



Department  
for Education

# **Higher technical education: the current system and the case for change**

**July 2019**

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## Introduction

1. This document is part of the review of higher technical education in England. It is intended to be read alongside the main consultation document. Further data about student characteristics can be found in the impact assessment that also accompanies this consultation.
2. This comprehensive review of higher technical education is the first for many years, working in partnership with Further Education (FE) and Higher Education (HE) providers, Awarding Bodies, employers and others. This review is looking at level 4 and 5 qualifications in subjects aligned to technical routes, from accounting to engineering, management to laboratory science.
3. The review is evidence-led, meaning that we have drawn in expertise, evidence, and user insights to support the development of our proposals. In August 2018, we published the Review of Level 4 and 5 Education Interim Evidence Overview,<sup>1</sup> working closely with a range of academics and other organisations to gain a better understanding of current provision at level 4-5. In February 2019, we published the Review of the Level 4 and 5 qualification and provider market,<sup>2</sup> which included an investigation into factors affecting the design and development of level 4-5 qualifications and barriers to their provision. Since the review was launched, the government also announced the Post-18 Review of Education and Funding, which is considering level 4-5 education as part of its remit. The report by the Independent Panel was published on 30<sup>th</sup> May 2019.<sup>3</sup> Conclusions of the Post-18 Review will be announced later this year.
4. The evidence base developed throughout the review suggests that there are a number of interrelated challenges within the current system that are likely reducing the effectiveness and take-up of level 4-5 education. This document describes these challenges and provides the case for reform.

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<sup>1</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

<sup>2</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>3</sup> [Review of Post-18 Education and Funding](#) (DfE 2019)

## The current level 4-5 system

5. Level 4-5 qualifications sit between level 3 (e.g. A Levels and T Levels, amongst others) and level 6 (e.g. bachelor degrees). They are typically, but not exclusively, technical in nature. This means they aim to provide occupational skills and signal work-readiness to employers. Most students at this level (around 88%<sup>4</sup>) are studying subjects aligned to technical routes;<sup>5</sup> the remainder are studying qualifications whose main purpose is academic progression – for example, a Foundation Degree in History, or a Diploma of Higher Education in English.

**Table 1: Proportion of students undertaking level 4-5 qualifications by sector subject area 2016/17<sup>6</sup>**

Sector subject area	% of L4-5 qualification learners
Health, public services and care	23%
Business, administration and law	17%
Engineering and manufacturing technologies	12%
Education and training	12%
Arts, media and publishing	8%
Construction, planning and the built environment	4%
Agriculture, horticulture and animal care	4%
Information and communication technology	4%
Science and mathematics	4%
Social sciences	3%
Combined/general subject unspecified	3%
Leisure, travel and tourism	3%
Languages, literature and culture	1%
Retail and commercial enterprise	1%
History, philosophy and theology	1%
Preparation for life and work	0%

6. There are a wide range of organisations that develop level 4-5 qualifications. In total, 154 Awarding Organisations (AOs) and 98 Higher Education Institutions (HEIs) develop level 4-5 qualifications. There are currently over 4,000 individual

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<sup>4</sup> [Mapping the higher technical landscape](#) (RCU 2018)

<sup>5</sup> The Sainsbury Review and Post-16 Skills Plan set out fifteen routes describing occupations across the labour market that require technical and higher technical education.

<sup>6</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

qualifications on offer to students at level 4-5; this comprises 1,655 AO-accredited qualifications including 735 with over 5 enrolments. For HEI-accredited qualifications there are 2,734 including 1,786 with over 5 enrolments.<sup>7</sup>

**Figure 1: Description of current level 4-5 qualifications<sup>8</sup>**

- Foundation degrees, which are standalone Level 5 qualifications that are mostly delivered over two years.
- Certificates in HE (CerHE), which are one-year Level 4 qualifications.
- Diploma in HE (DipHE), which are one-year Level 5 qualifications.
- Credits of qualifications, which are small units of either the DipHE or CerHE that are not delivered as a whole programme.
- Diplomas, Certificates, and Awards, ranging from short courses of as little as 10 guided learning hours to two-year qualifications, and offered by a wide range of Awarding Organisations with different brands.
- Higher National Certificates and Diplomas (HNCs and HNDs), mostly around 980 guided learning hours, and HNCs are around 480 guided learning hours;
- National Vocational Qualifications (NVQs), which are work-based competency qualifications, and range from 25 to 500 guided learning hours;
- Professional and sector-specific qualifications, which are commonly developed by industry but do not conform to the categories described above. Examples include the AAT Professional Diploma for Accounting and the Level 4 Medium Risk Operator Competence for Non-Hazardous Waste Treatment and Transfer.

