March 2019

Dudley College of Technology

DUDLEY Insight

APPRENTICESHIPS AND THE STEM CHALLENGE

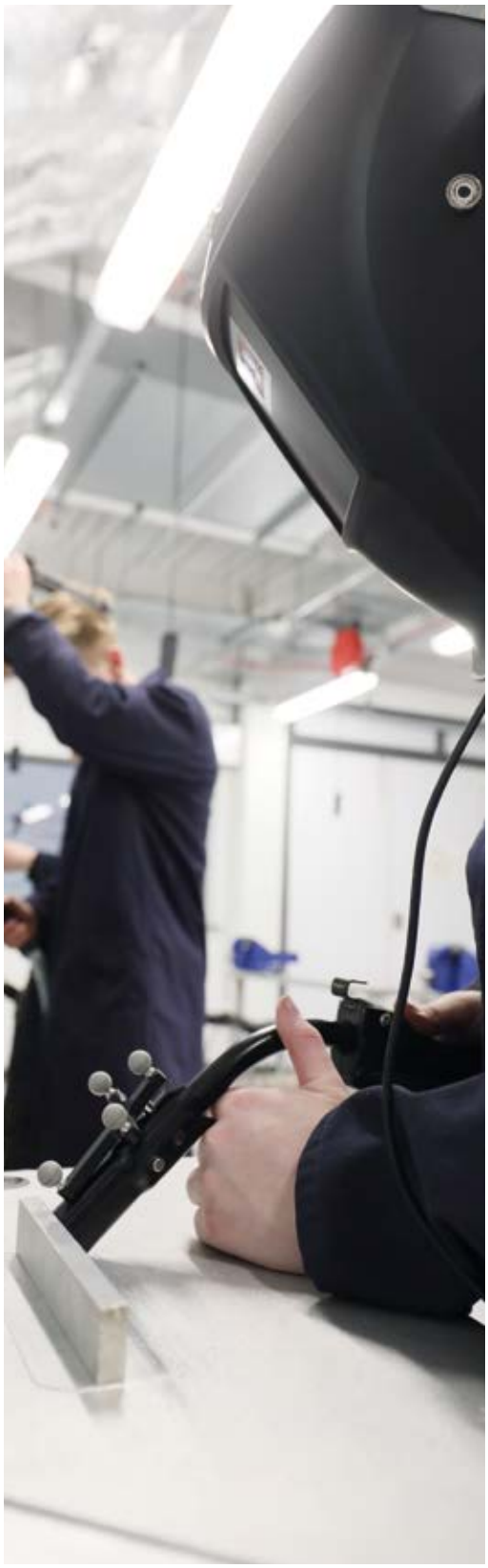
This is one of a series of papers aimed at providing our stakeholders, both internally and externally, with up-to-the-minute information on how we are strategically responding to local and national challenges. The papers may be of interest to many relevant stakeholders including parents, employers and the Local Enterprise Partnership.

hands-on **thinking**

INTRODUCTION

Dudley College of Technology has been delivering Apprenticeship training for over 50 years and currently we have **just under 4,000 young people and adults on Apprenticeship programmes**. This makes us the largest provider of Apprenticeships across the West Midlands Combined Authority area, delivering 27% of all college delivered Apprenticeships. Of those individuals studying with us 51% of all apprentices are studying in LEP transformational sectors. Much of our Apprenticeship provision is also in STEM related areas such as engineering with **1,480 apprentices in 2017/18** (40% of the total apprentice cohort) **studying on a STEM related programme**.

CONTEXT



Against the background of government reforms including the creation of the **Institute for Apprenticeships (IfA)** and the introduction of the **Apprenticeship Levy** Dudley College of Technology has continued to expand its delivery working closely with employers to ensure the **change from** Apprenticeship **frameworks**, the old style qualifications **to the new style standards**, fits their needs.

The IfA was established in May 2016 by the **Enterprise Act 2016** with a remit to ensure the development of high quality Apprenticeships so that Apprenticeships are viewed and respected as highly as other education routes.

