



Department
for Education

Further Education Skills Index

England

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Summary of findings

The Further Education (FE) Skills Index shows how the aggregate value of the skills supplied by the FE system each year has changed over time. The index works by taking an estimate of the 'value-added' for all adult learners and apprentices in England who have successfully completed their training.

The Skills Index is a key part of how we measure the productivity impact of the FE system. In line with established academic and public policy practice, we use the increase in earnings due to achieving a qualification as a measure of the impact on productivity. The Skills Index tracks the total productivity contribution of the FE system by aggregating the earnings returns for the total number of learners achieving qualifications and subsequently going into sustained employment.

Changes to the Skills Index occur when there are changes in either the numbers of people achieving qualifications in a year, changes in the average value of the qualifications obtained, and/or changes in employment rates associated with the qualifications achieved. The average value of qualifications can increase because learners are switching to training that offers more valuable skills, the same qualifications become more valuable over time as the quality of the training improves, or employment rates for learners achieving the same qualifications increase. Timely data is available on the numbers of achievements, which allows changes in the numbers of students or the types of training studied to be quickly incorporated into the Skills Index. Data to estimate the quality of courses has a much greater lag and it will take a number of years before such changes are included in the index. This means that until this data is available the Skills Index potentially underestimates the overall value of the skills value-added when there are policies, such as the recent apprenticeship reforms, that seek to boost quality. Employment rates for learners achieving specific courses have some lag, with the most recent data available being from 2016/17. Therefore more recent years will not take into account changes in employment figures.

The overall Skills Index, covering both apprenticeships and classroom-based learning, has decreased each year from 2012/13 to 2016/17, with a slight rise in 2017/18 followed by a steeper fall in 2018/19, of 17% compared to the previous year. The large fall in 2018/19 has mainly been driven by a decline in apprenticeship achievements, which fell by a third compared to 2017/18. Achievements in classroom-based learning were more stable in 2018/19, falling by 2% from the previous year. However, as apprenticeships make a larger contribution to the overall Skills Index than classroom-based training, the larger fall in apprenticeship achievements has had more of an impact on the 2018/19 Skills Index than the smaller fall in classroom-based achievements.

Until 2017/18, there had generally been increases in the volume of apprenticeship achievements, particularly advanced and higher apprenticeships, as well as a small shift

towards sectors with higher wage returns. The value-added for apprenticeships also increased year-on-year from 2012/13 to 2017/18, followed by a large drop of 26% in 2018/19. The recent fall in apprenticeship achievements takes place in the context of a decrease in the number of starts and increases in course length¹. The value-added for classroom-based training has also decreased during this period, due to a combination of generally falling achievement numbers overall, and generally decreasing numbers of achievements at Full Level 2 and Full Level 3. This decline was steeper from 2012/13 to 2015/16, and in 2018/19 the value-added for classroom-based training decreased by 5% from the previous year.

In 2018/19, achievements in frameworks made up 85% of all apprenticeship achievements². It is still too early to have outcomes data for apprentices who train on standards, so the employment rates, earnings outcomes and returns estimates used in the Skills Index are based on frameworks. Standards are of higher quality and have additional training hours compared to frameworks; this may lead to changes in value-added in future as data on standards comes through.

¹DfE (2019), [Further education and skills: January 2020](#); DfE (2019), [Apprenticeship and levy statistics: October 2019](#).

²DfE (2020), [Further education and skills: January 2020](#)

1 Introduction

DfE aims to deliver a skills system that delivers skills that the economy and employers value to a greater number of people. This report presents experimental analysis aiming to monitor and evaluate the value of FE and Skills in England.

1.1 Measuring the impact of FE and Skills on productivity

A key reason for the Government's investment in skills is to increase the productivity of the economy. Productivity is how much we produce with the resources we have available. Ultimately, productivity determines how quickly a country's average income and welfare increases over time. Though the rate of productivity growth is influenced by a number of factors, a country's skills level is a major component, as giving people valuable knowledge, skills and behaviours boosts their productivity³.

We use the increase in earnings attributable to training as a measure of the impact on productivity. This approach is well-established in academia and public policy analysis⁴. In a well-functioning labour market, an individual's wages should reflect their value, or productivity, to a firm. Further, productivity and earnings growth tend to increase at the same rates.