7. This range of qualifications is delivered in various institutions across HE and FE, and by private providers. In 2016-2017, just over half (53%) of level 4-5 students were taught in an FE college (FEC), around a third (32%) were in universities, with the rest taught in alternative providers, private training providers, specialist colleges, sixth form colleges, and in adult community learning.<sup>9</sup>

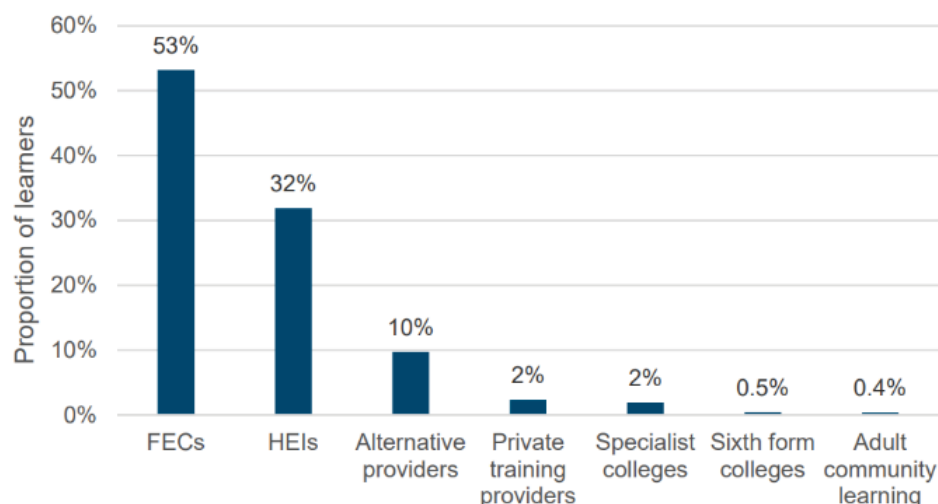
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<sup>7</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>8</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>9</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

**Figure 2: Take up of level 4-5 qualifications by provider type<sup>10</sup>**



*Note: the proportion of learners in further education colleges includes learners on HEI franchise agreements.*

*Source: ILR and HESA HEI and AP data, 2016/17*

Level 4-5 qualifications are taken by two groups of students:

### **Young students (under 21s)**

- Currently, young students account for only 21% of all students on higher technical courses aligned to technical routes.<sup>11</sup> This group includes students who have recently completed, a level 3 qualification (such as an A Level or technical equivalent, e.g. T Level) or a level 3 apprenticeship.

### **Mature students (21+)**

- Mature students (21+) are more likely to have already entered the workplace and could be using higher technical study to upskill or retrain in order to gain a promotion or maintain their employability. Mature students make up the majority of current higher technical students, with the average age of students being 30.<sup>12</sup> In 2015-16, over half of all higher technical students were studying on a part-time basis.<sup>13</sup>

<sup>10</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>11</sup> [Mapping the higher technical landscape](#) (RCU 2018)

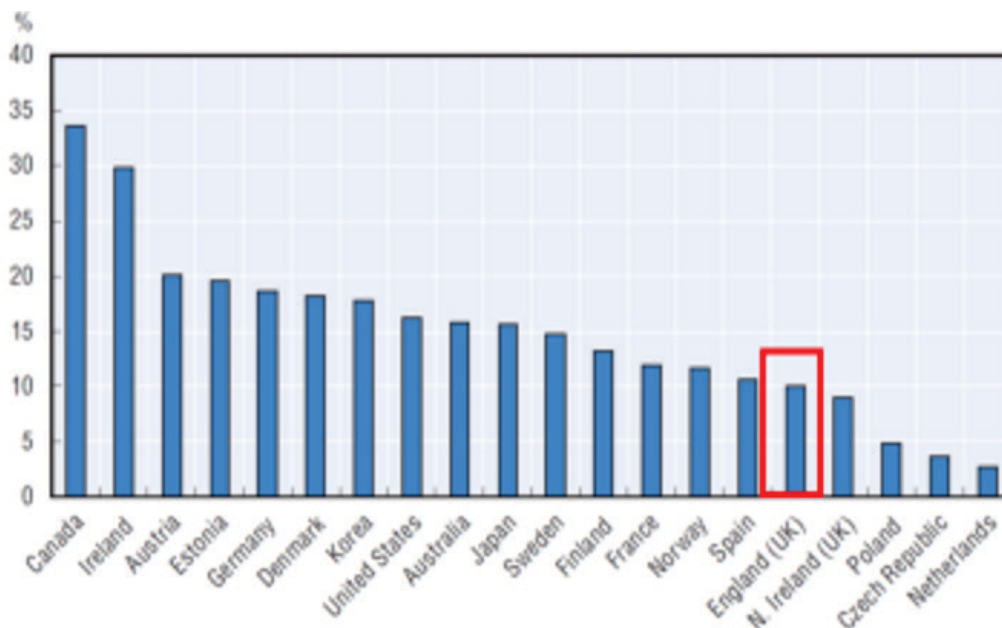
<sup>12</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>13</sup> [Mapping the higher technical landscape](#) (RCU (2018)). This is a figure for all students but includes mature students.

## Uptake of level 4-5 is low in England compared to other countries and other education levels

8. Higher technical education uptake is low in England. Only 10% of all adults aged 18-65 hold a level 4-5 qualification as their highest<sup>14,15</sup> compared to around 20% of adults in Germany and as much as 34% in Canada.<sup>16</sup> Based on current patterns, England's position within OECD rankings is likely to worsen. The number of adults aged 18-65 holding a level 4-5 qualification includes older workers who were more likely to complete a level 4-5 qualification when more students studied at this level and when it represented a larger share of HE.

