

Review of Tech levels: societal consequences of discontinuation

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This document is in three parts:

1. A brief literature review of the educational and employment outcomes of those who take Level 3 vocational qualifications.
 2. A quantitative analysis of information about who takes Tech levels and a summary of how well they match up with T levels in terms of content and geographical availability.
 3. Recommendations and points for consideration.
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Part 1: Literature review of vocational qualifications

There is a reasonable body of literature on Level 3 vocational qualifications in England, though it is important to note that researchers typically do not distinguish between vocational qualifications offered by different exam boards. This literature was used to investigate who studies for vocational qualifications, and what their educational and employment outcomes are likely to be.

Who studies for Level 3 vocational qualifications in England?

Essentially, the answer to this is 'predominantly low attainers and those who come from disadvantaged backgrounds', rather than 'those who believe that vocational qualifications are the right choice for them'¹.

'Low attainers' are defined as those who did not achieve a 4/C or above in GCSE Maths and/or GCSE English; as of 2017, this was around 2 in 5 students². In 2012-2013, low attainers were more likely than average to be male, Black, non-native speakers of English, eligible for free school meals (FSM), and to have special educational needs (SEN)³.

According to this research³, groups at some intersections of these characteristics were particularly likely to contain high proportions of low attainers, including students who are FSM-eligible and have SEN, or are both FSM-eligible and White. However, the characteristics of low attainers are not stable over time, and between

¹ Vidal Rodeiro, C., & Williamson, J. (2018). Meaningful destinations: using national data to investigate how different education pathways support young people's progression in England. *Research Papers in Education*, 1-24.

² Department for Education (2018). *Revised GCSE and equivalent results in England, 2016 to 2017*. Retrieved from: <https://www.gov.uk/government/statistics/revised-gcse-and-equivalent-results-in-england-2016-to-2017>

³ Velthuis, S., Lupton, R., Thomson, S., & Unwin, L. (2018). *The characteristics and post-16 transitions of GCSE 'lower attainers'*. Retrieved from: http://hummedia.manchester.ac.uk/institutes/mui/igau/lower_attainers_working_paper_oct2018.pdf

2012-13 and 2016-17, low attainers became *more* likely to be Asian (excluding Chinese), Black, or mixed-race or to be a non-native speaker and *less* likely to be male, White, have SEN, or be FSM-eligible³.

Thus, students working towards Level 3 vocational qualifications are likely to belong to groups that are disadvantaged in one or more ways and decisions about these qualifications should take that into account.

The high number of low attainers and those from disadvantaged backgrounds is a partial reflection of two important factors. Firstly, choosing what to study at Level 3 can be extremely difficult given the high stakes for future employment or study and the sheer number of options⁴. The difficulty is correspondingly higher for students who come from working-class backgrounds and whose network may not have the cultural capital to help them navigate these decisions⁵. However, advice and guidance are likely to be better for students studying for vocational qualifications than for those studying for academic qualifications⁶.

This choice has also historically been considered to be more high-stakes for working-class students than students from other social backgrounds because of the financial burden of making the 'wrong' decision, though research in the last decade has found that differences no longer exist between socioeconomic groups in terms of debt aversion related to higher education⁷.

Secondly, the public narrative about vocational qualifications is contradictory: they are simultaneously considered as necessary for the health of the economy *and* as a nonviable alternative to academic qualifications⁸. The latter of these is probably related to low uptake, understanding and recognition of vocational qualifications as routes to higher education¹.

The public narrative contradicts research on vocational education, which indicates that the academic/vocational distinction is not necessary or helpful⁸. These contradictions are partly due to the competing 'logics' of employment (which requires diverse, variably-sized and specific qualifications) and education (which requires standardised, broad qualifications that are easily comparable with other types of qualification at the same level)⁹. T levels can be seen as an attempt to move Level 3 vocational qualifications closer to the education logic.

⁴ Fuller, A., & Unwin, L. (2012). Banging on the door of the university: The complexities of progression from apprenticeship and other vocational programmes in England. *LLAKES Monograph*, 14.

⁵ Shields, R., & Masardo, A. (2018). False equivalence? Differences in the post-16 qualifications market and outcomes in higher education. *Educational Review*, 70(2), 149-166.

⁶ Joy, K. (2018). The effectiveness of post-16 pathways for gaining employment associated with undergraduate degree study. *Journal of Further and Higher Education*, 42(7), 953-968.

⁷ Baker, Z. (2019). The vocational/academic divide in widening participation: the higher education decision making of further education students. *Journal of Further and Higher Education*, 1-15.

⁸ Connolly, S. (2019). Student and teacher perceptions of the differences between 'academic' and 'vocational' post-16 media courses. *Media Practice and Education*, 1-13.

⁹ Raffe, D. (2015). First count to five: some principles for the reform of vocational qualifications in England. *Journal of Education and Work*, 28(2), 147-164.

What are the educational outcomes for students who take vocational qualifications at Level 3?

The number of students with BTECs, and presumably other types of Level 3 vocational qualification, entering higher education (HE) has risen sharply in recent years, as has the number of students with a mix of BTECs and A-levels¹⁰.

Around a quarter of students who are taking Level 3 vocational qualifications at age 17 will go on to attend university, compared to around two fifths of students taking A levels¹¹. However, it is still around eight times more likely that a student with only academic qualifications will enter HE than a student with only vocational qualifications or a mix of academic and vocational qualifications¹². HE students with vocational qualifications are more likely to be mature students, male, and to come from neighbourhoods with low participation rates in HE⁵, which may reflect the demographics of those taking Level 3 vocational qualifications but could also indicate a bias in university selection procedures.

Generally speaking, the likelihood of a student being accepted to university with vocational qualifications is greatly increased if they also have at least one A level⁴. However, the proportion of students with vocational qualifications or a mix of vocational and academic qualifications is not consistent across universities in the UK. Students who followed a vocational or mixed pathway prior to university make up about 4% of students in Russell Group Universities, 10% of students in the 1994 Group, and 33% of students in the MillionPlus Group¹³. This may in part be because some Widening Participation initiatives at universities, designed to increase the numbers of young people entering university from under-represented groups, are limited to students studying for A levels¹⁴ – even though people from under-represented groups are more likely to be studying for vocational qualifications at Level 3.

People with vocational qualifications that are the UCAS-point equivalent of three A levels or one A level are much more likely to progress to HE than those who have a vocational qualification equivalent to two A levels⁴. However, the reasons for carrying on to HE differ: those with the equivalent of three A levels are likely to be people in work participating in apprenticeships who then go on to pursue a Level 4 or 5 vocational qualification, while those with the equivalent of one A level are typically studying A levels alongside their vocational qualifications and are presumably therefore more likely to continue to an academic degree.