The Skills Index takes the increases in earnings attributable to different types of training and aggregates these across the FE and Skills system to estimate a total impact on productivity.

We use full, HM Treasury Green Book compliant, Net Present Value estimates to assess the full impact of apprenticeships and classroom-based FE⁵. The Skills Index is intended to be a simpler, more tractable measure that we can use to monitor changes in the value-added of the FE and Skills system over time.

1.2 Using the Skills Index

We use the Skills Index to monitor the total productivity value-added for the FE system over time.

An increase in the Skills Index would be caused by one or more of:

1. An increase in the number of learners;
2. An increase in achievement rates;
3. A shift toward more economically valuable training (as measured by wage returns).

³ BIS (2015), [UK skills and productivity in an international context](#)

⁴ See, for example, [Becker](#) (1975) and [Mincer](#) (1974), and HMT (2018), [The Green Book](#)

⁵ BIS (2015), [Measuring the Net Present Value of Further Education in England](#)

4. An increase in employment rates

The Skills Index **is not** intended to be:

- A full assessment of the total value generated by FE and Skills. Training delivers economic value not captured by wage returns such as increased profits to employers, benefits to the Exchequer (greater tax revenue and lower welfare spending), and wider benefits to society rooted in greater and improved products and services.
- A full assessment of the productivity impact over a learner's lifespan. The Skills Index is rooted in the increase in annual earnings attributable to training; it does not capture the total increase in earnings over a lifetime. As set out above, we use Net Present Value estimates to provide fuller assessment of the economic impact of training.
- A timely measure for evaluating specific policy changes. The full impact of reforms will take time to filter through into the Skills Index.

We hold our estimates of wage returns from different types of training constant. This is because we do not have routine or timely updates to wage returns estimates. Therefore, the Skills Index does not generally immediately reflect changes to the quality of training. We will incorporate new wage returns evidence as and when it becomes available, e.g. from the shift in apprenticeships from frameworks to standards; the first firm estimate of the impact of the 2017 apprenticeship reforms on wages returns due to changes in course quality is unlikely to be available until the early to mid-2020s.

2 Data and methodology

2.1 Data sources and approach

The Skills Index covers funded skills training for FE learners in England over the age of 19 and apprentices of all ages between 2012/13 and 2018/19, taking into account the provision type, level and subject area of the qualification. Training funded through the Adult Community Learning budget is not included.

The value-added is calculated separately for each sector subject area⁶, level and provision type by multiplying together:

- 1. The number of funded learners that achieved qualifications** in the academic year as recorded through the Individualised Learner Record (ILR)⁷. Where learners achieved more than one qualification, their highest level was taken. Headline numbers of achievements by qualification type and level are regularly published on gov.uk⁸.
- 2. The proportion of learners that were employed** after achieving their qualification. Employment rates corresponding to the appropriate year are used where available, or from the nearest year if not available due to the lag in calculating employment outcomes. Estimates are taken from the most recent release of DfE's annual Outcome-Based Success Measures statistics⁹.
- 3. The percentage earnings returns** to having achieved a qualification, as a percentage increase relative to non-achievers. The returns are averaged over 3-5 years after the qualification¹⁰. The same estimates of earnings returns are used across all years as these are not routinely updated nor timely to produce.
- 4. The average real earnings** for employed achievers, taken from the same source as the estimated earnings returns for consistency.

These are then added together to create the total value-added for the entire FE and Skills system, and so the total value-added takes into account how the provision mix has changed over time.

⁶ Subject areas used for the estimates of earnings returns have been mapped to standard Sector Subject Areas.

⁷ In 2016/17 a number of Full Level 2 and Full Level 3 qualifications were reclassified by the ESFA for the 19-23 entitlement, to align with the 16-19 offer and recommendations in the [Wolf Review of Vocational Education](#). These qualifications are included in the Skills Index according to their original classification to allow for a consistent time series.

⁸ DfE (2020), [Further education and skills: January 2020](#). The achievement figures in this publication differ from those used in the Skills Index. The apprenticeship achievement figures in the Further education and skills publication count the number of aims achieved rather than the number of unique learners, while the FE and Skills achievement learner volume figures include Community Learning, and learning at an unknown level, both of which are excluded from the Skills Index.

