Department for Education

Further Education Skills Index

England

April 2019

Contents

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 and/or changes in the average value of the qualifications obtained. The average value of qualifications can change because learners are switching to training that offer more valuable skills, or the same qualifications become more valuable over time as the quality of the training improves. 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 Skill 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 underestimates the overall value of the skills value-added when there are policies, such as the recent apprenticeship reforms, that seek to boost quality.

The overall Skills Index, covering both apprenticeships and classroom-based learning, has decreased each year since 2012/13, before flattening out in 2017/18.

The value-added for classroom-based training has decreased during this period, due to a large decrease in the number of achievements at Full Level 2 and Full Level 3. In 2017/18 the value-added for classroom-based training decreased by 2 per cent on the previous year.

However, the picture for apprenticeships is markedly different to that of adult classroom-based qualifications. The value-added for apprenticeships has increased year-on-year since 2012/13. In 2017/18 it increased by 2 per cent on the previous year due to an increase in the volume of achievements of advanced and higher apprenticeships, as well as a small shift towards sectors with higher wage returns.

For apprenticeships, the Skills Index does not estimate the added-value of the switch from frameworks to standards. As full outcome data for apprentices achieving apprenticeship standards is not yet available, the 2 per cent increase is likely to be a

conservative estimate. In 2017/18 achievements on standards made up 1 per cent of all apprenticeship achievements[1].

[1]DfE (2019), Further education and skills: March 2019

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 levels is a major component, as giving people valuable knowledge, skills and behaviours boosts their productivity[2].

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 analysis[3]. 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 FE[4]. 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).

[2] BIS (2015), UK skills and productivity in an international context
[3] See, for example, Becker (1975) and Mincer (1974), and HMT (2018), The Green Book
[4] BIS (2015), Measuring the Net Present Value of Further Education in England

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 2017/18, and takes into account the 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 area[5], level and qualification 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)[6]. 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.uk[7].

2. **The proportion of learners that were employed** after achieving their qualification. The employment rates are held constant across all years due to the lag in availability of employment data, and estimates are taken from the most recent release of DfE's annual Outcome Based Success Measures statistics[8].

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 qualification[9]. 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.

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

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[5] Subject areas used for the estimates of earnings returns have been mapped to standard Sector Subject Areas.
[6] 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 Qualifications. These qualifications are included in the Skills Index according to their original classification to allow for a consistent time series.
[7] DfE (2019), Further education and skills: March 2019
[8] DfE (2018), Further education outcome-based success measures: 2015 to 2016
[9] BIS (2014), Estimation of the labour market returns to qualifications gained in English Further Education

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 will 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 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, largely driven by a reduction in learners achieving classroom-based qualifications. This decrease has slowed since 2014/15 and there was no change in the overall index in 2017/18.

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

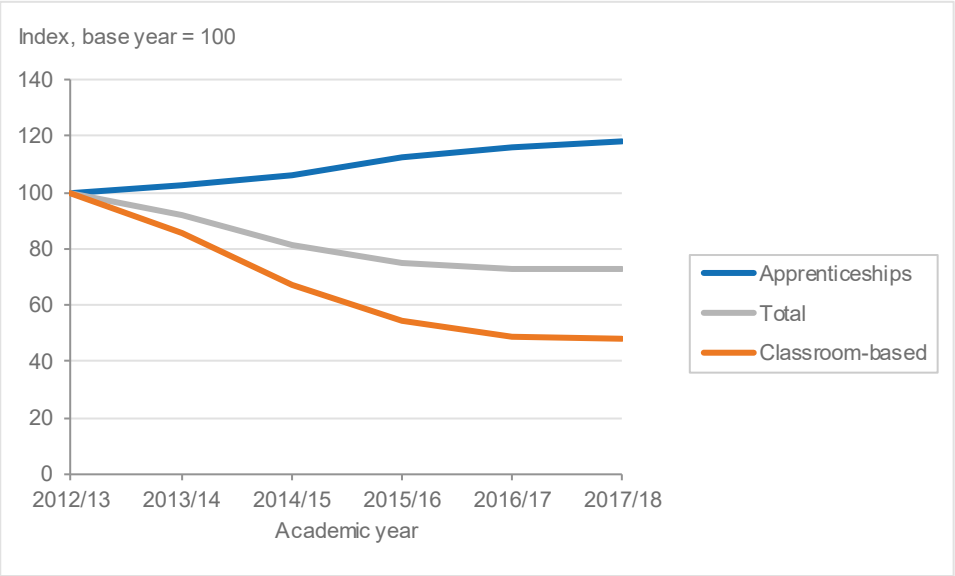
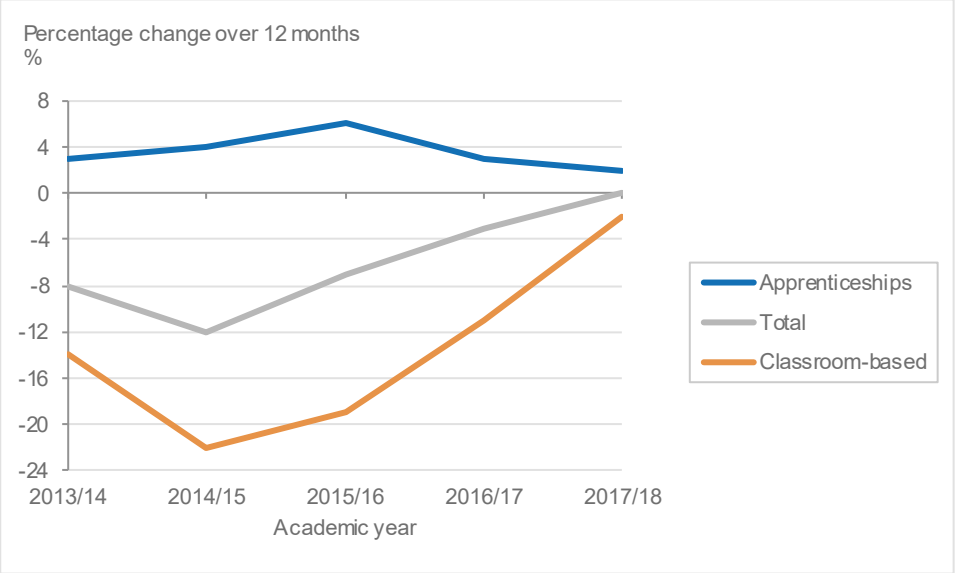