**Figure 3: Proportion of adults holding a level 4-5 qualification as their highest<sup>17</sup>**



<sup>14</sup> Level 4-5 defined as 'professional education and training'.

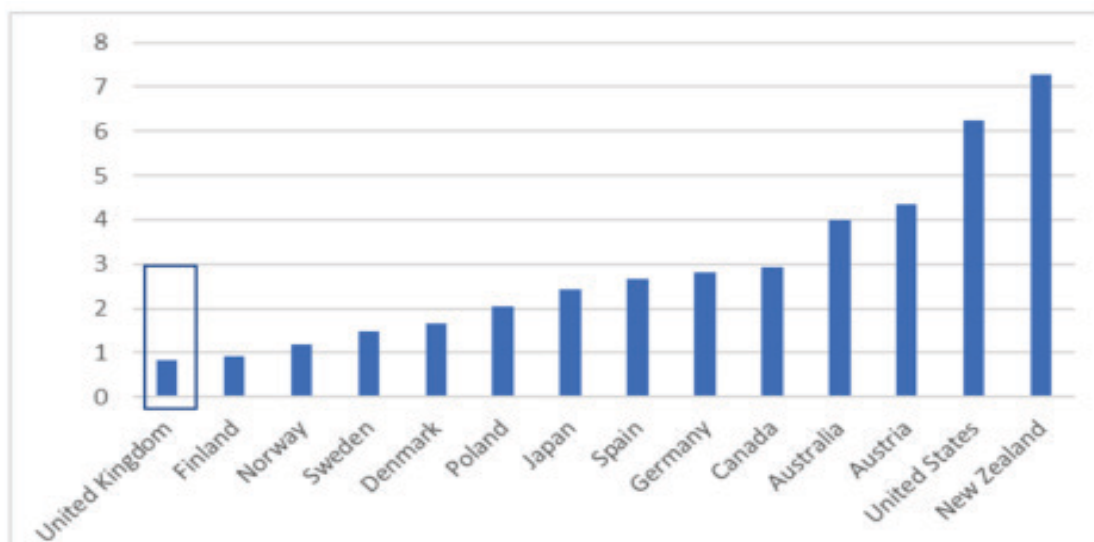
<sup>15</sup> [Skills beyond school - synthesis report](#) (OECD 2013)

<sup>16</sup> [Skills beyond school - synthesis report](#) (OECD 2013)

<sup>17</sup> [Skills beyond school - synthesis report](#) (OECD 2013)

9. England also appears lower in international rankings on the number of new people studying and completing a level 4-5 qualification.<sup>18</sup> Over time, this trend would reduce the total volume of skills at this level.

**Figure 4: Number of people completing a level 4-5 programme per thousand in the population<sup>19</sup>**



10. Level 4-5 uptake is also very low compared to other levels of education. Uptake has fallen over time as a share of HE and, since the 2000s, in absolute terms, despite attempts at reform over the same timescale<sup>20</sup> (see Annex A for a brief history of higher technical qualifications). In 2016-17, only 187,000 people were studying for qualifications at this level, compared with around 2 million people studying across level 3 and level 6.<sup>21</sup> In one GCSE cohort, only 4% of students went on to achieve a level 4-5 by the age of 25;<sup>22</sup> comparatively, over a quarter went on to have a level 3 as their highest qualification, and similar levels level 6.

<sup>18</sup> [The missing middle](#) (Simon Field 2018)

<sup>19</sup> [The missing middle](#) (Simon Field 2018)

<sup>20</sup> [Sub-bachelor higher education in the United Kingdom](#) (QAA 2017)

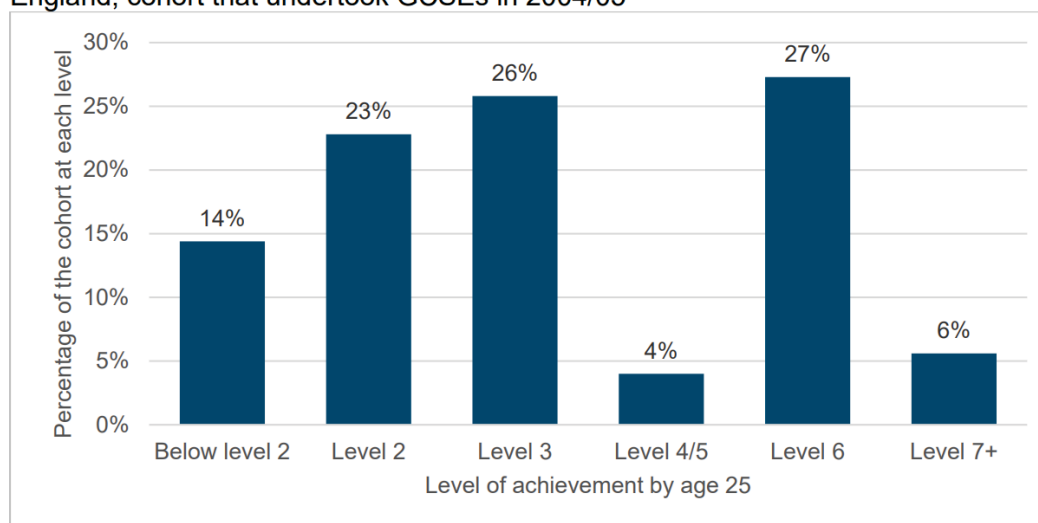
<sup>21</sup> [FE and skills participation demographic tool](#) (DfE 2017/8)

<sup>22</sup> [Post-16 education: highest level of achievement by age 25](#) (DfE 2018)



**Figure 5: Highest level of qualification achieved by age 25<sup>23</sup>**

England, cohort that undertook GCSEs in 2004/05



Source: Longitudinal Education Outcomes Study.

