Further Education: Outcome-based success measures quality and methodology information

26 October 2017

About this document

This document provides a range of information on the quality of the further education: outcome-based success measures data, and the methodology used to produce it. It is based on the Office for National Statistics' guidelines for measuring statistical quality.

It provides an overview of the data sources used in the production of the further education: outcome based success measures, along with information on data issues, data definitions, publication cycle and supplementary data produced.

Contents

1. Introduction

This quality and methodology document provides an overview of the data used in the production of the Further Education (FE) outcome based success measures statistics. It provides information on the methodology used to calculate the measures, as well as information on the data sources, data issues and data definitions.

This document is based on the Office for National Statistics' guidelines for measuring statistical quality.

2. Scope

The publication presents information on all age Apprenticeships, all age Traineeships, and adult (19+) FE and Skills learners that completed Education and Skills Funding Agency (ESFA) funded learning in England. Further education includes provision delivered in further education organisations, sixth form colleges, independent training organisations, local authorities and other providers including training undertaken as part of apprenticeship and traineeship programmes, but excludes Adult Community Learners, learners funded through the Offenders' Learning and Skills Service (OLASS), or 16-19 FE and Skills learners.

It contains data for academic years, where the academic year runs from 1 August to 31 July.

The publication does not include information regarding:

- Learning delivered in school sixth forms, including state-funded and independent schools.

- Higher education learning in higher education institutions.

- Privately-funded training at FE organisations and independent training organisations.

3. Data sources

The statistics in the publication are produced using the Longitudinal Educational Outcomes (LEO) study, replacing the Individualised Learner Record-Work and Pensions Longitudinal Study dataset which was used to produce these statistics in previous releases.

The LEO study has been brought together by different government departments and is being used to improve the information available on a range of topics across different policy areas.

The LEO study links information about individuals, including:

- Personal characteristics such as gender, ethnic group and age.

- Education, including schools, colleges and higher education institution attended, courses taken, and qualifications achieved.

- Employment and income.

- Benefits claimed.

It is created by combining data from the following sources:

- The National Pupil Database (NPD) held by the Department for Education (DfE).

- Higher Education Statistics Agency (HESA) data on students at UK publicly funded higher education institutions and some Alternative Providers held by DfE.

- Individualised Learner Record Data (ILR) on students at further education institutions held by DfE.

- Employment data (P45 and P14) held by Her Majesty's Revenue and Customs (HMRC).

- The National Benefit Database, Labour Market System and Juvos data held by the Department for Work and Pensions (DWP).

By combining these sources together using unique identifiers, we can look at outcomes for further education learners.

Benefit Data

Benefit data are taken from the underlying DWP payments systems and are supplemented by the information entered by Jobcentre advisers. The data therefore captures basic information accurately, but non-compulsory fields in either the labour market system or the payment system may be incomplete. Due to the size and technical complexity, these systems are not accessed directly, but at regular intervals scans are taken that build up a longitudinal picture from repeated snapshots of the data.

Start dates are entered on to the system and are accurate dates of benefit payment, thus provide certain timing and duration of a benefit claim. However, while Job Seeker's Allowance (JSA) dates have very few discrepancies, due to the way the data are scanned the end dates recorded for other benefits may diverge to some extent from the events they are recording. The potential discrepancy varies from up to two weeks for Employment Support Allowance (ESA) to up to six weeks for Incapacity Benefit (IB). The data used for this publication does not include any information about those claiming Universal Credit (which will have had very limited effect on coverage up to 2014/15). We are working closely with colleagues at the Department of Work and Pensions to explore the inclusion of Universal Credit data in destination measures in future.

Employment Data

The employment and earnings administrative dataset covers those who pay tax through PAYE through employer submission of P45 and P14, or through completing a self-assessment tax form. The core purpose of this process is to collect tax from those who are eligible to pay it through this mechanism and so there is not complete coverage. Employers are not required to supply information to HMRC for individuals who earn below the tax threshold, although for large employers these individuals are thought to be included due to methods of data transfer. Further, HMRC started to implement Real Time Information (RTI) in April 2013 which includes nearly all such learners. RTI offers substantial improvements to the P45 system in terms of data coverage, since employers must now provide information on all their employees if even one employee of the company is paid above the Lower Earnings Limit. The move to RTI will mean that data coverage is higher for the most recent financial years.