Students with vocational or mixed Level 3 qualifications are also more likely to be studying for certain types of degree (e.g. Technologies, Mathematical and Computer Sciences, Education, and Creative Arts and Design) and much less likely to be studying for others (e.g. Languages and Literature, Linguistics and Classics, Medicine and Dentistry, Physical Sciences, and History and Philosophy)¹².

¹⁰ Shields & Masardo (2018). Please note, we cannot tell from the data in Part 1 of this document what other qualifications students are taking alongside Tech levels, so they could be taking other vocational qualifications, academic qualifications, or no qualifications.

¹¹ Hupkau, C., McNally, S., Ruiz-Valenzuela, J., & Ventura, G. (2017). Post-compulsory education in England: choices and implications. *National Institute Economic Review*, 240(1), R42-R57.

¹² Vidal Rodeiro, C., Sutch, T., & Zanini, N. (2015). Progressing to Higher Education in the UK: The effect of prior learning on institution and field of study. *Research Matters: A Cambridge Assessment Publication*, 20, 13-21.

¹³ The Russell Group consists of 24 highly competitive research-intensive universities, the 1994 Group is a now-dissolved group of 11-19 smaller research intensive universities with some overlap with the Russell Group, and the MillionPlus group consists of 21 post-1992 universities.

¹⁴ Baker, Z. (2019). The vocational/academic divide in widening participation: the higher education decision making of further education students. *Journal of Further and Higher Education*, 1-15.

However, we should bear in mind that it is not clear to what extent this is due to students with mixed and vocational qualifications not applying to study certain types of subject or to attend certain types of university due to perceived physical, academic or social boundaries¹⁴, and to what extent it is due to biased university admissions procedures. Certainly, at least some universities do not accept applicants who have vocational qualifications alone⁴, and this appears to be more often the case for more research-intensive universities. For example, while the MillionPlus Group's University of East London's Psychology BSc entry criteria¹⁵ mention A levels, the International Baccalaureate and BTECs, the Russell Group's University College London entry criteria¹⁶ for the equivalent course mention only A levels and the International Baccalaureate.

Degree outcomes are also affected by prior qualification type⁵. Students with vocational qualifications are less likely to achieve a first-class or upper-second class degree than those with mixed qualifications, who in turn are less likely to do so than those with academic qualifications only, and this effect became more extreme in the period from 2009-2013.

This relationship is present regardless of demographic factors like gender and whether they come from a neighbourhood with low participation rates in HE¹⁷, and interacts with how research-intensive a university is: students who have vocational qualifications are less likely to get a first or upper-second class degree the more research-intensive their university. This may be because MillionPlus universities, which are typically less research-intensive, have more experience working with students with vocational qualifications than Russell Group universities¹. This interaction is not present for student with mixed or academic qualifications.

These findings contrast with the perception among people who had completed Level 3 vocational study and a degree and were now in employment that they had gained a wide skill-set that left them well-prepared for academic study in HE or FE (further education)⁶ – though we should bear in mind that this perception may *only* be held by those who become employed after taking this pathway.

The same research⁶ showed that students taking Level 3 vocational qualifications know that they may be limited in the number of institutions where they can study for a degree, but may find this to be a positive if they are at an FE institution that also offers HE because they feel they are making an informed choice if they can continue to study at the same place.

What are the employment outcomes for students who take vocational qualifications at Level 3?

Level 3 vocational qualifications can improve later earnings and occupational status outcomes, but they do not do so to the same extent as academic qualifications at this level⁹.

Since the 2011 Census report¹⁸ on qualifications and employment aggregates vocational qualifications with qualifications gained outside the UK as 'other' qualifications and furthermore does not differentiate between vocational qualifications at different levels, it is hard to tell the exact extent of the employment impact of a vocational qualification.

¹⁵ <https://www.uel.ac.uk/Undergraduate/Courses/BSc-Hons-Psychology>

¹⁶ <https://www.ucl.ac.uk/prospective-students/undergraduate/degrees/psychology-bsc/2019>

¹⁷ Though past research has shown that other measures of social class *do* impact this relationship.

¹⁸ Office for National Statistics (2014). *2011 Census: Qualifications and labour market participation in England and Wales*. Retrieved from: <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/qualificationsandlabourmarketparticipationinenglandandwales/2014-06-18>

Nonetheless, the employment rate for people in the 25-64 age range is slightly higher for those whose highest qualification is two or more A levels compared to those whose highest qualification is 'other', and the unemployment rate is slightly lower¹⁸. This particularly impacts women: the difference in employment rate is around three times larger for women than for men, while the difference in unemployment rate is around twice as large for women as for men. In both cases, differences in rates are smaller for people in the 50-64 range than for younger people.

More specific information is available about post-university employment for those who have taken Level 3 vocational qualifications. Students with academic qualifications are more likely to be in education or employment in the October-March period immediately following graduation than students with mixed qualifications, who are in turn more likely to be in education or employed than students with vocational qualifications¹. Very similar percentages of students who took A levels and took Level 3 vocational qualifications at age 17 are employed at least one day a week at age 21, but the median earnings of those who took Level 3 qualifications are lower, and this difference is larger for women than for men¹¹.

Part 2: Quantitative analysis

Summary

As this section includes many tables and figures, a bullet-point summary is provided. For detailed explanations, please see the page reference in bold at the end of the bullet point.

- Relatively small numbers of students have registered to take Tech levels in the three years since they became available. In total, there have been 3387 registrations: 402 on Business Tech levels, 220 on Entertainment Technology (ET), 2211 on Engineering and 552 on Information Technology (IT). **[p8-9]**
- Tech level students are likely to be older than 16 when they begin a Tech level qualification, and, with the exception of Business students, are overwhelmingly likely to be male. **[p9-12]**
- T levels are all worth the equivalent of 3 A levels in UCAS points, while Tech levels are worth between 0.5 A levels and 3 A levels depending on the option the student chooses. This means that T levels are much less flexible because students may be unwilling or unable to take other qualifications at the same time. **[p13-14]**
- T levels will be phased in over several years, beginning with Construction, Digital and Education routes in 2020 and with seven more (including Health and Science, the only route that has centre information available) in 2021. The full 27 options will be available by 2025. **[p14]**
- While there is a good level of overlap between the content of the Engineering Tech levels and the Construction T level and between the content of the IT Tech level and the Digital T level, there is only a partial overlap between ET and its closest T level match (Digital) and there appears to be no T level option that overlaps with the Business Tech level. **[p15]**
- Centres offering Tech levels and centres offering the best-overlap T levels differ slightly in their geographical locations:

The 2020 wave of Construction T level centres will leave unserved multiple areas where Engineering Tech levels are currently offered, including London. With the 2021 wave, these areas will be mostly filled in, with the exception of an area along the east of England from Cambridgeshire to the East Riding of Yorkshire.