1. Age is based on academic age, which is age at the start of the academic year, 31 August.

11. This points to a prominent 'gap' in participation at levels 4-5. There are no structural or economic reasons to suggest why a gap in learning occurs at level 4-5. Importantly, this gap in level 4-5 has occurred despite a clear unmet need for skills of this type and level.

## There is a growing need for skills at level 4-5

### Skills shortages at higher technical level

12. Despite the low take-up of level 4-5 qualifications, evidence points to a substantial demand for higher technical skills which is not being met by the current education and skills system. The Employer Skills Survey 2017 found that some of the most persistent skills shortages were in skilled trades (such as technicians).<sup>24</sup> Other research suggests that there is an acute shortage of technician-level STEM skills which can be attributed to an undersupply of people with level 3-5 vocational qualifications over the last 20 years.<sup>25</sup>
13. Labour market analysis shows that this demand is growing. In the UK, Working Futures estimates show that Associate Professional and Technical occupations will

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<sup>23</sup> [Post-16 education: highest level of achievement by age 25](#) (DfE 2018)

<sup>24</sup> [Employer skills survey 2017](#) (DfE 2018)

<sup>25</sup> [Delivering STEM skills for the economy](#) (NAO 2018)

experience over 10% growth up to 2024 from 2014.<sup>26</sup> Roles in this occupation group - for example, science and engineering technicians - utilise higher technical skills. Automation is forecast to affect up to a third of jobs in the UK, concentrated amongst lower level roles.<sup>27</sup> Therefore, workers may need to upskill and move into these higher technical occupations. Britain's departure from the EU, and the end of free movement, may also accelerate demand for higher technical skills.

14. Skills gaps at the higher technical level may be holding back the productivity of the workforce. The UK has had a long-term labour productivity 'gap' with our leading competitors; in Germany, France and the US, the labour force is around a quarter more productive than the UK.<sup>28</sup>

### **Skills mismatch within the current system**

15. Alongside skills shortages at higher technical level, evidence suggests a persistent skills mismatch is rendering the current system less effective at providing the skills that the economy values.

### **Degrees**

16. Despite strong growth in the numbers of the population with an undergraduate degree, businesses are reporting a shortage of people with technical skills, especially in the STEM sector.<sup>29</sup> Evidence shows that graduate-level skills do not always align directly with the skills required in technician roles; particularly in engineering-related occupations, where technicians are likely to have expertise in particular processes or instruments that graduates lack.<sup>30</sup> Despite their expansion in numbers, degrees still have broad labour market currency and graduates are frequently employed outside the sector which may have need for them. 30.6% of engineering and technology graduates from 2015-16 were neither working in an engineering occupation, nor in the engineering sector, within six months of graduating.<sup>31</sup>

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<sup>26</sup> [UK labour market projections: 2014 to 2024](#) (UKCES 2016)

<sup>27</sup> [The impact of automation on jobs](#) (PWC 2018)

<sup>28</sup> [International productivity statistics](#) (ONS 2018)

<sup>29</sup> [Treating students fairly: The economics of post-school education](#) (Lords Economic Affairs Committee 2018)

<sup>30</sup> [Delivering STEM skills for the economy](#) (NAO 2018)

<sup>31</sup> [Engineering UK 2018: The state of engineering](#) (Engineering UK 2018)

## Apprenticeships

17. The current scale and rate of apprenticeship growth is unlikely to meet all of the predicted demand for technical skills, especially in STEM sectors. The National Audit Office assessed that growth in non-apprenticeship STEM Further Education will be important to meet the full range of labour market needs.<sup>32</sup> As estimated by the Gatsby Charitable Foundation, 700,000 additional STEM technicians will be needed to meet employer demand in the decade to 2024.<sup>33</sup> Higher technical skills are needed in a range of sectors, some of which are relatively new or largely composed of Small or Medium Enterprises, which may not have the capacity to fulfil their technical skill needs through in-house training or apprenticeships.
18. Overall, employers and students benefit from different types of provision for higher technical training to meet their specific needs, and classroom-based learning at this level plays an important role in ensuring flexible and sufficient higher technical training.

## There is low awareness of level 4-5 and varying quality

### Employer awareness and involvement

19. In some areas, higher technical education is well-recognised by employers and students and has a good reputation within industry standards.<sup>34</sup>
20. Also, many professional bodies have their own standards and, often, their own qualifications. In some cases, these qualifications are the industry standard, and are well-recognised by employers in their sector.<sup>35</sup>
21. However, the range of terminology, qualification types, delivery styles and provider types at level 4-5 creates a complex landscape.<sup>36</sup> There is also currently no national assurance that every higher technical qualification is meeting employer needs.