⁹ DfE (2019), [Further education outcome-based success measures: 2016 to 2017](#)

¹⁰ BIS (2014), [Estimation of the labour market returns to qualifications gained in English Further Education](#)

The total value-added is indexed to 2012/13 (the first year in the index), and an annual change figure is calculated.

We anticipate that improvements to the quality of qualifications will also improve economic outcomes. Currently quality, as measured by the earnings differential between achievers and non-achievers, is held fixed in the Skills Index, based on learners exiting learning between 2004/05 and 2010/11.

We expect that the switch from apprenticeship frameworks to standards may improve outcomes, however it will take a number of years before we can get additional earnings (and therefore productivity) estimates for post-reform apprenticeships.

2.2 Changes in methodology since last year

There have been some slight revisions to this methodology since last year's Skills Index publication, which mean that some figures for previous years have changed slightly. However, overall trends for previous years are broadly unchanged following these adjustments.

Last year's Skills Index used the same employment rate after achieving a qualification across all years, taken from the latest year available in the Outcome-Based Success Measures publication. This year's Skills Index uses employment rates from the same source, but uses the rates matching the year of achievement where available, or from the nearest year if not. Therefore employment rates now vary across years in this release of the Skills Index, whereas they were held fixed in the last publication.

2.3 Measures

Value-added	The total increase in earnings through the FE and Skills system each year. This is indexed to the estimate for 2012/13 in order to create the Skills Index.
Annual change in value-added	The percentage change in value-added compared to the previous year.
Value-added per learner	The average value-added attributable to each learner that achieved a qualification.

3 Findings

3.1 Skills Index for FE

The overall FE Skills Index has decreased each year since 2012/13, apart from in 2017/18, largely driven during this period by a reduction in learners achieving classroom-based qualifications. This decrease slowed from 2014/15 onwards but the overall Skills Index fell more sharply again in 2018/19. The fall in the most recent year is mainly due to a drop in apprenticeship achievements in 2018/19.

Figure 1: FE Skills Index by type of provision (2012/13 = 100)

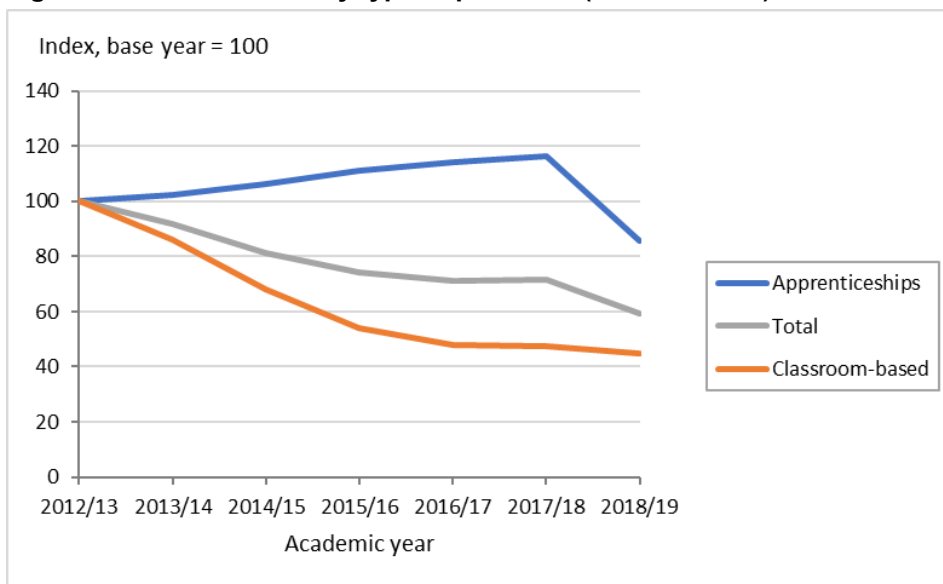
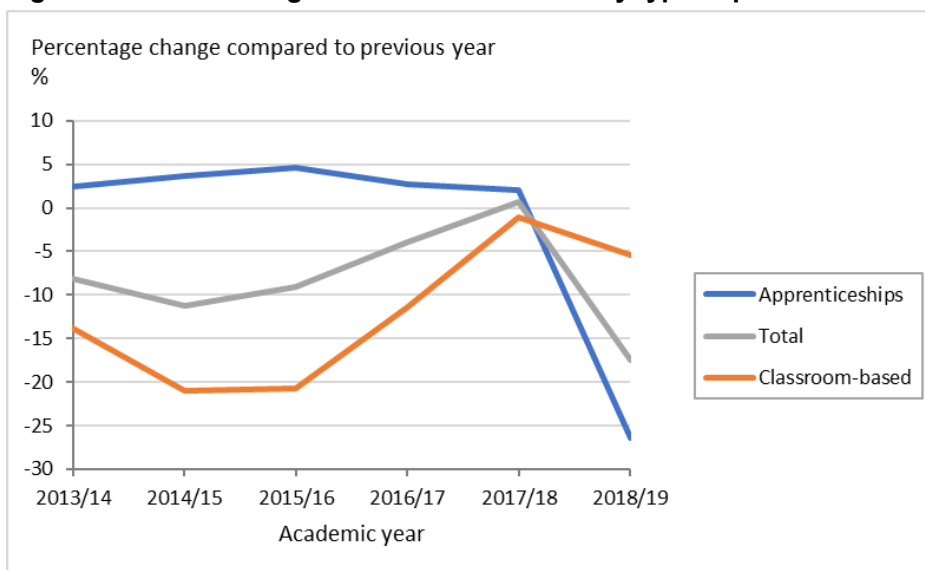