The data are primarily collected for the purposes of collecting taxes, so business rules have been applied to improve the quality of any suspect employment records to further enhance the data. This makes use of algorithms developed by researchers, and uses similar processes as documented in the research in Estimation of the labour market returns to qualifications gained in English further education[1].

Individualised Learner Record data

The Education and Skills Funding Agency requirements for personal data, including National Insurance numbers, vary by the type of provision provided.

Other personal details fields have high completion rates although there is some use of defaults where information is not known and particular groups such as offender learners have information withheld.

The dates of learning can be assumed accurate to within a week. Key data fields are tied to funding therefore there is a strong incentive for providers to ensure the information returned is accurate.

Time lags

All data used in this process are drawn from administrative sources, which take time to process and collate. Therefore there are time lags between the reference period and availability of the dataset for analysis.

- **Benefit data** taken from the National Benefits Database contain lags in completeness. The National Benefits Database has lags in completeness. At least 3 months is allowed for receipt of backdated claims and data are lagged by around 4 months. For example, data complete to the end of August 2016 was released at the end of December 2016.

- **Employment data** are matched to DWP data on a regular basis. There are cleaning rules applied to the data, which identify old records when updated with new information. As new information can

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[1] https://www.gov.uk/government/publications/further-education-comparing-labour-market-economic-benefits-from-qualifications-gained

come through about a job after it has ended this is a source of constant change and historically the data has been considered complete after approximately six months.

- **Earnings data** are less timely than employment data, and in the past it has taken up to fifteen months after the end of the tax year for the data to be considered complete. HMRC started to implement Real Time Information (RTI) in April 2013 which will provide much more frequent feeds of employment and earnings data and should significantly improve the timeliness of the source earnings data.

- **Individualised Learner Record data** are collated from returns by colleges with the provisional data collected to date generally published on a quarterly basis. Returns are not generally complete until up to six months after the end of the academic year, which runs from 1st August to 31st July.

- **Higher Education Statistics Authority data** are collated from returns by institutions and data for the full academic year are available approximately six months after the end of the academic year.

4. Matching process

Employment destinations and benefit learners

The employment destinations have been produced using a matched dataset of person level administrative data sources from DfE, DWP and HMRC. Completers from the ILR are matched to DWP benefit records, and HMRC P45 and P14 income tax returns using a mixture of National Insurance Number and matching on other personal details. The matching algorithm relies on a number of fields being accurately populated across both datasets and additionally, not all learners will necessarily have any record of employment or benefits for legitimate reasons, so the match rate will never reach 100%. For the learners covered by these measures over 97% are matched to DWP/HMRC data, rising to 99% for apprenticeships.

Once the match is established, the next step is to merge the different data files (employment, benefits, and learners) on the basis of the person level record linkage defined by the matching. The DWP and HMRC datasets provide a record of those receiving benefits and those paying tax through the self-assessment and Pay As You Earn (PAYE) systems. Processing rules are then applied to transform the data into useable information on employment and benefit receipt to support all analysis. The coverage of the different datasets is set out further below.

Learning destinations

The learning destinations have been produced using a combination of two matched datasets. First, completers from the ILR data are matched to ILR data for the next academic year to observe learning outcomes in Further Education. The very high match rates between the ILR and DWP's CIS data are supplemented by Unique Learner Number (ULN) data to create a robust person identifier that is used to link ILR records across years and create a longitudinal dataset. This dataset is used to measure a learner's progression into further education.

The same completers from the ILR are also matched with Higher Education Statistics Authority (HESA) data for the next academic year to observe activity in Higher Education. This makes use of linked data produced by the Higher Education Funding Council for England (HEFCE) using a similar process to those described above. Together with the Further Education data, this is then used to measure learning outcomes in the following academic year. Learners that progress into Alternative Providers for Higher Education have not been included in the destinations data for this release. However, analysis suggests that less than 1% of ILR completers progress into AP, and of these about two-thirds are already captured through other processes.