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<sup>32</sup> [Delivering STEM skills for the economy](#) (NAO 2018)

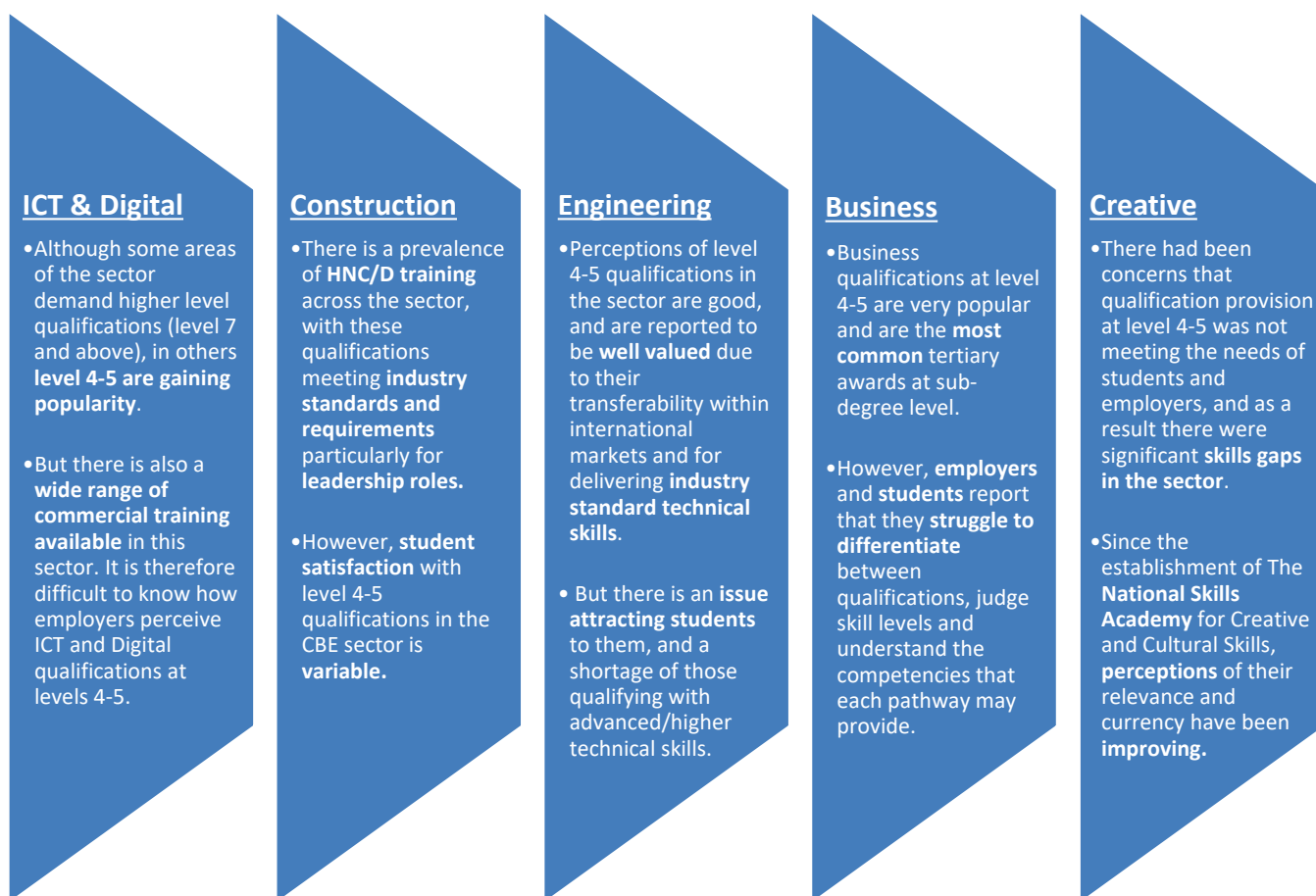
<sup>33</sup> [Delivering STEM skills for the economy](#) (NAO 2018)

<sup>34</sup> [Good practice in level 4 and 5 qualifications](#) (DfE 2018)

<sup>35</sup> [Good practice in level 4 and 5 qualifications](#) (DfE 2018)

<sup>36</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

**Figure 6: Strengths and challenges of level 4-5 qualifications across sectors<sup>37</sup>**



22. Where there is no traditional or longstanding level 4-5 qualification in a sector, and no clear information available to inform employers of the potential value of level 4-5 qualifications, employers tend to focus their recruitment towards more established routes, including school leavers and graduates.<sup>38</sup> A study on good practice in level 4-5 qualifications<sup>39</sup> found that all sectors reported a perceived lack of information on qualifications at level 4-5 and the range of progression routes available.