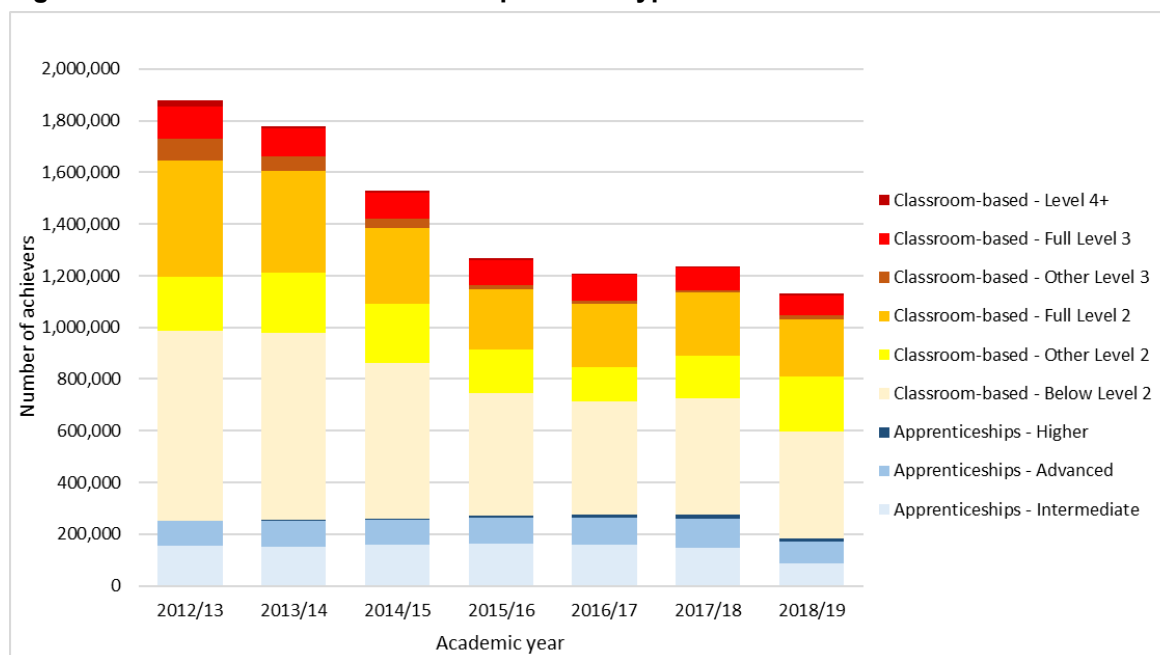
Figure 2: Annual change in the FE Skills Index by type of provision



The total value-added for apprenticeships increased every year from 2012/13 to 2017/18, but fell by 26% in 2018/19. This is mainly due to changes in the number of apprenticeship achievements, which increased by 10% between 2012/13 and 2016/17, remained steady in 2017/18 but then fell by 33% in 2018/19. Since 2014/15 there has been a shift towards advanced and higher level apprenticeships, which has been more pronounced in recent years. While this trend continued in 2018/19, it was not enough to compensate for the steep drop in achievement numbers overall. This decline in apprenticeship achievements is due to various factors. Apprenticeship starts fell from 2015/16 to 2017/18, with a particularly large drop for shorter intermediate apprenticeships in 2017/18¹¹. The duration of apprenticeships is increasing, so there are fewer achievements in the short-term¹².