Since there are so few centres offering ET Tech levels and multiple centres that will offer Digital T levels, it is unlikely that students would be left unserved geographically, but this must be balanced against the poor overlap in content.

The 2020 wave of Digital T level centres will leave unserved a small area in the east of England (from Cambridgeshire to Lincolnshire) where IT Tech levels are currently available. However, this area will be filled in by the 2021 wave. **[p15-20]**

- There are no differences in governmental child deprivation statistics in the areas which are currently served by Tech level centres and which will be served by T level centres. **[p21]**

What are Tech levels like, and who studies for them?

Tech levels are available to students in England in four different subject areas and at up to four different levels¹⁹, as detailed in Table 1.

Table 1: Tech level subject area availability (✓ indicates the subject/level combination is available, ✗ that it is not available).

Subject area	Guided learning hours (GLH)			
	360 (= 1 A level)	540 (= 1.5 A levels)	720 (= 2 A levels)	1080 (= 3 A levels)
Business	✓	✗	✓	✗
Entertainment Technology (ET)	✓	✓	✓	✓
Engineering²⁰	✓	✗	✓	✗
Information Technology (IT)²¹	✓	✗	✓	✗

Tech levels have been offered since the 2016-17 academic year. The numbers of students who have registered on each course are summarised in Tables 2-5 below.

Please note this includes withdrawn and absent candidates; some candidates have also registered on multiple qualifications or on the same qualification in different years. However, the large majority of students are taking only one Tech level at a time.

It is not clear whether they are taking other qualifications at the same time, but it is reasonable to assume that at least some are doing so, and that these may be either other vocational courses or academic courses.

¹⁹ AQA (2017). An introduction to our Level 3 technical and vocational qualifications. Retrieved from: <https://www.aqa.org.uk/tech-levels>

²⁰ There are two 720 GLH Engineering options (Design Engineering; Mechatronic Engineering).

²¹ There are three 360 GLH IT options (Cyber Security; Technical Support; Scripting and App Programming) and four 720 GLH IT options (Cyber Security and Security Administration; Networking; Programming; User Support)

Table 2: Numbers of students registered on Business Tech level qualifications from 2016 to 2019.

Qualification	Year			Total
	2016-17	2017-18	2018-19	
Marketing Communications (360 GLH)	77	152	130	359
Marketing (720 GLH)	38	5	0	43
Total	115	157	130	402

Table 3: Numbers of students registered on ET Tech level qualifications from 2016 to 2019.

Qualification	Year			Total
	2016-17	2017-18	2018-19	
Video Games Art and Mechanics (360 GLH)	44	43	33	120
Video Games Art and Animation (540 GLH)	0	26	27	53
Video Games Art and Design (720 GLH)	6	3	2	11
Video Games Art and Design Production (1080 GLH)	0	16	20	36
Total	50	88	82	220

Table 4: Numbers of students registered on Engineering Tech level qualifications from 2016 to 2019.

Qualification	Year			Total
	2016-17	2017-18	2018-19	
Engineering (360 GLH)	408	612	678	1698
Design Engineering (720 GLH)	61	116	163	340
Mechatronic Engineering (720 GLH)	28	67	78	173
Total	497	795	919	2211

Table 5: Numbers of students registered on IT Tech level qualifications from 2016 to 2019.

Qualification	Year			Total
	2016-17	2017-18	2018-19	
Cyber Security (360 GLH)	15	57	72	144
Technical Support (360 GLH)	23	51	49	123
Scripting and App Programming (360 GLH)	45	47	22	114
Cyber Security and Security Administration (720 GLH)	0	3	37	40
Networking (720 GLH)	26	12	11	49
Programming (720 GLH)	18	42	24	84
User Support (720 GLH)	0	0	0	0
Total	127	212	215	554

How old are Tech level students?

Table 6 shows the ages of students on different Tech level courses at the date of registration. Please note ages are given in years plus decimalised months (e.g. 16.75 is equivalent to 16 years and 9 months). In sum, students taking Tech levels are older than the expected average of students beginning Level 3 (16.5; or 16 years and 6 months).

The increased age for Tech levels with higher guided learning hours (GLH) is partly a reflection of some students completing a 360 GLH Tech level and then taking a course with higher GLH, meaning that they are starting the higher GLH course one year after beginning Level 3.

Table 6: Average age at registration in years plus decimalised months for students taking Tech levels from 2016 to 2019.

Qualification and number of Guided Learning Hours (GLH)	Year			Average age across years
	2016-17	2017-18	2018-19	
Business: Marketing Communications (360 GLH)	17.00	16.75	16.63	16.76
Business: Marketing (720 GLH)	17.51	16.58	-	17.40
ET: Video Games Art and Mechanics (360 GLH)	16.85	16.68	16.86	16.80
ET: Video Games Art and Animation (540 GLH)	-	16.69	17.25	16.98
ET: Video Games Art and Design (720 GLH)	16.94	16.50	18.08	17.03
ET: Video Games Art and Design Production (1080 GLH)	-	17.18	17.66	17.45
Engineering: Engineering (360 GLH)	16.86	16.85	16.82	16.84
Engineering: Design Engineering (720 GLH)	16.93	17.13	17.20	17.13
Engineering: Mechatronic Engineering (720 GLH)	17.53	17.30	17.75	17.54
IT: Cyber Security (360 GLH)	17.13	16.98	17.39	17.20
IT: Technical Support (360 GLH)	17.09	17.03	16.95	17.01
IT: Scripting and App Programming (360 GLH)	17.32	17.20	17.06	17.22
IT: Cyber Security and Security Administration (720 GLH)	-	19.03	17.73	17.83
IT: Networking (720 GLH)	17.55	17.32	17.51	17.49
IT: Programming (720 GLH)	17.78	17.18	17.48	17.40
IT: User Support (720 GLH)	-	-	-	-

What genders are Tech level students?

Table 7 shows the percentage of male, female and unspecified-gender students on different Tech level courses. The majority of students on all courses except the 720 GLH Business Tech level are male.