5. Destination measures

Learners in scope for the measures

The measures cover all age apprenticeships, all age Traineeships, and adult (19+) Further Education (FE) and Skills learners that completed an eligible FE learning aim funded by the Education and Skills Funding Agency (ESFA). Eligible learning is identified using the Individualised Learning Record (ILR), in particular the completion status and end date fields to identify completers (also referred to as 'retained'). The measures reported here cover learners completing an aim in the academic years 2013/14 to 2014/15.

Adult learners are those that are at least academic age 19 in the year they complete their training, i.e. in the case of learners completing in 2013/14 this covers learners aged 19 or older on 31 August 2013. Outcomes are reported at a learner basis and learners appear once for each provider where they have completed a course.

The measures do not cover Adult Community Learners, learners funded through the Offenders' Learning and Skills Service (OLASS), or 16-19 FE and Skills learners.

Learners with multiple learning aims

Outcomes are reported on a learner, rather than a learning aim basis. In the case where a learner completes multiple eligible aims within the academic year, outcomes are reported against their highest level aim, unless they completed a traineeship in the year. Where a learner completes two aims at the same level, the outcome is reported against the most recently completed aim. The hierarchy used to select between aims is below

- Highest qualification
    - Higher Apprenticeship
    - Level 4 (or higher)
    - Advanced Apprenticeship
    - Full Level 3 (including academic qualifications, e.g. A-Levels)
    - Other Level 3
    - Intermediate Apprenticeship
    - Full Level 2 (including academic qualifications, e.g. GCSEs)
    - Traineeships
    - Level 2 ESOL
    - Level 2 English and Maths
    - Other Level 2
    - Entry or Level 1 ESOL
    - Entry or Level 1 English and Maths
    - Other Entry or Level 1
    - Unassigned

- Most recently completed aim (if completing more than one at the same level)

Where a learner completes more than one aim at the same level and on the same date, outcomes are reported against the aim with the lowest aim sequence number (a unique number used when recording aims in the ILR).
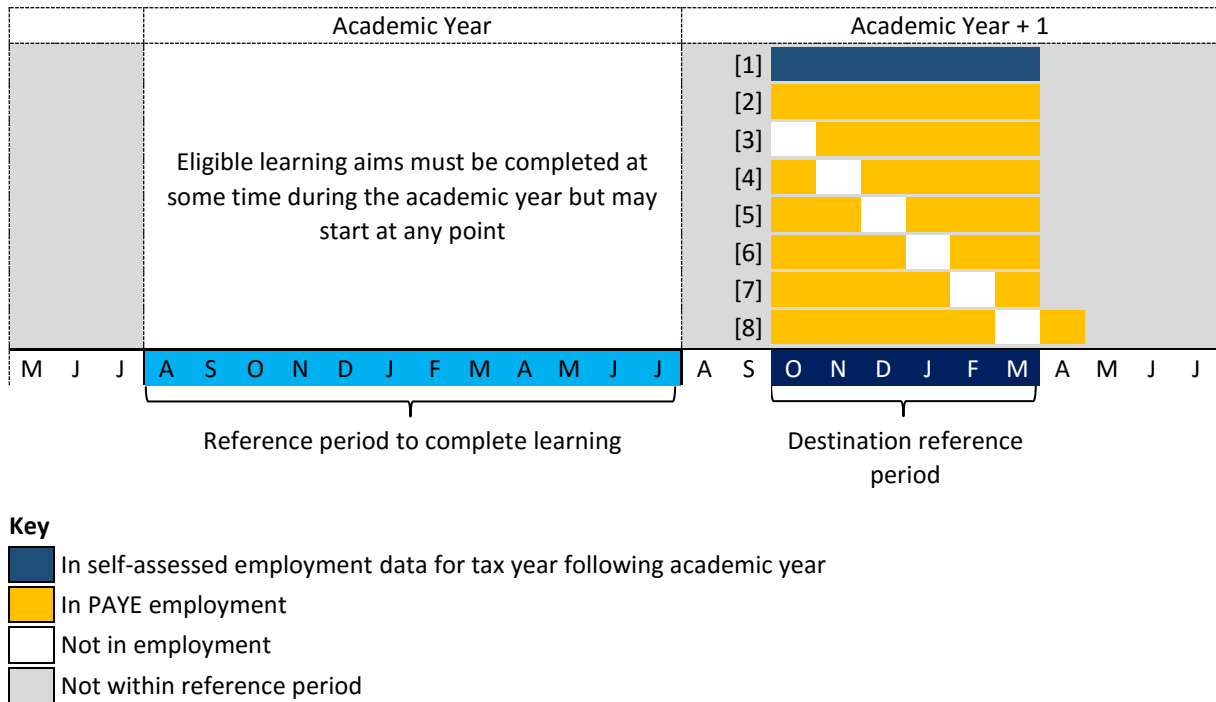
Destination measure – sustained employment