The total value-added for classroom-based training has decreased every year since 2012/13, due to a large decrease in the number of achievements at Full Level 2 and Full Level 3, which has somewhat stabilised in the most recent years. The value-added for classroom-based training decreased by 5% in 2018/19.

Figure 3: Number of achievers at each provision type and level¹³



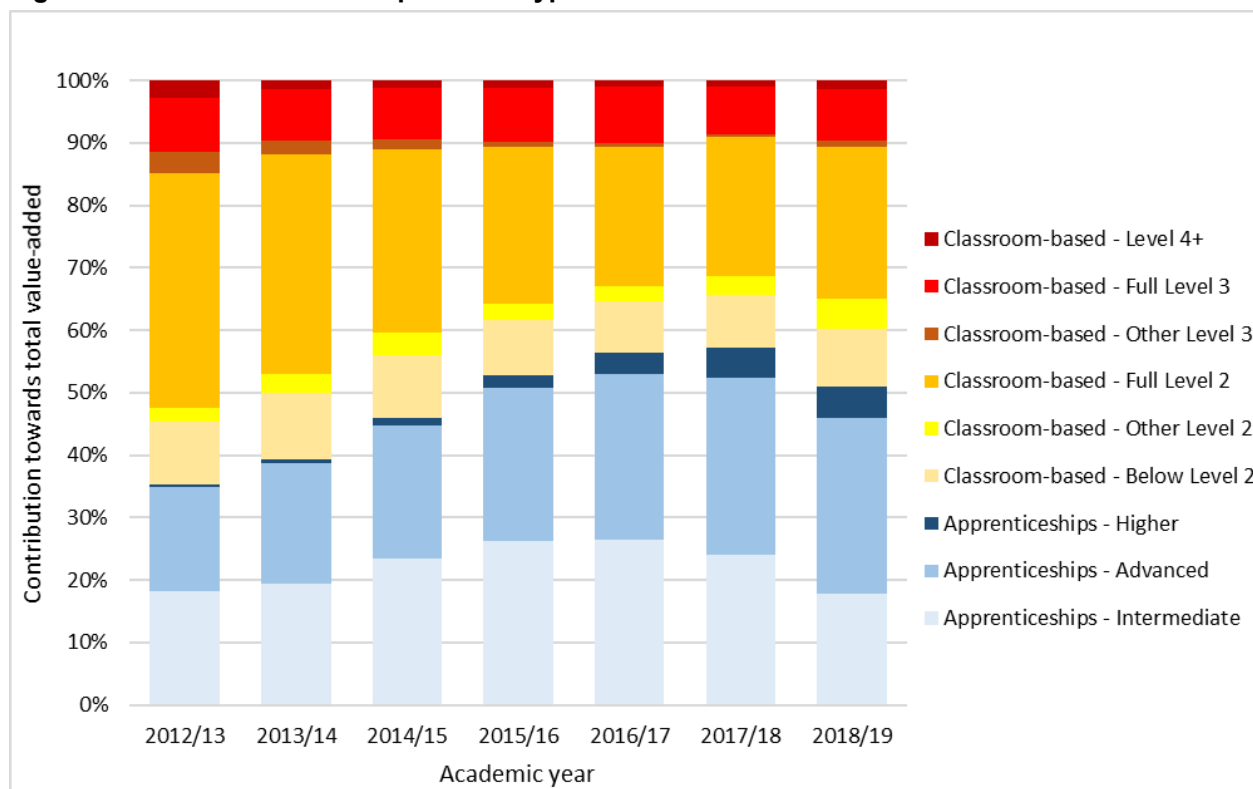
Apprenticeships accounted for 35% of the total value-added in 2012/13, increasing to 57% in 2017/18. This fell to 51% in 2018/19. Over the same period, classroom-based Full Level 2 training has decreased from 38% of the total value-added to 24% in 2018/19. Much of the change in value-added is due to a change in the number of achievements at each level.

¹¹ DfE (2020), [Further education and skills: January 2020](#).

¹² DfE (2019), [Apprenticeship and levy statistics: October 2019](#).