Table 7: Percentage of students taking Tech levels who are listed as female (F), male (M) or unspecified (U), from 2016 to 2019. Most frequent gender of students is highlighted in the Average across years column.

Qualification and number of Guided Learning Hours (GHL)	Year			Average across years
	2016-17	2017-18	2018-19	
Business: Marketing Communications (360 GLH)	F: 51	F: 39	F: 40	F: 42
	M: 49	M: 61	M: 60	M: 58
	U: 0	U: 0	U: 0	U: 0
Business: Marketing (720 GLH)	F: 55	F: 40		F: 53
	M: 45	M: 60	-	M: 47
	U: 0	U: 0		U: 0
ET: Video Games Art and Mechanics (360 GLH)	F: 7	F: 21	F: 15	F: 15
	M: 93	M: 77	M: 85	M: 85
	U: 0	U: 2	U: 0	U: 0
ET: Video Games Art and Animation (540 GLH)		F: 23	F: 30	F: 26
	-	M: 77	M: 70	M: 74
		U: 0	U: 0	U: 0
ET: Video Games Art and Design (720 GLH)	F: 0	F: 0	F: 50	F: 9
	M: 100	M: 100	M: 50	M: 91
	U: 0	U: 0	U: 0	U: 0
ET: Video Games Art and Design Production (1080 GLH)		F: 19	F: 20	F: 19
	-	M: 81	M: 80	M: 81
		U: 0	U: 0	U: 0
Engineering: Engineering (360 GLH)	F: 10	F: 11	F: 14	F: 12
	M: 90	M: 84	M: 86	M: 86
	U: 0	U: 5	U: 0	U: 2
Engineering: Design Engineering (720 GLH)	F: 3	F: 8	F: 13	F: 10
	M: 97	M: 91	M: 87	M: 90

	U:	U: 1	U: 0	U: 0
Engineering: Mechatronic Engineering (720 GLH)	F: 0 M: 100 U: 0	F: 21 M: 79 U: 0	F: 5 M: 95 U: 0	F: 10 M: 90 U: 0
IT: Cyber Security (360 GLH)	F: 27 M: 73 U: 0	F: 2 M: 98 U: 0	F: 10 M: 90 U: 0	F: 8 M: 92 U: 0
IT: Technical Support (360 GLH)	F: 35 M: 65 U: 0	F: 2 M: 98 U: 0	F: 2 M: 98 U: 0	F: 8 M: 92 U: 0
IT: Scripting and App Programming (360 GLH)	F: 16 M: 84 U: 0	F: 17 M: 74 U: 9	F: 23 M: 77 U: 0	F: 18 M: 79 U: 3
IT: Cyber Security and Security Administration (720 GLH)	-	F: 0 M: 100 U: 0	F: 3 M: 97 U: 0	F: 3 M: 97 U: 0
IT: Networking (720 GLH)	F: 12 M: 88 U: 0	F: 33 M: 67 U: 0	F: 9 M: 91 U: 0	F: 16 M: 84 U: 0
IT: Programming (720 GLH)	F: 0 M: 100 U: 0	F: 12 M: 88 U: 0	F: 8 M: 92 U: 0	F: 8 M: 92 U: 0
IT: User Support (720 GLH)	-	-	-	-

Where are Tech levels currently offered?

Figure 1 shows the locations of centres currently offering Tech levels²². While there is a wide spread of centres offering Engineering Tech levels, centres offering IT, Business and especially ET are much more geographically restricted.

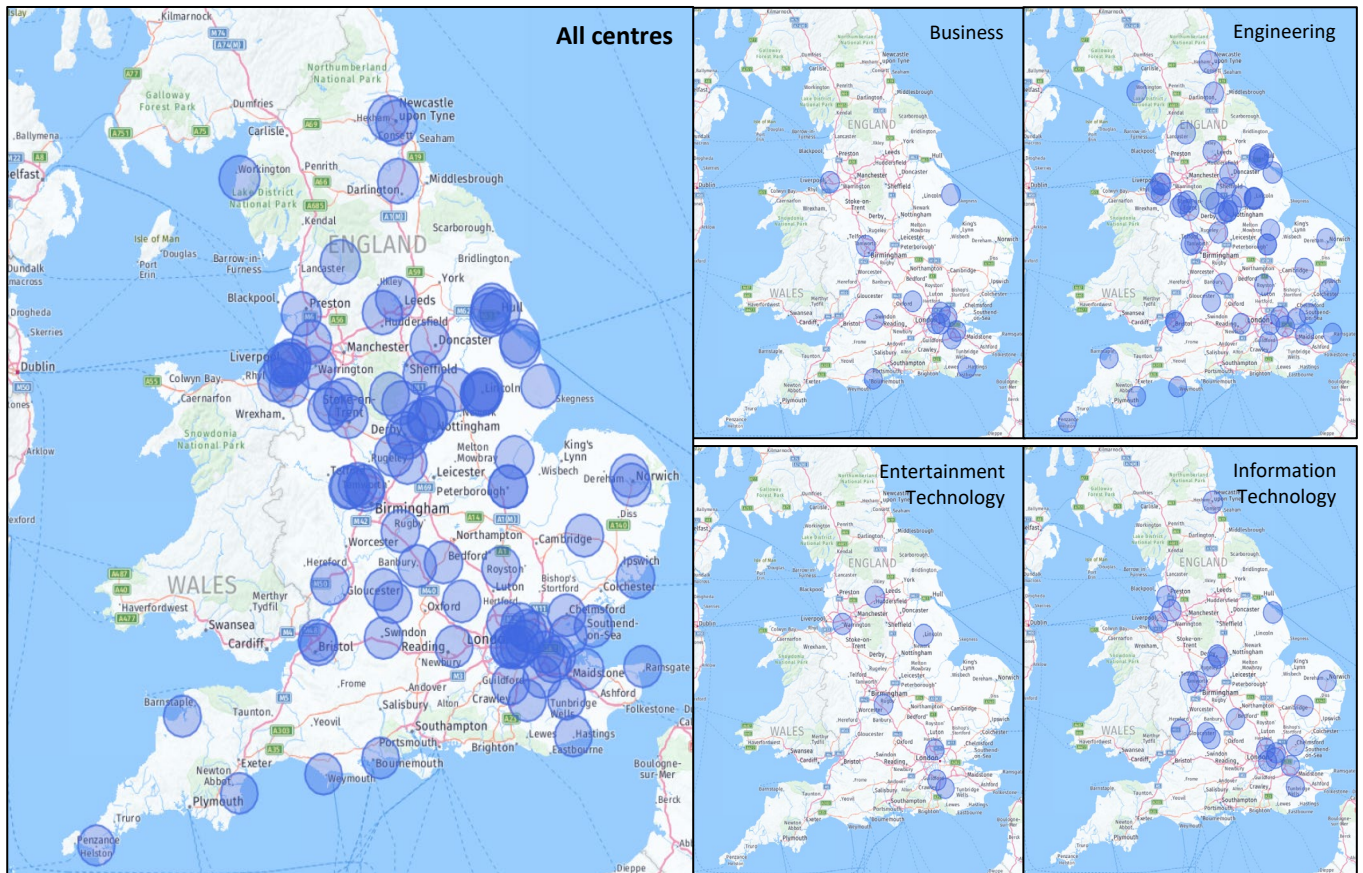


Figure 1: Locations of all centres offering Tech levels (based on postcode of centre plus a nominal catchment area with a ten-mile radius).