Figure 2: Annual change in the FE Skills Index by type of provision



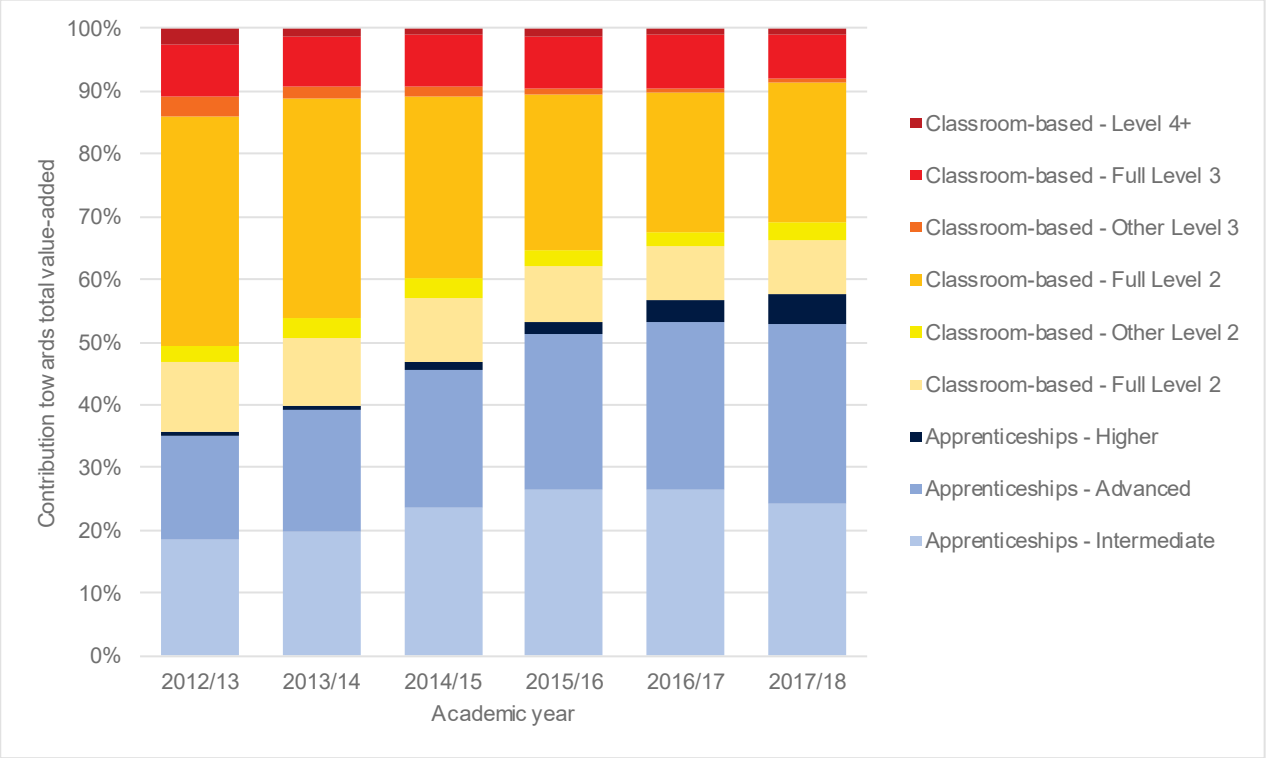
The total value-added for apprenticeships has increased every year since 2012/13, and rose by 2 per cent in 2017/18. The number of apprenticeship achievements increased by 10 per cent between 2012/13 and 2016/17, with an additional slow but steady shift

towards advanced and higher level apprenticeships and higher value sectors since 2014/15.