¹³ In 2016/17 some Full Level 2 and Full Level 3 qualifications were reclassified (see page 7). These qualifications are included in the Skills Index according to their original classification.

Figure 4: Contribution of each provision type and level¹⁴ towards total value-added



3.2 Annual change in value-added per learner

The value-added per learner increased between 2012/13 and 2016/17, in part due to a shift towards apprenticeships over classroom-based qualifications; apprenticeships typically have higher employment rates and higher wage returns.

The value-added per learner fell by 2% in 2017/18 then by 10% in 2018/19, putting it to a level slightly below the original 2012/13 value. This was partly due to a fall in value-added per learner for classroom-based qualifications, due to a shift away from Full Level 2 and Full Level 3 qualifications, as well as a decline in apprenticeship achievements in 2018/19.

Value-added per learner for apprenticeships has increased each year from 2012/13 onwards, gradually up to 2017/18 then with a larger increase of 10% in 2018/19. This is partly due to an increase in achievements in advanced and higher level apprenticeships compared to intermediate level apprenticeships. Another factor is a move within both intermediate and advanced apprenticeship achievements to sector subject areas with higher wage returns and/or higher employment rates in 2018/19.

¹⁴ In 2016/17 some Full Level 2 and Full Level 3 qualifications were reclassified (see page 7). These qualifications are included in the Skills Index according to their original classification.

Figure 5: Value-added per learner by type of provision (2012/13 = 100)

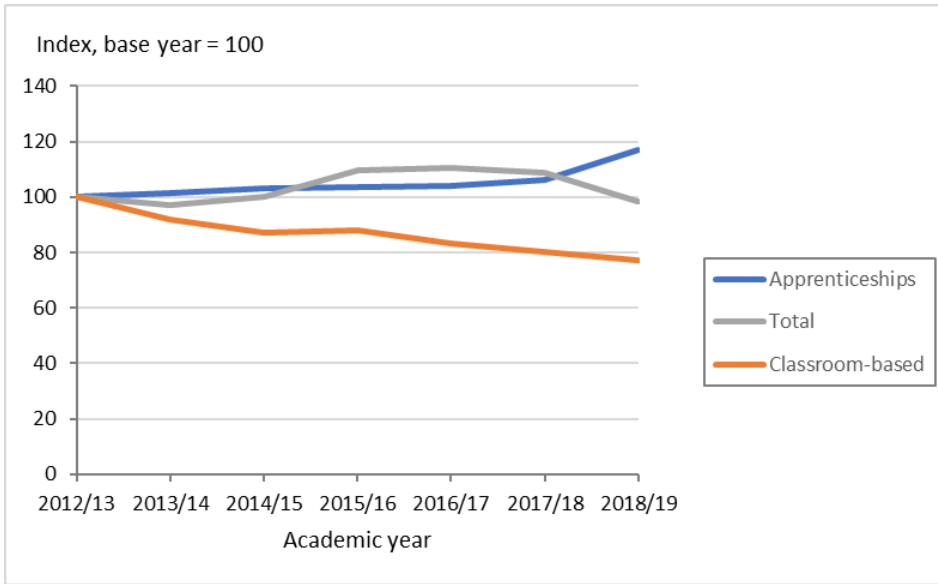
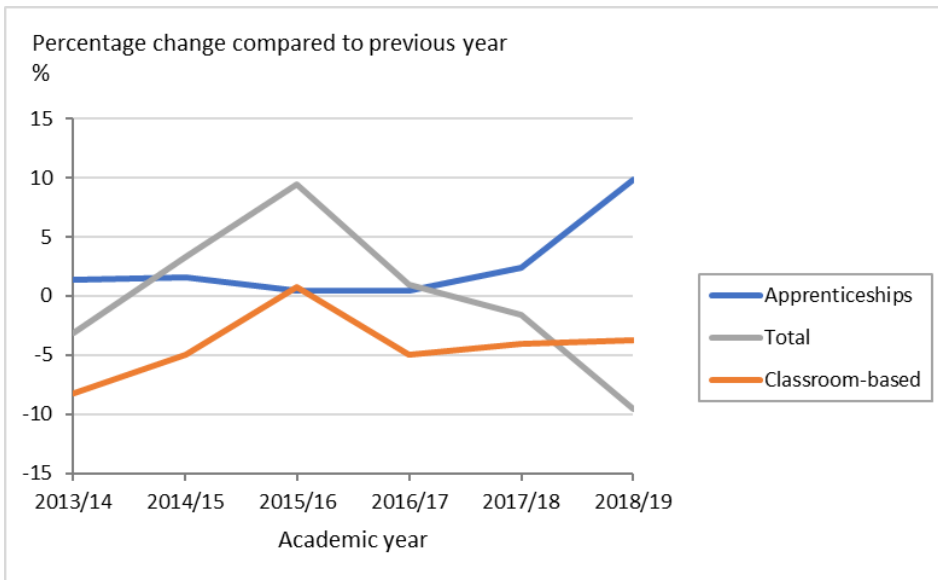