What will T levels be like and how well do they match up with Tech levels?

The Department for Education²³ has specified that each T level is the equivalent of three A levels in terms of UCAS points. This means they are less flexible than Tech levels, which range from an AS level to three A levels in terms of UCAS points.

Consequently, students may be less willing or able to take other qualifications alongside T levels than they are to do so alongside Tech levels due to caring duties or need to work part time. There are currently no plans to

²² This and similar figures in the report were created using the mapping tools at www.doogal.co.uk.

²³ Department for Education (2019). *Introduction of T levels*. Retrieved from <https://www.gov.uk/government/publications/introduction-of-t-levels/introduction-of-t-levels>

offer T levels part-time, though students will be able to count hours at their job towards a T level if it is in a relevant area²⁴.

However, T levels cover a broader range of subjects than Tech levels – 27 in total.

Three T level subject areas will be offered from September 2020:

- Digital production, design and development,
- Design, surveying and planning (construction),
- Education.

A further seven T level subject areas will be offered from September 2021:

- Building services engineering,
- Digital business services,
- Digital support and services,
- Health,
- Healthcare science,
- Onsite construction,
- Science.

The remaining 17 are planned to be offered by 2025:

- Accountancy,
- Agriculture, land management and production,
- Animal care and management,
- Catering,
- Craft and design,
- Cultural heritage and visitor attractions,
- Design, development and control,
- Financial,
- Hair, beauty and aesthetics,
- Human resources,
- Legal,
- Maintenance, installation and repair,
- Management and administration,
- Manufacturing and process,
- Media, broadcast and production.

There will also be a T level Transition programme²⁵, a year-long study programme that will help prepare young people for T levels. It is specifically aimed at those “who are not ready to start a T-level at age 16, but who can realistically achieve a T-level by age 19”. This will likely be a substantial chunk of students as nearly 50% of students start Level 3 at age 17, meaning they have either been resitting a Level 2 qualification in the previous year or have repeated a year earlier on in schooling.

²⁴ National Foundation for Educational Research (2019). *T levels research: How are providers preparing for delivery?* Retrieved from: https://www.nfer.ac.uk/media/3496/t_levels_research_final_report.pdf

²⁵ Sezen, C. (2019). *What to expect as the T-level Transition prepares for take-off*. Retrieved from: <https://fewee.co.uk/2019/05/18/what-to-expect-as-the-t-level-transition-prepares-for-take-off/>

Matching Tech level and T level content

T level content is not fully specified yet, but there is outline content for the T levels beginning in 2020²⁶. Comparing this content with Tech levels of the highest available GLH for each subject (assumed to be the closest match), it appears that:

- Business Tech level has no equivalent in the first two years of T levels.
- The Design route of the Engineering Tech level has a good overlap with the Construction T level, though the T level is focused more specifically on building and the Tech level on engineering skills in general. The Mechatronic route of the Engineering T level has a fair overlap with the Construction T level in terms of aspects like materials technology, project management and mathematics in engineering, but the outline content for the T level makes no reference to mechatronic engineering.
- ET Tech level has a partial overlap with the Digital T level, but while the Tech level focuses almost entirely on designing and developing games, the T level has a broader focus on multiple uses of software development in business contexts. It is not clear from the outline content if this includes game design/development.
- All the routes of the IT Tech level (Cyber Security, Networking, Programming and User Support) are mostly or entirely covered by the Digital T level.

Where will T levels be offered?

From 2020, there will be 50 centres in the UK offering T levels²⁷, of which 37 will be offering the T level Transition Programme²⁸. These are broken down by location and route in Table 6. Six of these centres currently offer Tech levels (two Engineering, three IT and one ET).

²⁶ Institute for Apprenticeships & Technical Education (n.d.). *Outline content for first new T levels*. Retrieved from: <https://www.instituteforapprenticeships.org/about/outline-content-for-first-new-t-levels/>

²⁷ Education & Skills Funding Agency (2019a). *Providers selected to deliver T Levels from the 2020 to 2021 academic year*. Retrieved from: <https://www.gov.uk/government/publications/providers-selected-to-deliver-t-levels/providers-selected-to-deliver-t-levels-from-the-2020-to-2021-academic-year>

²⁸ Education & Skills Funding Agency (2019b). *Providers planning to deliver the T Level Transition Programme from the 2020 to 2021 academic year*. Retrieved from: <https://www.gov.uk/government/publications/providers-selected-to-deliver-t-levels/providers-selected-to-deliver-the-transition-programme-from-the-2020-to-2021-academic-year>

Table 6: T level and T level Transition Programme centre locations from 2020-21.

Region	Total providers	Offering Transition Programme	Route		
			Digital	Construction	Education & Childcare
East Midlands	1	1	1	1	1
East of England	4	2	3	2	2
London	4	4	4	0	3
North East	4	2	4	1	3
North West	6	6	6	1	4
South East	9	7	8	3	8
South West	6	6	6	4	5
West Midlands	9	4	7	2	4
Yorkshire & the Humber	7	5	5	3	6
Total	50	37	44	17	36

By the beginning of the 2021 academic year, a further 74 centres will offer T levels²⁹, of which four currently offer Tech levels (one Engineering and ET, one ET, one Business, one IT). In Table 7, these new centres are added to the first wave of providers from Table 6. Please note that these numbers may be an underestimate, especially for the Health and Science route, as the first wave providers could be offering more options at this point.

²⁹ Education & Skills Funding Agency (2019c). *Further providers selected to deliver T Levels from the 2021 to 2022 academic year*. Retrieved from: <https://www.gov.uk/government/publications/providers-selected-to-deliver-t-levels/further-providers-selected-to-deliver-t-levels-from-the-2021-to-2022-academic-year>

Table 7: T level centre locations from 2021-22.