The sustained employment measure aims to count the proportion of learners in sustained employment following the completion of their course. Employment destinations are produced by matching ILR data to HMRC tax records (further details are provided later).

The definition of sustained employment is consistent with the definition used for 16-19 accountability. This looks at employment activity in the six month October to March period following the end of the academic year in which the learning aim took place. For 2014/15 completers to be counted as in sustained employment:

- A learner must have completed a self-assessed return for tax year 2015/16, or

- A learner must be in paid PAYE employment in five out of the six months between October 2015 and March 2016.

- A learner needs to be in paid PAYE employment for at least one day in a month for that month to be counted.

- If a learner is employed in the five months between October 2015 and February 2016, but not in March 2016, then they must also be employed in April 2016.

Figure 1: The eight possible scenarios that would lead to a learner being classified as in sustained employment.

Key
- In self-assessed employment data for tax year following academic year
- In PAYE employment
- Not in employment
- Not within reference period

The measure allows for a one month pause in PAYE employment to reflect that there may be more volatility in initial employment post learning. Where the pause is in March, activity in April is checked to see if it is a short pause or a more substantial break.

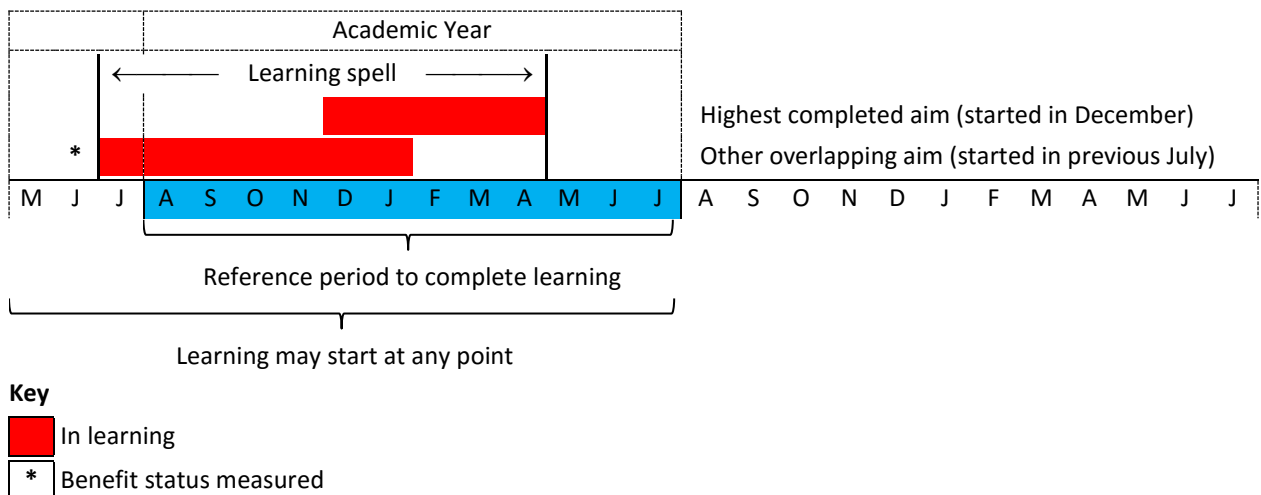## Destination measure – sustained employment for benefit learners

The 'sustained employment for benefit learners' measure counts the same outcome as the sustained employment measure describe above, but for the sub group of learners that, prior to the start of their learning, were claiming benefits subject to more stringent labour market requirements.

