_S_0405_AIMS	2004/2005	ESF
ILR_S_0405_ESF	2004/2005	ESF
ILR_S_0405_LEARNER	2004/2005	ESF
ILR_S_0506_AIMS	2005/2006	ESF
ILR_S_0506_ESF	2005/2006	ESF
ILR_S_0506_LEARNER	2005/2006	ESF
ILR_U03_0304_ADMIN	2003/2004	Ufl
ILR_U03_0304_AIMS	2003/2004	Ufl
ILR_U03_0304_LEARNER	2003/2004	Ufl
ILR_U05_0405_ADMIN	2004/2005	Ufl
ILR_U05_0405_AIMS	2004/2005	Ufl
ILR_U05_0405_ESF	2004/2005	Ufl
ILR_U05_0405_LEARNER	2004/2005	Ufl
ILR_U05_0506_ADMIN	2005/2006	Ufl
ILR_U05_0506_AIMS	2005/2006	Ufl
ILR_U05_0506_ESF	2005/2006	Ufl
ILR_U05_0506_LEARNER	2005/2006	Ufl
ILR_W_0203_AIMS	2002/2003	WBL
ILR_W_0203_ESF	2002/2003	WBL
ILR_W_0203_LEARNER	2002/2003	WBL
ILR_W_0304_AIMS	2003/2004	WBL

ILR_W_0304_ESF	2003/2004	WBL
ILR_W_0304_LEARNER	2003/2004	WBL
ILR_W_0405_ADMIN	2004/2005	WBL
ILR_W_0405_AIMS	2004/2005	WBL
ILR_W_0405_ESF	2004/2005	WBL
ILR_W_0405_LEARNER	2004/2005	WBL
ILR_W_0506_ADMIN	2005/2006	WBL
ILR_W_0506_AIMS	2005/2006	WBL
ILR_W_0506_ESF	2005/2006	WBL
ILR_W_0506_LEARNER	2005/2006	WBL
P16_ILR_0607_FE_LEARNER	2006/2007	FE
P16_ILR_0607_FE_LEARNER_ESF	2006/2007	FE
P16_ILR_0607_FE_LEARNER_TtG	2006/2007	FE
P16_ILR_0607_FE_LEARNER_Ufl	2006/2007	FE
P16_ILR_0607_FE_AIMS	2006/2007	FE
P16_ILR_0607_FE_AIMS_ESF	2006/2007	FE
P16_ILR_0607_FE_AIMS_TtG	2006/2007	FE
P16_ILR_0607_FE_AIMS_Ufl	2006/2007	FE
NISVQ_0607 (note not available yet)	2006/2007	NISVQ
NISVQ_0102	2001/2002	NISVQ
NISVQ_0203	2002/2003	NISVQ
NISVQ_0304	2003/2004	NISVQ
NISVQ_0405	2004/2005	NISVQ
NISVQ_0506	2005/2006	NISVQ
NISVQ_KS_0102_0506*	2001 - 2005	NISVQ - KS

* Note contains qualifications from Wales and Northern Ireland which should be filtered out.

Annex C Skills for life learning routes which are counted towards the SfL target

Learning route	Whether data is collected in the Individualised Learner Record (ILR)	Whether data was included in the repeat learning analysis	Proportion of total SfL learners 2006/7
Further Education (FE)	Yes	Yes	60%
Work-based Learning (WBL)	Yes	Yes, except that 2006/7 data wasn't available at the time	23%
Train to Gain (TTG)	Yes from 2006/7	Yes from 2006/7	6%
Offender Learning (OLASS)	Yes from 2006/7	Yes from 2006/7	1%
European Social Fund (ESFSR)	Yes	Yes	1%
Higher education (HE)	No	No	0%
Job Centre Plus (JCP)	Yes from 2006/7	Yes from 2006/7	0%
Adult and Community Learning (ACL)	Yes but limited	No, as only limited information was available	1%
Ufi	Yes	Yes	7%
Employer Training Pilot (ETP)	No. Replaced by Train to Gain from 2006/7	No	0%

Note even if a learning route was not included in the repeat learner analysis, the discount factors from this analysis would have been subsequently applied to the achievements obtained from it.

Annex D Skills for life courses which count towards the SfL target.

	Level
Nationally approved Certificate in Adult Literacy	Entry Level 3
	Level 1
	Level 2
Nationally approved Certificate in Adult Numeracy	Entry Level 3
	Level 1
	Level 2
Nationally approved Certificate in English for Speakers of other Languages Skills for Life	Entry Level 3
	Level 1
	Level 2
Key Skills in Application of Number - Delivered as part of the entitlement for full-time 16 to 18 year-old learners	Level 1
	Level 2
Key Skills in Application of Number - Learners aged 19 or over and for those learners aged 16 to 18 who are following a part-time programme	Level 1
	Level 2
Key Skills in Communication - Delivered as part of the entitlement for full-time 16-18 year-old learners	Level 1
	Level 2
Key Skills in Communication - Learners age 19 or over and those learners aged 16-18 who are following a part-time programme	Level 1
	Level 2
GCSE English	Level 1
	Level 2
GCSE Maths	Level 1
	Level 2

Annex E: Variables which identified approved Skills for Life Target achievements

A qualification was identified as approved if the following was true.

- A_SFL=1 AND A_SFLPAR=1 AND A_SFLTYA BETWEEN 1 AND 26

The qualification was considered to be achieved if:

- A34=2 AND A35=1