Region	Total providers	Route			
		Digital	Construction	Education & Childcare	Health and Science
East Midlands	4	4	3	4	3
East of England	11	9	5	8	5
London	13	9	4	8	5
North East	6	6	3	4	2
North West	21	17	13	14	15
South East	17	15	5	13	8
South West	12	12	7	10	6
West Midlands	17	11	5	8	3
Yorkshire & the Humber	13	10	5	9	5
Total	114	93	50	78	52

Are there geographical areas which will be left unserved or if Tech levels are discontinued?

Using information about centres which currently offer Tech levels and centres which will offer T levels, it is possible to construct maps that show areas where students will likely have access to fewer Level 3 vocational options.

Please note that these maps should be interpreted with caution since they do not include centres offering other types of Level 3 vocational qualification such as BTECs. Maps are provided for Engineering, ET and IT but not for Business (as there is no similar T level course planned to start by 2021.)

Engineering

Figure 2 shows the geographical locations of centres offering Engineering Tech levels and Construction T levels. In the event that Engineering Tech levels are withdrawn for the 2020-21 academic year, there will be a large geographical area – including London – that is left underserved. However, this gap is largely filled in by 2021, leaving a smaller gap along the east of England from Cambridgeshire to the East Riding of Yorkshire.

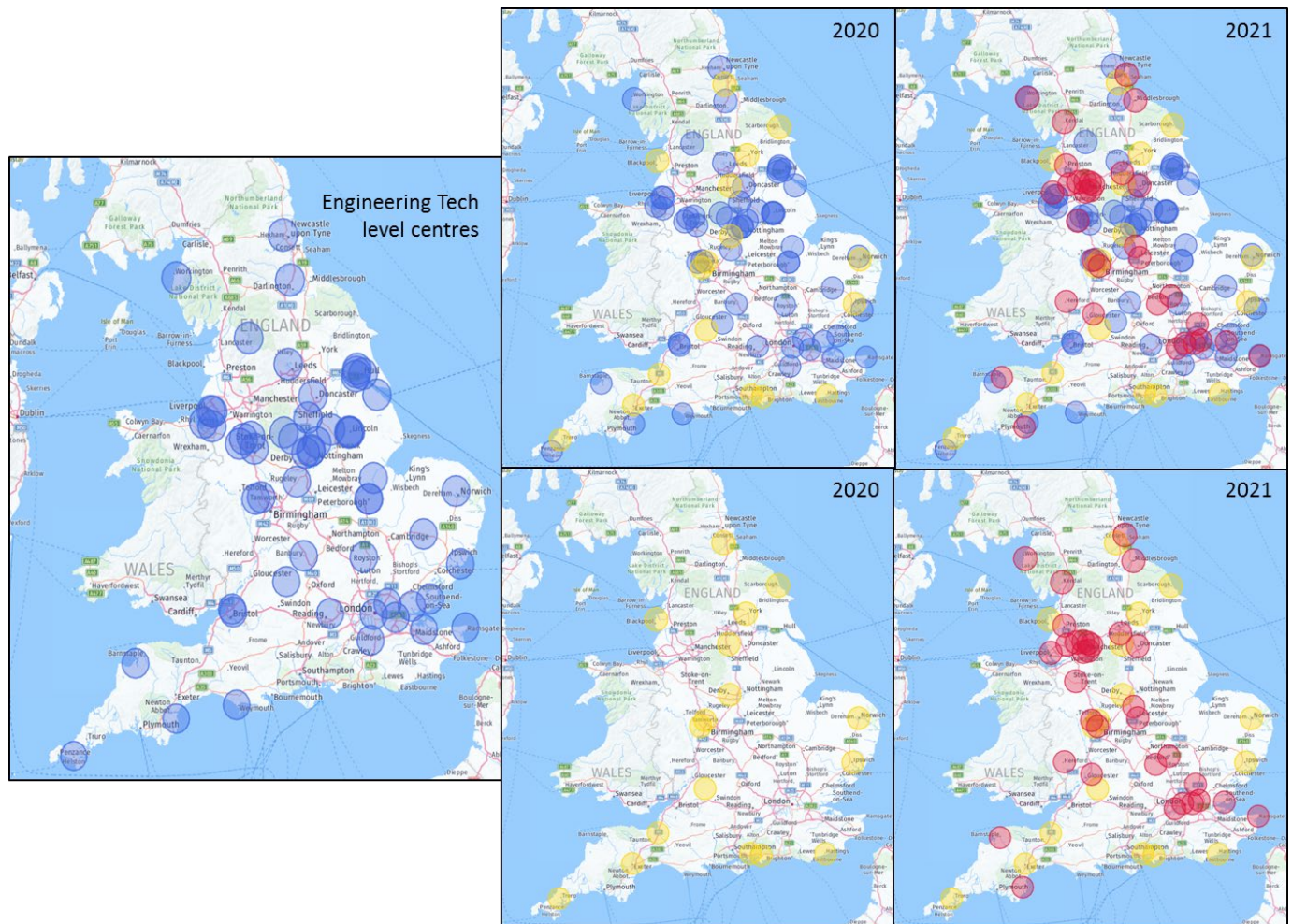


Figure 2: Leftmost map shows locations of all centres offering Engineering Tech levels. Four smaller maps show locations of centres offering Construction T levels from 2020 (yellow) and 2021 (red), with (top row) and without (bottom row) centres offering Tech levels. All circles are based on the postcode of the centre plus a nominal catchment area with a ten-mile radius.

ET

As Figure 3 shows, centres offering ET Tech levels are very geographically restricted, with no availability in the far north of England, East Anglia, the Westcountry and the South West. Centres that will offer Digital T levels are far more widely spread and cover most of the areas that are already served by centres offering ET Tech levels, but it is unclear whether students would wish to take a Digital T level instead of an ET Tech level since there is only a partial overlap in the subject matter.