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 stabilised in the most recent years. The value-added for classroom-based training decreased by 2 per cent in 2017/18.

Apprenticeships accounted for 36 per cent of the total value-added in 2012/13, increasing to 58 per cent in 2017/18. Over the same period, classroom-based Full Level 2 training has decreased from 37 per cent of the total value-added to 22 per cent. Most of the change in value-added is due to a change in the number of achievements at each level.

Figure 3: Contribution of each qualification type and level[10] towards total value-added



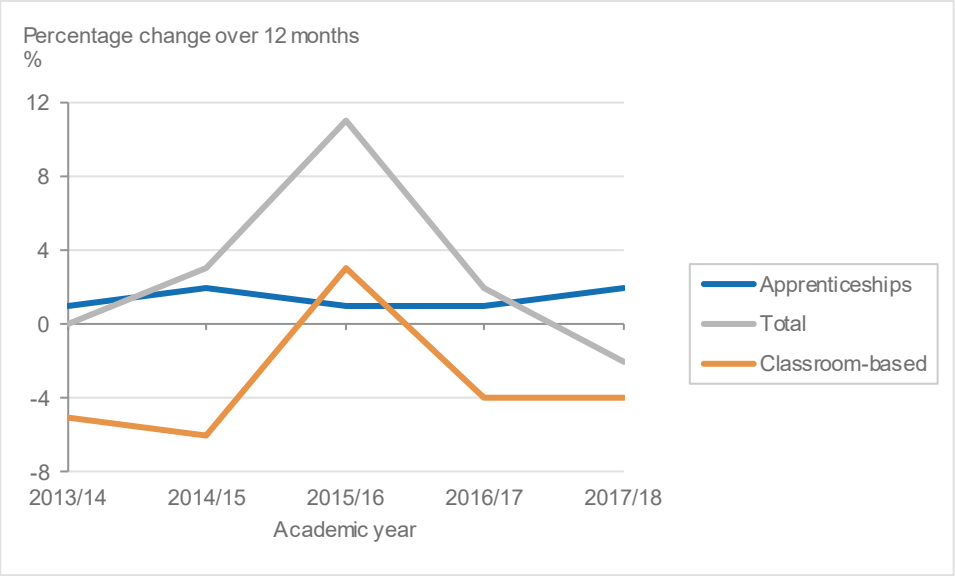
3.2 Annual change in value-added per learner

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 per cent in 2017/18. This was due to a fall for classroom-based qualifications, driven by less achievements in Full Level 2 and Full Level 3 qualifications.

[10] 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: 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**
Total	**100**	**92**	**81**	**75**	**73**	**73**
Apprenticeships	100	103	106	112	116	118
Classroom-based	100	86	67	54	49	48

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

	Percentage annual change in Skills Index (%)					
	2012/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**
Total	**-**	**-8**	**-12**	**-7**	**-3**	**0**
Apprenticeships	-	3	4	6	3	2
Classroom-based	-	-14	-22	-19	-11	-2

Table 3: Contribution of each qualification type and level[11] towards total value-added

		Contribution to total value-added (%)					
		2012/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**
Apprenticeships		**36**	**40**	**47**	**53**	**57**	**58**
of which…	Intermediate	18	20	24	26	27	24
	Advanced	17	19	22	25	27	29
	Higher (Level 4+)	0	1	1	2	3	5
Classroom-based		**64**	**60**	**53**	**47**	**43**	**42**
of which…	Below Level 2	11	11	10	9	8	9
	Other Level 2	2	3	3	3	2	3
	Full Level 2	37	35	29	25	22	22
	Other Level 3	3	2	2	1	1	1
	Full Level 3	8	8	8	8	9	7
	Level 4+	3	1	1	1	1	1

[11] 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: Value-added per learner by type of provision

	Percentage annual change in value-added per learner (%)					
	2012/13	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**
Total	**-**	**0**	**3**	**11**	**2**	**-2**
Apprenticeships	**-**	1	2	1	1	2
Classroom-based	**-**	-5	-6	3	-4	-4

5 Get in touch

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Department for Education

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