23. Nevertheless, securing employer engagement is key to building an effective higher technical education offer. Interviews with providers suggest that qualifications are strongest when developed with the involvement of employers. This helps to make the qualification content relevant to industry and builds its quality and reputation.<sup>40</sup> All of this can contribute to meeting local skills needs and improving the employment

<sup>37</sup> [Good practice in level 4 and 5 qualifications](#) (DfE 2018)

<sup>38</sup> [Good practice in level 4 and 5 qualifications](#) (DfE 2018)

<sup>39</sup> [Good practice in level 4 and 5 qualifications](#) (DfE 2018)

<sup>40</sup> [Good practice in level 4 and 5 qualifications](#) (DfE 2018)

prospects of students.<sup>41</sup> International evidence similarly points to the importance of strong employer engagement in qualification development.<sup>42</sup>

**Figure 7: International good practice**

**Key lessons from international practice**

The OECD report *Skills Beyond School* gives key recommendations based on international best practice on features of technical education generally (not specifically higher technical education). The Level 4/5 Review has supplemented this with some focussed international learning to understand how other countries' systems work in practice.

Some key characteristics of international good practice are:

- Alignment with labour market needs, supported by strong employer engagement in qualification development.
- High-quality assessment of vocational skills.
- Work-based learning incorporated into technical education programmes.
- Inclusion of core academic skills like literacy and numeracy.
- Clear progression from lower level technical education to higher levels.
- Balancing national consistency with local flexibility.
- A manageable number of qualifications / clear branding.

**Student awareness and the benefits of level 4-5**

24. The overall low awareness of higher technical qualifications,<sup>43</sup> coupled with a lack of clear information available, leads to a poor understanding of this type of study amongst students and makes the job of promoting higher technical education very challenging.

25. Providers suggest that it can be difficult to attract young school leavers into studying at level 4-5 because information and guidance is more targeted towards undergraduate degrees, and they may be more attracted to the perceived lifestyle and prestige that comes with degree study.<sup>44</sup> Many young people also perceive

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<sup>41</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

<sup>42</sup> [Skills beyond school](#) (OECD 2014)

<sup>43</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>44</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

degrees to provide better value in the labour market and to be more widely recognised by employers.<sup>45</sup>

26. There is a cultural preference for degrees in England,<sup>46</sup> unlike in Germany, for instance, where higher technical education is deeply embedded and widely respected by wider society.<sup>47</sup> It has not always been this way. Historically, advanced courses below the bachelor degree were one of the largest segments of British Higher Education.<sup>48</sup>
27. A report by UCAS found that there is a lack of visibility of options available outside of the traditional route of A Levels to 3 or 4-year degrees.<sup>49</sup> Teachers, parents and other family members, some of whom may have been through the university system themselves, may also steer individuals towards degrees.
28. Some potential students may be encouraged to study at level 4-5 if the benefits are more clearly communicated.<sup>50</sup> Evidence suggests that these benefits include higher wages and greater employability for students completing a level 4-5 course than those with level 2-3 skills.
29. Analysis of median earnings of the 2004-5 GCSE cohort suggests that those who have achieved level 4-5 qualifications by the age of 23 have a median income around £2,000 higher aged 26 than those whose highest qualification is at level 3.<sup>51</sup> The Centre for Vocational Education Research (CVER) also found that by the age of 30, males achieving higher vocational qualifications in STEM subjects are observed to earn above some degree holders.<sup>52</sup>
30. Addressing challenges within the current level 4-5 system can remove barriers to participation, facilitate better life outcomes, and improve social mobility. A strong offer at level 4-5 also allows a more diverse range of students to progress to higher levels of study and employment. For example, as shown in Figure 8, learners studying level 4-5 qualifications are more likely to progress to further learning (30%

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<sup>45</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>46</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>47</sup> [Skills beyond school](#) (OECD 2014)

<sup>48</sup> [Sub-bachelor higher education in the United Kingdom](#) (QAA 2017)

<sup>49</sup> [Progression pathways 2017: pathways through higher education](#) (UCAS 2017)

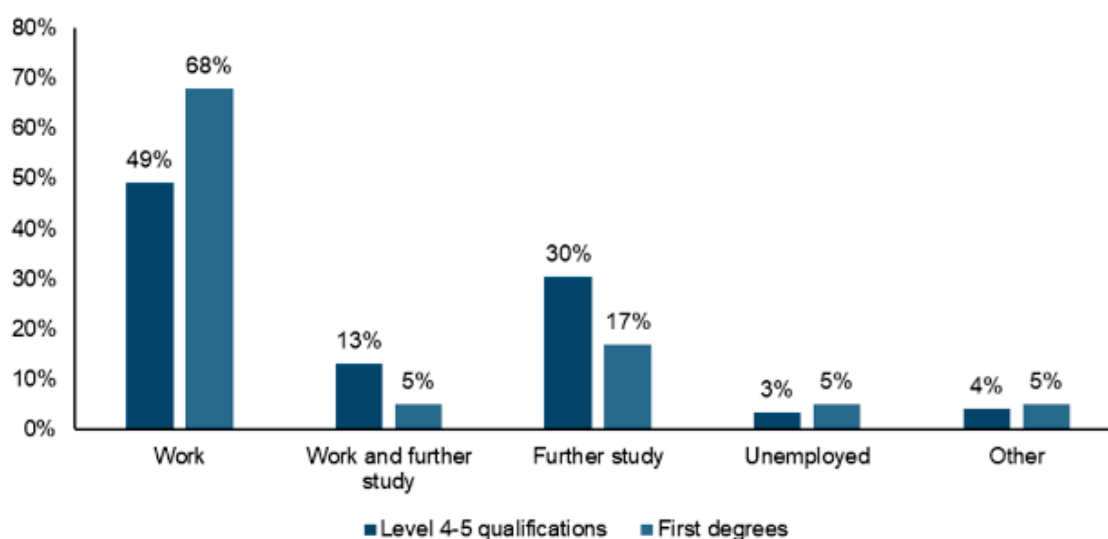
<sup>50</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

<sup>51</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

<sup>52</sup> [A comparison of earnings related to higher level vocational/technical and academic education](#) (CVER 2019)

compared to 17%).