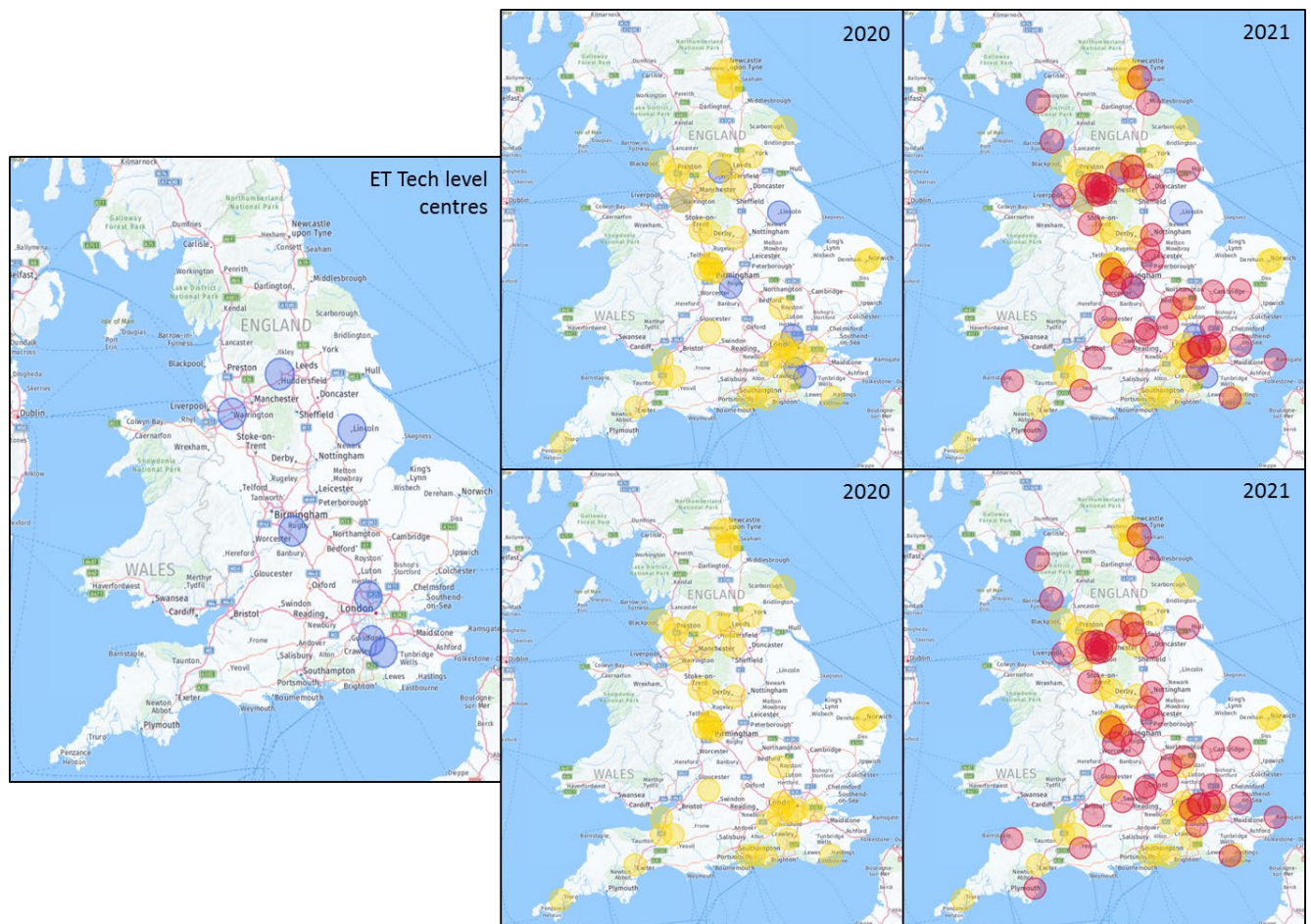


Figure 3: Leftmost map shows locations of all centres offering ET Tech levels. Four smaller maps show locations of centres offering Digital T levels from 2020 (yellow) and 2021 (red), with (top row) and without (bottom row) centres offering ET Tech levels. All circles are based on the postcode of the centre plus a nominal catchment area with a ten-mile radius.

IT

As shown in Figure 4, centres offering IT Tech levels are also relatively geographically restricted, with no availability in the South West, Westcountry, and much of the far north of England. By 2020, most of the areas where IT Tech levels are available will also be covered by Digital Tech levels, with the exception of an area in the east of England stretching from Cambridgeshire to Lincolnshire. By 2021, this area will also be covered.