Alongside the establishment of the IfA the government also introduced a new funding mechanism for Apprenticeship programmes – **The Apprenticeship Levy**. On 6 April 2017 the Apprenticeship Levy came into effect with all UK employers with a pay bill of over £3 million per year paying the levy. The levy is set at 0.5% of the value of the employer's pay bill, minus an Apprenticeship levy allowance of £15,000 per financial year. The levy is paid into an Apprenticeship service account, and funds in this account have to be spent on Apprenticeship training and assessment. The Government applies a 10% top-up to the funds that are paid by an employer for the levy. In April 2018 it became possible for levy-paying organisations to transfer up to 10 per cent of the annual value of funds entering their apprenticeship service account to other organisations in the apprenticeship service. This will increase to 25 per cent from April 2019.

The consequence of the levy has been that after a large increase in new starts nationally in April 2017, the number has dropped significantly since the reforms.

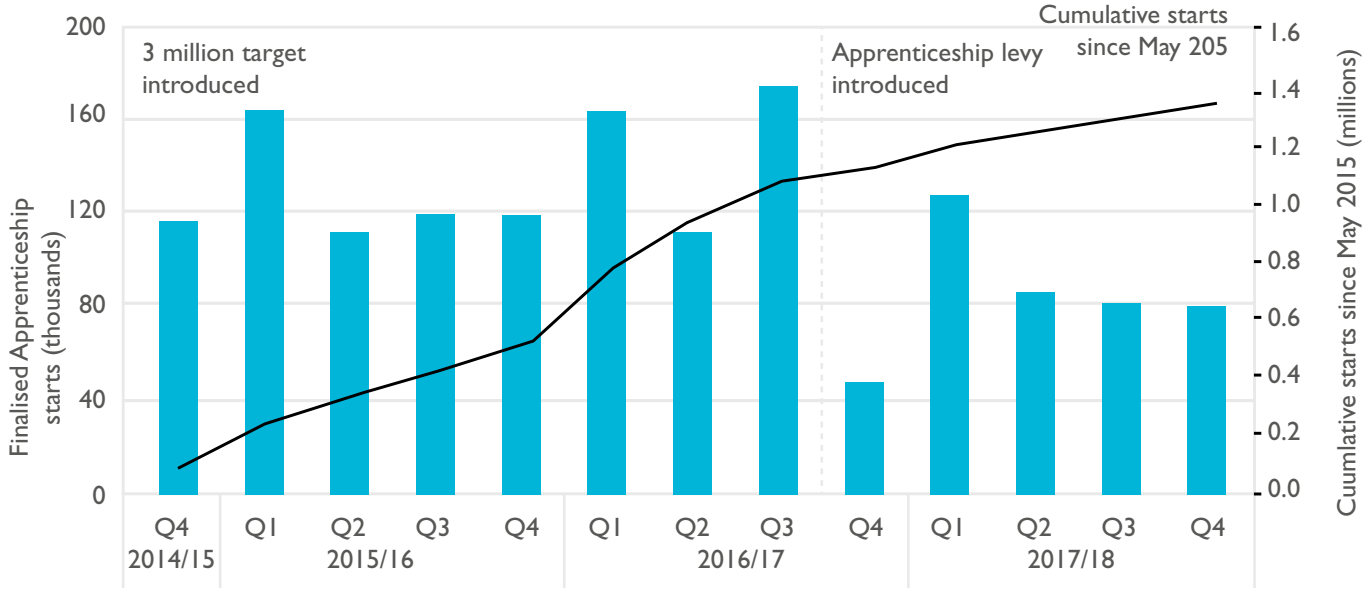
Government statistics show that the number of people starting an Apprenticeship from May 2017 to October 2017 (the 6-month period after the levy was introduced) was 162,400 – over 40 per cent lower than the same period in the previous year. This ongoing trend with 375,800 Apprenticeship starts reported for the 2017/18 academic year, compared with 494,900 in 2016/17 and 509,400 in 2015/16, a decrease of 24.1 and 26.2 per cent respectively has resulted in significant structural changes to the apprenticeship funding system. Of the 375,800 Apprenticeship starts reported in 2017/18, 43.6 per cent (163,700) were on Apprenticeship standards.