Benefit status is determined using ILR data matched to DWP's Customer Information System, rather than through any fields on the ILR itself. The DWP data are seen as more robust and does not rely on the learner telling their training provider this information. Learners are included in this measure if, on the day before their training starts, they are claiming either

- Job Seeker's Allowance (JSA), or

- Employment Support Allowance (ESA) and in the Work Related Activity Group (WRAG).

If a learner completes two eligible aims in the academic year 2014/15, and those aims overlap (so that the learner is studying two aims for at least some part of the year) then the learner's benefit status is measured the day before the earlier start date. For example if a learner completed two eligible overlapping aims in the year, and the highest aim started on 1 December 2014 but the other started on 1 July 2014, then their benefit status would be measured prior to the earlier date, on 30 June 2014.

Figure 2: Example of when benefit status is measured for learners with multiple overlapping aims.


Key
In learning
* Benefit status measured

Destination measure – sustained learning

The 'sustained learning' measure aims to count the proportion of learners in sustained learning, regardless of economic activity, following the completion of their course. Learning destinations are produced by matching ILR data to ILR data (the following year) and Higher Education Statistics Authority (HESA) data.

The definition of sustained learning is consistent with the definition used for 16-19 accountability. This looks at learning activity in the six month October to March period following the end of the academic year in which the learning aim took place. For 2014/15 completers to be counted as in sustained learning

- A learner must be in training (either Further Education or Higher Education) in each of the six months between October 2015 and March 2016.

- A learner needs to be in learning for at least one day in a month for that month to be counted.

Figure 3: The single scenario that would lead to a learner being classified as in sustained learning.