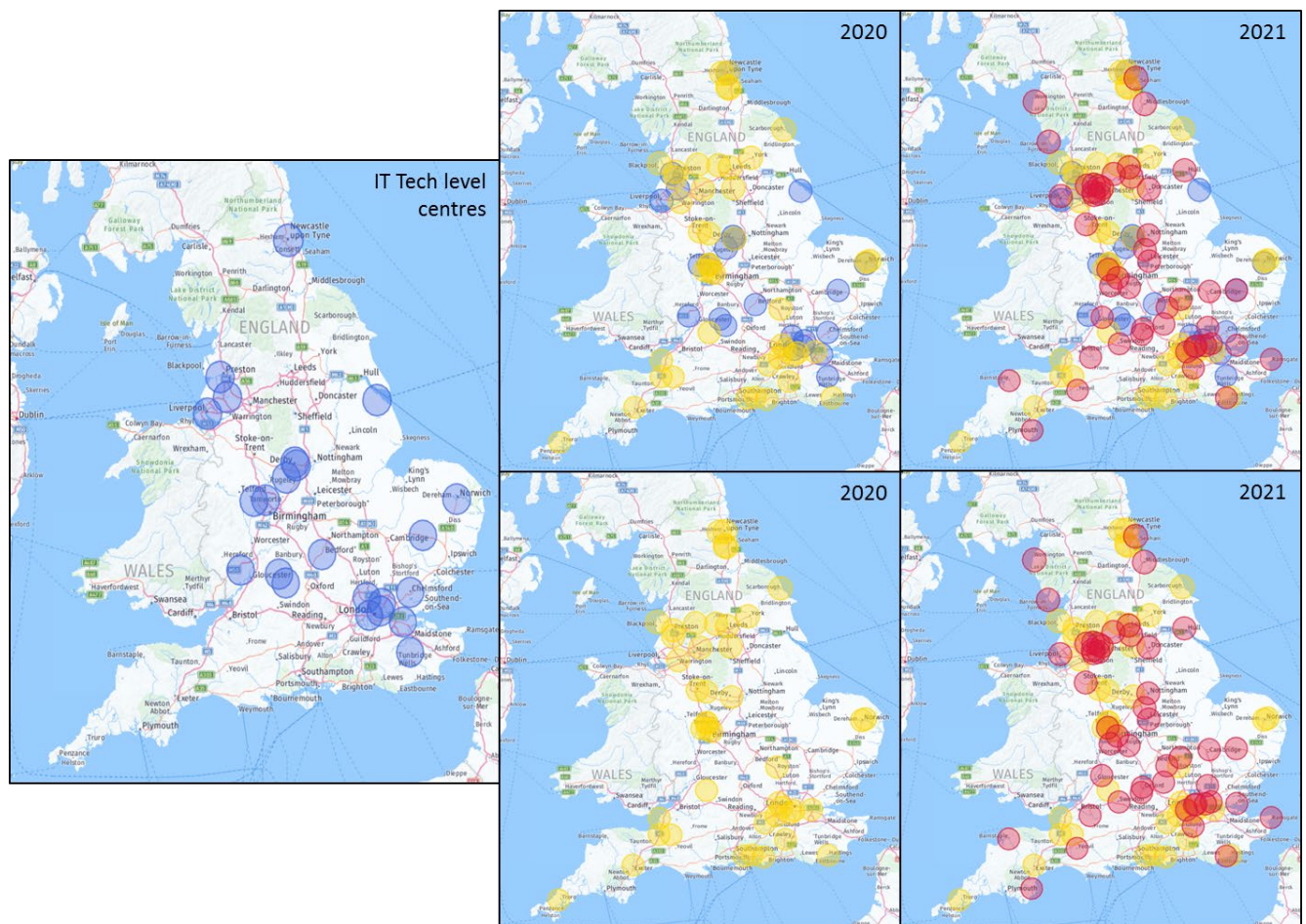


Figure 4: Leftmost map shows locations of all centres offering IT Tech levels. Four smaller maps show locations of centres offering Digital T levels from 2020 (yellow) and 2021 (red), with (top row) and without (bottom row) centres offering IT Tech levels. All circles are based on the postcode of the centre plus a nominal catchment area with a ten-mile radius.

Deprivation statistics

To check whether the areas in which Tech levels are offered and in which T levels will be offered are different in their levels of deprivation, the Income Deprivation Affecting Children Index (IDACI) ranks for the postcodes of each centre³⁰ were acquired. IDACI is a UK government measure of the proportion of children aged 0-15 years who are living in families who are deprived due to low income; ranks are based on that proportion in small areas of approximately 650 households and range from 1 (most deprived) to 32,844 (least deprived)³¹. Since we do not know student addresses, a centre's IDACI rank provides a useful proxy for the likely deprivation levels of its students.

Independent t-tests were used to compare the IDACI ranks of current Tech level centres and first wave T level centres, as well as current Tech level centres and all T level centres. These were also broken down by subject area, comparing Engineering Tech level centres with Construction Tech level centres, and ET Tech level centres/IT Tech level centres with Digital T level centres. None of these comparisons revealed a difference in the levels of deprivation, so it is unlikely that the removal of Tech level centres would particularly impact already-deprived students.

³⁰ Using <http://imd-by-postcode.opendatacommunities.org/>

³¹ Ministry of Housing, Communities and Local Government (2015). *English indices of deprivation 2015, Supplementary indices - Income Deprivation Affecting Children Index and Income Deprivation Affecting Older People Index*. Retrieved from: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

Part 3: Recommendations and points for consideration

1. Whatever decision is made, the number of students that is impacted will be quite small – there have been a total of 3387 registrations on Tech levels since 2016. However, given the general demographics of those taking vocational qualifications, those who are impacted are likely to be already disadvantaged in some way (e.g. they are more likely to be Black, a non-native speaker of English, FSM-eligible, or with SEN).
2. There is an incomplete overlap in content between Tech levels and the earliest T levels. While IT Tech levels match well with Digital T levels and Engineering Tech levels match fairly well with Construction T levels, there is only a partial overlap between ET Tech levels and the nearest-match Digital T levels, and no good match at all for Business Tech levels.
3. There is also an incomplete overlap in geographical locations of centres offering Tech levels and which will offer T levels. The biggest problem here is likely to be that the first wave of Construction T level centres in 2020-21 includes no centres in London, though this will be rectified with the second wave in 2021-22.
4. Given the complexities of the Level 3 qualification and vocational qualifications landscape and the patchiness of advice and guidance, students struggle to know what to choose to study at Level 3, especially if they are from working-class backgrounds. Discontinuing Tech levels might therefore be helpful for 16-year olds and especially working-class 16-year-olds because it lowers the number of options, making the decision less complex.
5. The largest problem is likely to be that T levels will be the equivalent of three A levels in terms of UCAS points, while Tech levels can be the equivalent of an AS level or one, two or three A levels (with some variation across subjects, but all offer the equivalent of an AS level or one A level). Consequently, T levels will offer much less flexibility to students than Tech levels. This could have several effects:
 - a. **Reduced flexibility.** For example, a student will probably not be able to take a T level alongside another qualification due to lack of time, whereas they can currently take a Tech level alongside another qualification. This may also cause difficulties for students who need to work to financially support themselves or who have caring duties. There do not appear to be any plans to make T levels available part-time, though students who need to work can count their job hours towards their qualification, providing it is in a relevant field.
 - b. **Reduced access to university.** Following on from the above point, it is easier for a student to get into university with vocational qualifications if they also have at least one A level, a factor which likely also makes more difference to application success the more research-intensive the university (however, see the next point for complicating factors).
 - c. **Trouble ‘fitting in’ at university.** Students who exclusively do vocational qualifications may perceive that some higher education institutions are beyond physical, academic or social boundaries that they do not feel comfortable crossing. Being able to do A levels alongside vocational qualifications may mitigate this self-restriction of choice, and T levels may remove that mitigating factor.
 - d. **Financial difficulties in accessing university admissions processes.** Being unable to study for A levels alongside vocational qualifications may limit access to Widening Participation schemes, which are in at least some cases restricted to students studying A levels. In turn, this would limit access to open days, auditions and other means of learning about higher education institutions for the poorest students who are reliant on Widening Participation funds for the costs of travel and accommodation. There is as yet no information on whether students working towards T levels would be eligible for Widening Participation schemes.

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- e. **Negative higher education and employment outcomes.** Those students who have solely vocational qualifications at Level 3 are increasingly less likely to receive a first-class or upper second-class degree than those who have solely academic qualifications, especially at research-intensive institutions. While students who have a mix of vocational and academic qualifications (e.g. one Tech level and two A levels) also do worse in terms of their degree outcomes and immediate employment outcomes compared to students with solely academic qualifications, the effect is not as severe as it is for those with only vocational qualifications and is not related to the research-intensity of the higher education institution. While Tech levels allow a hybrid vocational-academic route and less severe effects on later education, T levels will likely effectively force students into the vocational qualification-only route and its attendant more severe effects.