Structural changes have included the extension to the initial 18-month deadline for employers to spend their levy to 24 months, and the pressure to spend has eased, so employers are now taking time to plan a training strategy.

Besides the impact on volumes of Apprenticeship starts recent reports show that the levy has impacted on the types of training being procured by employers through their levy funds with one fifth of all Apprenticeships paid for by the levy being managerial.


advanced

Table A: Quarterley Apprenticeship starts from May 2015[3]



Final reported data shown, which is submitted in October for each academic year. For 2017/18, the latest quarterly data are the finalised figures reported in the Further education and skills: November 2018 statistics publication. The chart shows data aggregated for each quarter of the academic year, which runs from August to July.

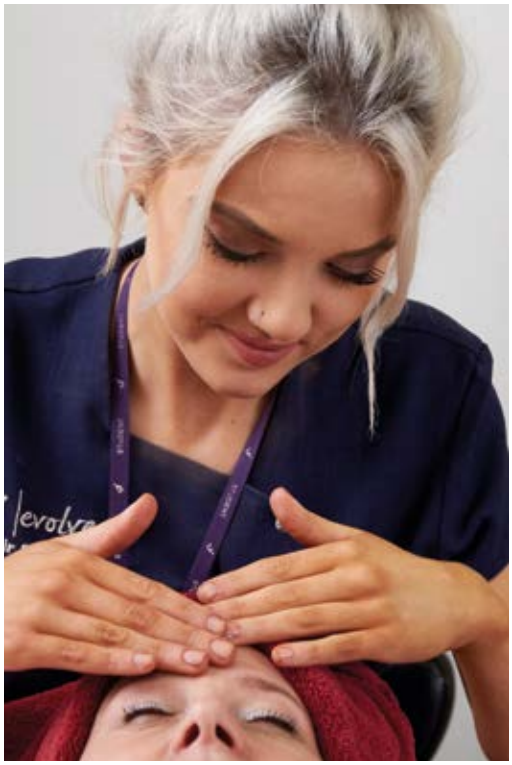
Latest statistics also show that there is an evolving picture as employers switch the focus of their Apprenticeship activity from young people to adults In 2007 there were approximately 300,000 adult learners starting an Apprenticeship each year but since 2011 and the ending of the Train to Gain scheme, which was dedicated to adult upskilling in the workplace, the number of learners aged 25 and over starting an Apprenticeship has been higher than the number of starts among those aged under 19 – with adult Apprenticeships peaking at 230,300 in 2013.

In addition to older age groups becoming the focus, the mix of apprenticeship levels is shifting from Intermediate (level 2) towards Higher and Degree Apprenticeships (levels 4-6; equivalent to the first year of university through to a full degree).

Table B: Apprenticeship starts by level since the 2011/12 academic year

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2016/17
Level 2	329,000	292,750	286,490	298,280	291,330	260,650	161,390
Level 3	187,880	207,670	144,730	181,760	190,870	197,660	166,220
Level 4	2,850	4,180	3,810	7,090	9,510	11,920	16,800
Level 5	850	5,610	5,410	12,590	16,870	22,960	20,480
Level 6				100	740	1,650	6,370
Level 7					30	50	4,500
Total Apprenticeship starts	**520,600**	**510,200**	**440,400**	**499,900**	**509,400**	**494,900**	**375,800**

Note: some learners had no recorded level (80 in 2014/15 and less than 5 in 2015/16)



Apprenticeship frameworks are being progressively phased out and replaced by the newer Apprenticeship standards. **By 2020, the ESFA expect all Apprenticeships starts to be on standards, and will not allow any starts on frameworks**.

As of January 2019, there were 220 standards approved for delivery, and there were 163,700 starts on standards. Although this was a significant increase from the number of starts on standards in 2016-17 (24,600), this represented 43% of all starts.