Key
In learning
Not within reference period
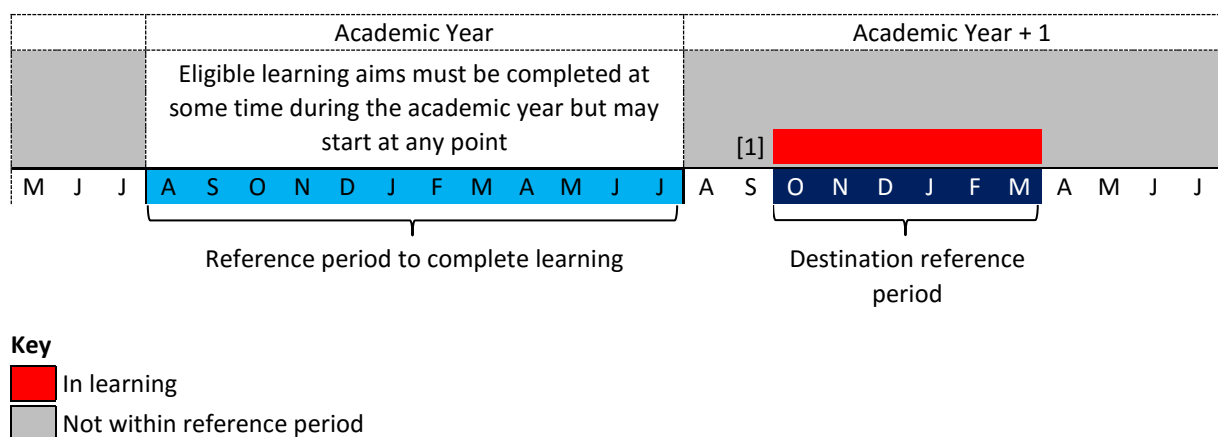
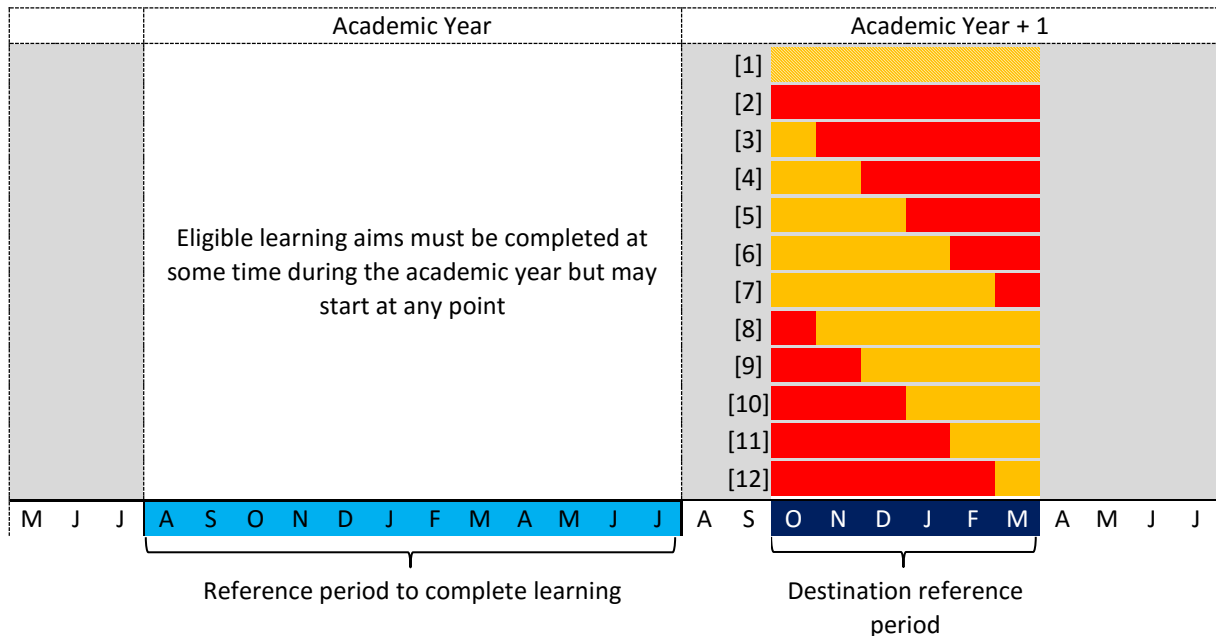## Destination measure – sustained positive destination

The 'sustained positive destination' measure aims to count the proportion of learners with a sustained positive outcome, either into learning or employment (or both). For 2014/15 completers to be counted as having a sustained positive destination, a learner must either

- Have a sustained positive employment outcome, or

- Have a sustained positive learning outcome, or

- Be engaged in either learning (Further Education or Higher Education) or paid employment in each of the six months between October 2015 and March 2016

Under the final scenario, learners may only 'switch' between learning and employment once. For example, if they are in learning for 2 months, then employment for 4 months they are counted as having a sustained positive destination. However if they are in learning for 2 months, then employment for 2 months, then learning 2 months, they are not counted as having a sustained positive destination.

Figure 4: The twelve possible scenarios that would lead to a learner being classified as having a sustained positive destination
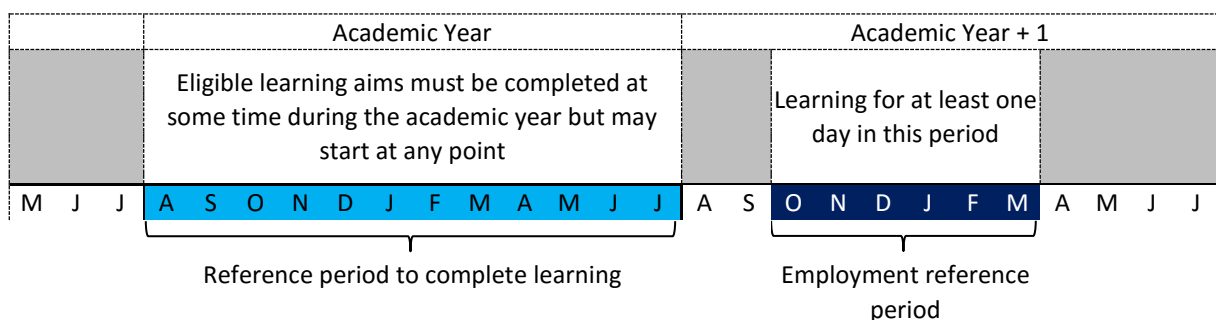