**Figure 8: Destinations of L4-5 learners and first degree learners<sup>53</sup>**



Source: HESA DLHE data 2015/16

31. Classroom-based higher technical courses provide a flexible means for the workforce to gain and retrain in higher technical skills. The majority of current students are part-time.<sup>54</sup> Providers suggest that students are attracted to level 4-5 provision because the course costs and living costs can be lower than three-year undergraduate degrees.<sup>55</sup>

## The delivery of level 4-5 needs proper focus across the provider landscape

32. Level 4-5 programmes are a small part of HEIs' and FE providers' overall offer. They comprise only 2% (111,420 students) of all AO-designed qualifications awarded in FE and 3% (75,632 students) of all HE students.<sup>56</sup> In a 2019 survey of post-16 institutions and providers, the majority of institutions with level 4-5 students felt there were challenges to delivering qualifications at this level.<sup>57</sup> The three key challenges were a lack of funding to support investment in level 4-5 infrastructure and capacity;

<sup>53</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>54</sup> [Mapping the higher technical landscape](#) (RCU 2018)

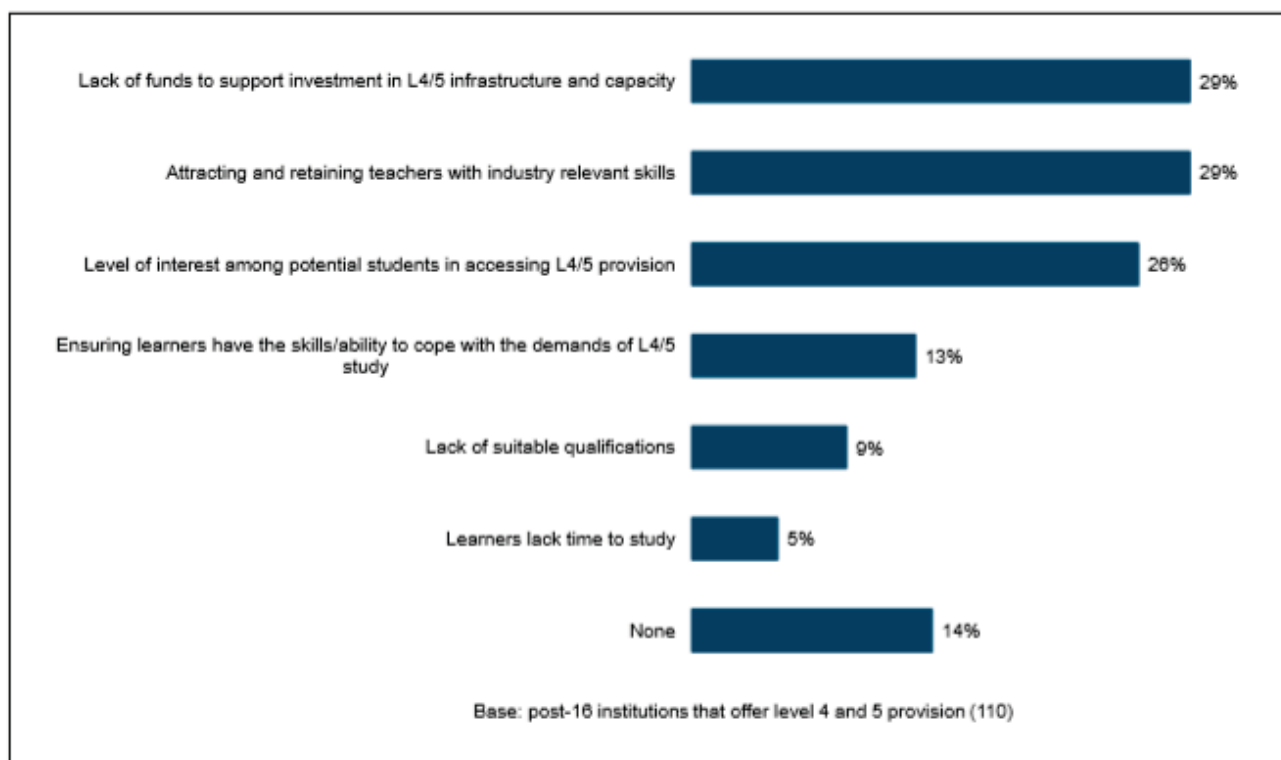
<sup>55</sup> [Level 4-5 provision in England: provider perspectives](#) (York Consulting 2018)

<sup>56</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

<sup>57</sup> [Post-16 institutions and providers omnibus survey](#) (DfE 2019)

attracting and retaining teachers with relevant industry skills; and the perceived level of interest among potential students in undertaking qualifications at this level.<sup>58</sup>