All standards also have a compulsory **End Point Assessment (EPA)** element **built into their assessment methodology**. End Point Assessments are an assessment process akin to a final examination, which all apprentices have to complete in order to achieve their qualification. EPAs replace the wholly continual assessment of frameworks and are delivered by an independent end-point assessment organisation with no affiliation to the employer or training provider of the apprentice.

With regard to STEM subjects there is a growing acknowledgment that the West Midlands has a deficit in young people who want to pursue a career in science, technology, engineering and maths as businesses are reporting a shortfall of some 700,000 workers a year. A survey of business leaders in the region revealed that 77% struggled to find the right people. Meanwhile, the West Midlands has the highest share of unqualified 16-64 year olds of any UK region with the exception of Northern Ireland. Skills training at level four or above is reported to be 21% for the region – six percentage points below the national average.

There is also a gender issue. Only one fifth of those working in core STEM occupations are women – and they only represent 14% in science, engineering and technology management.

THE CHALLENGE

Based on an analysis of the changing context in which we are operating the challenges we face are many with the following being the primary ones:

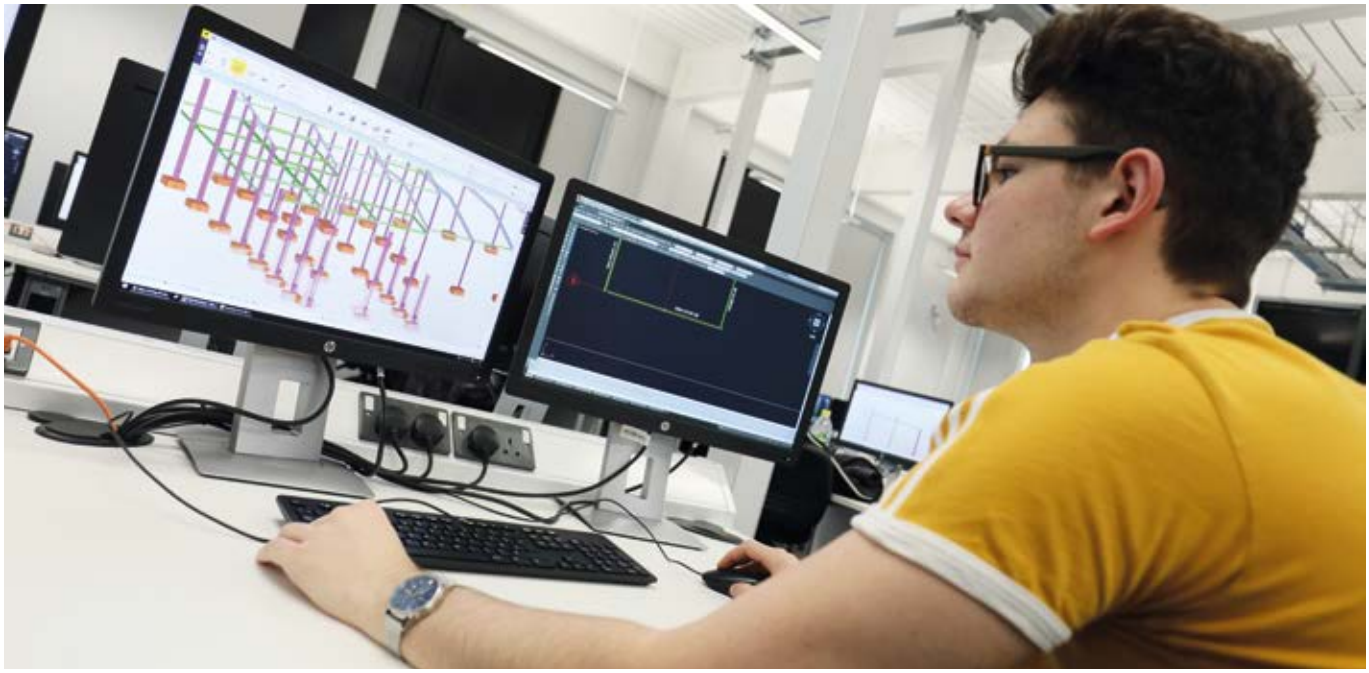
- Maintaining the volumes of learners on Apprenticeship programmes whilst ensuring Apprenticeships are accessed by both young people and adults.