Key
- Has a positive employment outcome (as per above)
- In learning
- In employment
- Not within reference period

Destination measure – learning (non-sustained)

The 'learning' measure aims to count the proportion of learners who are in any learning, regardless of economic activity, following the completion of their course. This uses the same data sources and reference period as the sustained learning measure, but to be counted as in learning:

- A learner must be in learning (in either Further Education or Higher Education) in <u>any</u> of the six months between October 2015 and March 2016.

- A learner only needs to be in learning for a single day in a month for the learning to be counted.

Figure 5: The scenario that would lead to a learner being classified as in learning.

Destination measure – positive destination (non-sustained)

The 'positive destination' measure aims to count the proportion of learners with a positive outcome, either into learning or sustained employment. For 2014/15 completers to be counted as having a positive destination, a learner must

- Have a sustained positive employment outcome, or

- Have a positive learning outcome (does not need to be sustained).

Aim titles

The qualification data have been aggregated by the qualification level and either the framework title (for Apprenticeships) or the aim title as recorded on the Learning Aims Database.

Outcomes by learner categories

In addition to the level of learning and provision type, the characteristics and background of learners also affect the outcome rates for each provider. For example, providers offering a higher proportion of apprenticeships are likely to have higher employment rates after learning than those offering entry level courses to the unemployed.

To account for this natural variation in outcomes, we have developed a new measure that splits a provider's outcomes into categories based on learner characteristics and the type of training offered:

Learner categories:

- Learners reported to have a Learning Difficulty and/or Disability (LLDD)
- Advanced and Higher Apprenticeships
- Full Level 3 or higher skills
- Access to HE
- Other Level 3
- Intermediate Apprenticeships
- Full Level 2 skills
- Traineeships
- English & Maths
- ESOL
- Other provision below Full Level 2

Apprenticeships and 'full' skills courses are then further broken down into their Sector Subject Areas to create 53 distinct learner categories. A full list of learner categories and their associated quintile thresholds can be found in the reference table RF01 accompanying this release[2].

The measure reports on a learner, rather than a learning aim basis, and the learner categories are listed in order of precedence so for example, outcomes for learners reported to have a learning difficulty and/or disability (LLDD) who completed an intermediate apprenticeship will be reported within the LLDD category only.

Outcomes for each category are measured separately, depending on whether the learner was on out-of-work benefits before they started training (ie. whether they were classed as being a 'benefit learner'). A ranked distribution of providers by learning category is then constructed for each cohort, based on the **Sustained Positive Destination Rate**. Ranked providers are divided into five equal groups (or **quintiles)** based on performance for each learner category.

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[2] https://www.gov.uk/government/collections/statistics-outcome-based-success-measures

After creating a ranking for every learning category, we calculate the percentage of learners in each quintile for each provider, and report how much of a provider's outcomes fall within each quintile.

A worked example
Using the above methodology, we use outcomes for a fictional provider to calculate how much of their provision falls into each quintile of performance:

Provider A has 1,000 learners, of which 50 were on out-of-work benefits before they started training. These rates are reported for all providers in table PR05:

Provider Name	Learner Category	Total Learners				Benefit learners				All (excl. benefit learners)			
		Completions		Sustained Positive Destination Rate		Completions		Sustained Positive Destination Rate		Completions		Sustained Positive Destination Rate	
		2013/14	2014/15	2013/14	2014/15	2013/14	2014/15	2013/14	2014/15	2013/14	2014/15	2013/14	2014/15
Provider A	All	.	1000	.	88%	.	50	.	81%	.	950	.	88%

These learners can be separated into one of four different learner categories, and English and Maths provision can be further broken down into benefit learners and non benefit learners creating five different learning categories in total:

Figure 9: Sustained positive destination rate by learner category for 'Provider A'

Types of provision offered at provider A:	Completers	Sustained positive destination rate
Group 1: Advanced and Higher Apprenticeship: Business, Administration and Law	690	87%
Group 2: Advanced and Higher Apprenticeship: Health, Public Services and Care	230	94%
Group 3: English and Maths (excl. benefit learners)	20	73%
Group 4: LLDD learner	10	56%
Group 5: Benefit learners in English and Maths	50	76%

See table PR05 for providers sustained positive destination rates by learning category and table PR06 for providers sustained positive destination rate by learning category and Sector Subject Area.