**Figure 9: Challenges to post-16 institutions in offering level 4-5 provision<sup>59</sup>**



33. In FECs that deliver provision across levels 2-5, for example, staff and facilities must meet the needs of a very broad range of students and interact with a number of different funding and regulatory regimes.<sup>60</sup> In order to use their resources effectively, FECs typically need tutors that can teach at levels 2-3 as well as 4-5 (some also teach below level 2).<sup>61</sup> In interviews with FECs, some were candid about their own strategic planning being skewed towards delivery below level 4, as this accounts for a large majority of their total provision.<sup>62</sup>

34. It can be difficult for providers to afford specialist lecturers.<sup>63</sup> Providers have cited recruiting and retaining staff as a problem; in particular, not being able to attract

<sup>58</sup> [Post-16 institutions and providers omnibus survey](#) (DfE 2019)

<sup>59</sup> [Post-16 institutions and providers omnibus survey](#) (DfE 2019)

<sup>60</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

<sup>61</sup> [Level 4-5 provision in England: provider perspectives](#) (York Consulting 2018)

<sup>62</sup> [Level 4-5 provision in England: provider perspectives](#) (York Consulting 2018)

<sup>63</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)



sufficient good quality staff (including those currently working in industry) who can teach effectively at levels 4-5.<sup>64</sup>

35. Providers also reported challenges in improving or expanding facilities, including modernising the equipment used by level 4-5 students such that it maintains industry-relevance.<sup>65</sup> Difficulty in accessing the latest technical equipment may have an impact on course quality.<sup>66</sup>
36. Overall, there is a need to support providers to raise capacity and capability to deliver high-quality courses. Acknowledging and identifying high-quality providers are important steps which could attract industry-experienced staff to the profession, further strengthening the quality signal to students, and helping some providers to prioritise the delivery of higher technical education.

## Conclusion

37. There is no single, simple explanation for why uptake of level 4-5 qualifications, and the resulting supply of skills, is consistently low in England.<sup>67</sup> Evidence suggests that students who complete level 4-5 qualifications can progress to further levels of learning or benefit from higher wages or employability in the labour market. Level 4-5 education could also play an important role in the UK economy, as higher level technical skills are in a shortage yet could be crucial to boost productivity.<sup>68</sup>
38. There is currently no national assurance that every higher technical qualification is meeting employer needs. Low awareness of level 4-5; a lack of clear information available to students, providers and employers; and the cultural bias towards degrees,<sup>69</sup> means that many young people perceive that undergraduate degrees at level 6 provide better value in the labour market and are more widely recognised by employers. This is despite evidence that level 4-5 qualifications can improve earning potential and employability by providing good progression routes and cheaper tertiary education choices.
39. Given the potential benefits of level 4-5 qualifications, current low levels of participation could indicate that the education system is not working as effectively as

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<sup>64</sup> [Level 4-5 provision in England: provider perspectives](#) (York Consulting 2018)

<sup>65</sup> [Level 4-5 provision in England: provider perspectives](#) (York Consulting 2018)

<sup>66</sup> [Review of level 4 and 5 education: interim evidence overview](#) (DfE 2018)

<sup>67</sup> [Sub-bachelor higher education in the United Kingdom](#) (QAA 2017)

<sup>68</sup> [Employer skills survey](#) (CBI 2016)

<sup>69</sup> [Review of the level 4-5 qualification and provider market](#) (DfE 2019)

it could to facilitate learning that is beneficial for individuals, employers and the economy.

## Annex A

### A brief history of higher technical qualifications

There have been a series of developments in higher technical qualifications over many decades<sup>70,71</sup>:

The main form of higher technical qualification was historically the Higher National Certificate and Diploma. HNC/Ds cover a broad range of technical disciplines. Our review suggests they continue to be valued in fields such as construction, manufacturing and engineering.

In the mid-1950s, Diplomas in Technology were introduced as 'degree equivalent' qualifications. They subsequently became bachelor programmes.

In the 1970s, the Diploma in Higher Education was introduced as part of reforms to teacher training. It has since broadened scope to serve specific professional occupations such as nursing.

In the 1980s, work-based NVQs were introduced, covering occupational learning from levels 1-5. These were based on National Occupational Standards (NOS) which specified in great detail the competences required for different occupations.

In 2000, the Foundation Degree was introduced. These were intended to be a HEI-led qualification to expand level 4-5 study and achieve parity of esteem between academic and vocational qualifications.

Since the 1980s, and in some cases earlier, qualifications at levels 4-5 have functioned as staged awards or access routes to the bachelor degree.

Despite these reforms, higher technical education shrunk as a proportion of overall higher education. Professions such as engineering, teaching and nursing increasingly came to expect full bachelor degrees in their recruits. Since the 2000s, higher technical education uptake as a whole has fallen in absolute terms; and between 2008/09 and 2015/16, the number of part-time undergraduate students in England halved, with a significant effect on higher technical education.

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<sup>70</sup> [Sub-bachelor higher education in the United Kingdom](#) (QAA 2017)

<sup>71</sup> [The missing middle](#) (Simon Field 2018)



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Reference: DfE-00143-2019



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