- Delivering the type of mix and balance of Apprenticeship provision that employers want to invest their levy into.

- Moving our provision from frameworks to standards and making sure we have a range of offer through the levels, to suit employers who are wanting to use their levy to procure higher level skills training through Apprenticeships at level 4 and above.

- Maintaining our sector leading performance for achievements and timely achievements whilst ensuring the higher levels of learner and employer satisfaction levels we have experienced in the past are also retained. And doing this against the new framework of End Point Assessments.

With regard to STEM education the challenge is to turn young people on to the wealth of exciting careers in these disciplines and challenge outdated perceptions, particularly of manufacturing and engineering – of dirty, labour intensive environments, which is anachronistic when compared with the reality of today's industries. As STEM represents the jobs of the future in sectors as diverse as health automotive, engineering and aerospace, the challenge is to make sure we inspire young people to enter these fields by promoting the vibrancy of these sectors and the long term sustainable job prospects offered in them.



OUR RESPONSE

Dudley College of Technology has continued to respond positively to the new challenges and opportunities presented by the changing context in which Apprenticeships operate.

Despite a decreasing demographic for 16-19 year olds we have continued to maintain our market share in terms of the number of apprentices we are working with, 3,853 apprentices in college in 2017/18. We are pleased to see the continuation of high numbers of 16-18 year olds accessing the Apprenticeship route with 1,379 young apprentices in college in 17/18 a fall of just 134 learners on the previous year.

This has been achieved as we have sought to bolster our Business Development Team with the recruitment of an additional member and the creation of a team Supervisor. Moreover the activity of our Employment Hub has been expanded as they have taken on a wider remit around employer engagement including that of Industry placements for T levels.

The college has also managed to maintain a broad mix and balance of Apprenticeship provision largely because we have for several years offered the types of training our local and regional employers have valued and are therefore happy to continue to invest in. As a large part of our Apprenticeship offer is in the key LEP sectors of engineering, manufacturing and construction our portfolio meets the needs of both local and regional SME and large employers. Because of our well-established track record in these sectors we have also been able to secure some significant new business through major Apprenticeship Levy contracts with national employers including Tesco and Lander.

Throughout this transitionary time we also have maintained high achievement rates. In 2017/18 our overall achievement rate was 78.2% which represented a fall of 4.7% on the previous year but was still significantly above the national rate of 67.7%. There was also a marginal fall in timely achievements from 72.7% in 2016/17 to 67.8% but still massively above the national average of 59.4%.

By investment in dedicated facilities including the £12m invested in Dudley Advance II Centre for Advanced Building Technologies and the £5m. In the Construction Apprenticeship Training Centre (CAT) we are continuing to provide the first-class training environments with leading edge equipment employers value their apprentices being able to access and are essential if they are to be fully able to contribute to their businesses.

Employer and learner satisfaction has also been maintained with employers stating they are highly satisfied with the overall quality of the training we provide (scoring a satisfaction rating of 9.05 out of 10). Learners' overall satisfaction remained broadly in line with previous years with a rating of 77 out of 100.

With regard to promoting STEM the college has invested in a number of new initiatives to raise the profile of STEM related careers. One of these is the sponsorship of the **STEM Challenge** a competition which involves over 30 secondary schools in the Black Country participating in a research and development activity based around product innovation.

This programme delivered in conjunction with the Midland News Association title – The Express and Star, is a year-long and involves a host of industry mentors working with young people in their schools to design and build a new product against a challenging brief. The college provides access to its facilities so that prototypes can be built and the schools can take advantage of resources such as the 3D printer and CNC machines. Culminating in an event that brings the schools together for judging and prize giving. The STEM Challenge is a tangible way in which the college is looking to place STEM at the core of its activities. With promotion of the event through the newspapers many channels including online, there is a rolling programme of positive messaging around STEM related careers.