For each of the above learning categories Provider A is then ranked (based on the sustained positive destination rate) against all providers offering the same provision. Once ranked, providers are grouped into one of five quintiles of performance so that providers whose outcomes are in the top 20% are assigned to the top quintile while providers whose outcomes are in the bottom 20% are assigned to the bottom quintile. Table RF01 shows the sustained positive destination rate thresholds used to define quintiles, and is replicated below for the learner categories we are interested in for Provider A:

Figure 10: Sustained positive destination thresholds

Learner Category	Learner type	20th Percentile	40th Percentile	60th Percentile	80th Percentile
Advanced and Higher Apprenticeships: Business, Administration and Law	All (excl. benefit learners)	81%	85%	89%	92%
Advanced and Higher Apprenticeships: Health, Public Services and Care	All (excl. benefit learners)	80%	83%	86%	90%
English & Maths	All (excl. benefit learners)	71%	78%	84%	88%
LLDD learner	All (excl. benefit learners)	55%	66%	73%	80%
English & Maths	Benefit Learners	47%	56%	63%	73%

Comparing the sustained positive destination rates in figure 9 against the quintile thresholds in figure 10 allows us to calculate how Provider A's outcomes compare against other providers for each learner category.

Figure 11: Example comparing outcomes for 'Provider A' against quintile thresholds

| Framework group | Completions | Quintile | | | | | Sustained Positive Destination Rate |
		Bottom	4th	3rd	2nd	Top	
Advanced and Higher Apprenticeship: Business, Administration and Law	690	.	.	690	.	.	*87%*
Advanced and Higher Apprenticeship: Health, Public Services and Care	230	.	.	.	.	230	*94%*
English and Maths (excl. benefit learners)	20	.	20	.	.	.	*73%*
LLDD learner	10	.	10	.	.	.	*56%*
English and Maths (benefit learners	50	.	.	.	.	50	*76%*
Total number of learners	1000	0	30	690	0	280	
Percentage of learners	*100%*	*0%*	*3%*	*69%*	*0%*	*28%*	

The outcomes table (PR04) shows the distribution of each provider of all their learners, and also the distribution of just those learners that were **not** reported as having a learning difficulty or disability (LLDD).

Disclosure

For all data, totals are rounded to the nearest 10 learners and percentages are rounded and reported to the nearest percentage point.

Outcome rates for a destination are suppressed and marked with 'x' where:
- There were fewer than 11 completers in the denominator
- The rate is based on 1 or 2 learners in the numerator
- The rate rounds to zero

In addition, employment outcomes are suppressed and replaced with 97-100% where data are based on 40+ learners (rounded) and the sustained employment rate is between 97% and 100%. Employment outcomes are suppressed and marked with 'x' where data are based on fewer than 35 learners (unrounded).

6. Changes in Methodology

The publication is now based on the data matched as part of the Longitudinal Education Outcomes (LEO) study. The underlying further education, employment and benefits datasets are the same, but the methodology used to match them together has changed compared to previous years and is now based on a new unique person identifier created in the LEO matching process.

7. Users of these Statistics

The publication provides an understanding the long-term trends of learners into all types of employment and attracts a wide variety of users who use the statistics in various ways. This includes to help inform learners, employers and providers (e.g. to inform learner choice between providers or qualifications) and to help the Department for Education (DfE) develop and monitor Further Education policy.

8. Accompanying Tables

A list of accompanying tables relating to the statistical publication can be found on the GOV.UK website with the most recent publication:

https://www.gov.uk/government/collections/statistics-outcome-based-success-measures

9. Get in touch

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