Figure 6: Annual change in value-added per learner by type of provision



4 Tables

Table 1: FE Skills Index by type of provision (2012/13 = 100)

	Skills Index (2012/13 = 100)						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Total	100	92	82	74	71	72	59
Apprenticeships	100	102	106	111	114	116	86
Classroom-based	100	86	68	54	48	47	45

Table 2: Annual change in the FE Skills Index by type of provision

	Annual percentage change in Skills Index						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Total	-	-8	-11	-9	-4	1	-17
Apprenticeships	-	2	4	5	3	2	-26
Classroom-based	-	-14	-21	-21	-11	-1	-5

Table 3: Number of achievers by provision type and level¹⁵ (learners counted once only, by highest level of achievement)

		Number of achievers						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Apprenticeships		251,000	253,800	259,000	269,700	275,800	274,900	184,200
of which...	Intermediate	154,600	149,100	158,900	162,400	160,200	148,300	85,600
	Advanced	94,800	102,000	95,800	100,400	104,600	111,000	84,800
	Higher (Level 4+)	1,600	2,700	4,300	6,900	11,000	15,700	13,800
Classroom-based		1,626,600	1,526,400	1,269,500	1,000,000	933,200	961,800	945,400
of which...	Below Level 2	736,100	725,400	603,500	477,300	437,300	452,300	414,300
	Other Level 2	209,400	232,200	227,600	168,300	134,900	165,000	211,600
	Full Level 2	448,900	396,000	295,000	230,500	243,100	243,100	219,300
	Other Level 3	85,500	53,000	35,000	19,000	11,200	10,200	16,100
	Full Level 3	123,800	109,300	100,500	96,800	100,700	84,700	76,000
	Level 4+	22,800	10,600	7,800	8,100	6,000	6,600	8,100
Total		1,877,600	1,780,200	1,528,400	1,269,700	1,209,000	1,236,800	1,129,600

¹⁵ In 2016/17 some Full Level 2 and Full Level 3 qualifications were reclassified (see page 7). These qualifications are included in the Skills Index according to their original classification.

Table 4: Contribution of each provider type and level¹⁶ towards total value-added

		Contribution to total value-added (%)						
		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Apprenticeships		35	39	46	53	56	57	51
of which...	Intermediate	18	19	23	26	27	24	18
	Advanced	17	19	21	25	27	28	28
	Higher (Level 4+)	0	1	1	2	3	5	5
Classroom-based		65	61	54	47	44	43	49
of which...	Below Level 2	10	11	10	9	8	8	9
	Other Level 2	2	3	4	3	2	3	5
	Full Level 2	38	35	29	25	22	22	24
	Other Level 3	3	2	1	1	1	1	1
	Full Level 3	9	8	8	9	9	8	8
	Level 4+	3	1	1	1	1	1	1
Total		100	100	100	100	100	100	100

Table 5: Value-added per learner by type of provision (2012/13 = 100)

	Value-added per learner (2012/13 = 100)						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Total	100	97	100	110	111	109	98
Apprenticeships	100	101	103	103	104	106	117
Classroom-based	100	92	87	88	83	80	77

Table 6: Annual change in value-added per learner by type of provision

	Annual percentage change in value-added per learner						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Total	-	-3	3	9	1	-2	-10
Apprenticeships	-	1	2	0	0	2	10
Classroom-based	-	-8	-5	1	-5	-4	-4

¹⁶ In 2016/17 some Full Level 2 and Full Level 3 qualifications were reclassified (see page 7). These qualifications are included in the Skills Index according to their original classification.

5 Get in touch

5.1 Media enquiries

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5.2 Other enquiries/feedback

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