With specific regard to Apprenticeships: data shows the percentage of apprentices following a STEM related programme of study, has stayed similar to previous years with 40% of all apprentices following STEM programmes in 2017/18 compared to 40% in 2016/17.

PROGRESS TO DATE

In overall terms Dudley College of Technologys progress in the provision and delivery of Apprenticeships has been good and has seen significant alignment to both the national Industrial Strategy, and the West Midland Combined Authority Regional Skills Plan.

We continue to build our employer networks working closely in the collaboration of the design and type of Apprenticeships we offer. This has stood us in good stead and is one of the reasons why employers we work with have continued to invest in Apprenticeship training as we are remaining responsive to our market by offering the kind of apprentices our local/regional employers want to invest in.

We have made good progress in moving our provision from frameworks to standards and have expanded our Higher Apprenticeship provision to include programmes such as: Advanced Manufacturing Engineering level 4 (with either a Mechanical or Electrical pathway available) and Operational Departmental Manager level 5.

By mapping our existing frameworks to standards we are phasing out frameworks and in the academic year 2017/8 half of all of our Apprentices are on the new programmes. We have also developed a number of new standards based on dialogue with employers including a new Chef De Partie and Commis Chef Apprenticeship programme.

NEXT STEPS

Our new Strategic Plan 2019-2021 will set even more stretching targets for our Apprenticeship engagement with an aspiration that by the end of the plan we will expand our curriculum offer further.

If the college's bid to develop an Institute of Technology (IOT) is successful, which will be known in spring 2019, a whole new impetus to our Apprenticeship offer will be put in place as we bring new activity forward to create the unique proposition for the IOT that complements the offer of the college. The IOT will expand the higher level Apprenticeship offer locally, ensuring Black Country Firms, especially SME's will have the skills they need to innovate and provide higher level jobs.

Through our Business Development Team we will continue to meet with employers and shape our curriculum according to their needs and in order to offer a streamlined service to them we will investigate the possibility of working with external stakeholders to establish an Independent End Point Assessment body, which we will have a controlling interest in.

We will continue to place a focus on promoting the STEM curriculum and working with Years 7-11 in our feeder and Dudley Academies Trust schools to present an accurate and inspirational picture of career pathways in STEM related fields.

Appendix data sources

1. Apprenticeship and levy statistics: January 2019 (reported to date) OFFICIAL STATISTICS:
https://www.gov.uk/government/statistics/apprenticeship-and-levy-statistics-january-2019

2. Overall Apprenticeship performance Released November 2018:
https://www.gov.uk/government/statistics/further-education-and-skills-november-2018

3. Apprenticeship and levy statistics: December 2018 (reported to date) OFFICIAL STATISTICS:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/766962/Apprenticeship-and-levy-statistics-December-2018-2.pdf

4. FE News https://www.fenews.co.uk/fevoices/16833-the-impact-of-the-levy-on-apprenticeship-quantity

Dudley Insight catalogue:

Issue 1: The STEM Challenge - October 2014
Issue 2: The Maths Challenge - October 2014
Issue 3: The English Challenge - October 2014
Issue 4: The Apprenticeships Challenge - November 2014
Issue 5: The Management of Student Attendance - November 2014
Issue 6: Skills Competitions Success - January 2015
Issue 7: The SEND challenge - March 2015
Issue 8: Meeting Local Enterprise Partnership Priorities - March 2015
Issue 9: The Learning Technology Challenge - April 2015
Issue 10: Work Experience - November 2015
Issue 11: The Mathematics challenge GCSE resits - March 2016
Issue 12: The English challenge GCSE Resits - March 2016
Issue 13: The Mathematics challenge GCSE Resits - The Results - October 2016
Issue 14: The English challenge GCSE Resits - The Results - October 2016
Issue 15: The Apprenticeship challenge - February 2017
Issue 16: Meeting our corporate and social responsibilities - May 2017
Issue 17: Safeguarding and Prevent - May 2017
Issue 18: Measuring Learner Progress - July 2018

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