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**Apprenticeships & Technical Education
data and evidence review**

**A report prepared for
The Careers & Enterprise Company**

By

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March 2022

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Acronyms

APS	Annual Population Survey
ATE	Apprenticeships and Technical Education
CVER	Centre for Vocational Education Research
ESFA	Education and Skills Funding Agency
ESS	Employer Skills Survey
FE	Further Education
FAA	Find an apprenticeship
FSM	Free School Meals
HE	Higher Education
HESA	Higher Education Statistics Agency
ICT	Information and communications technology
IfATE	Institute for Apprenticeships and Technical Education
ILR	Individualised Learner Record
IMD	Indices of Multiple Deprivation
ITPs	Independent Training Providers
KS	Key Stage
LEP	Local Enterprise Partnership
LFS	Labour Force Survey
LSIP	Local skills improvement plans
MCA	Mayoral Combined Authority
MCS	Millennium Cohort Study
NEET	Not in Education, Employment or Training
NPD	National Pupil Database
PISA	Programme for International Student Assessment
PPT	Percentage point
SEND	Special education needs and disabilities
SES	Socioeconomic status
SFC	Sixth Form College
SSA	Sector Subject Area
SSF	School sixth form
TVET	Technical and Vocational Education and Training
VQs	Vocational qualifications

Executive summary

The Careers and Enterprise Company (CEC) needs deeper insight into the journeys that young people experience to uncover the barriers and enablers to following apprenticeship and technical education routes. Warwick Institute for Employment Research was commissioned to undertake this literature and data review into journeys towards apprenticeships and technical education at different levels within the wider context of supply. The study focuses on young people up to and including Key Stage 4 and 5.

Aims and objectives

There are two main objectives of the study: to review research evidence and data on what drives and hinders young people's participation in vocational learning pathways; and to review the full range of data sources and how this currently maps and describes young people's journeys.

How young people engage with careers education and make choices

Much of the research and data available does not systematically track the careers information and advice process from actual provision and utilisation into post-16 outcomes, especially in TVET. This has implications in knowing which students from differing SES groups receive trustworthy information on TVET options, how they engage with that information and make choices. Analyses of longitudinal data show that there are myriad pathways young people take post-16 through their initial entry into the labour market and then into their late teens to mid-twenties. The longitudinal surveys that provide most insights cannot provide an up-to-date picture, especially in the years since the 2017 DfE Careers Strategy was published. They also tend to focus on provider pathways (e.g. school and FE) rather than types of education and training (academic and vocational routes within providers).

The decision-making processes of young people are complex and often start at an early age in primary school. Later, decisions are based on a complex interaction between a number of influencers and key elements (e.g. opportunities, beliefs and skills) which affect a young person's assessment of the opportunity for, motivation to, and capability of pursuing different choices. However, most young people are clear that the decisions they make are their own and based on their career aspirations.

The findings show that amongst the most important influencers, and within a number of domains, that not all options are presented equally. Careers education activities young people undertake vary between different data sources, mainly because they are surveys of different age groups and geographies.

In KS4 most young people have access to a range of information, including about apprenticeships and other TVET options. However, a significant minority do not. There is less research and data about career decision making in KS5, and most focus on the university option rather than TVET options.

Parents, teachers, peers and careers advisers are the primary influencers. However, their knowledge of TVET options is limited compared to academic options. In most cases they are less likely to promote TVET options, despite the fact that most parents/carers and young people have a positive view of TVET options.

Significant factors affecting how careers education is provided to young people in Key Stage 4, and the pathways they choose, appear to be level of attainment and whether a school has a sixth form or not. Careers education concerning TVET is 'patterned'. Pupils with lower attainment are directed more towards TVET options, and schools with sixth forms have an incentive to direct (mostly higher attaining) pupils to their provision. This may include TVET options such as BTECs but is mostly A levels. Socio-economic status, gender and whether a young person has SEND all play a role but there is intercorrelation between these factors which makes them difficult to disentangle.

Pupils are often presented with TVET options, especially apprenticeships, but this is not as prevalent as A levels and university options. Whilst the introduction of the Baker Clause made it a statutory requirement for external providers to have access to school pupils, compliance appears to be selective. Some providers feel they do still not have access to school pupils, and if they do, it is only to a particular subset.

T levels provide an additional TVET option to young people, however, little is known about how T levels are presented to young people, what sorts of young people select them and the careers education support they receive.

Opportunities, applications and outcomes

Opportunity structures within education, training and the labour market influence horizons for action and are inter-related, affecting perceptions of what might be available and what is an appropriate decision. This plays a part, whether certain options are available locally and whether the school has a sixth form or not. Within their horizons, people make pragmatically rational decisions, with many unsure about career choices even into KS5 and beyond. The research findings show there is a key role for career guidance not only in supporting the decisions of young people, but in providing them with the tools, confidence and motivation to source and access careers provision.

Many young people in England get access to careers guidance in Key Stages 3, 4 and 5 and this tends to expand close to the key transition point at the end of Year 11 (KS5). The Careers & Enterprise Company (2021) found that, overall, the achievement of Gatsby benchmarks was higher for 16-18 providers than schools without a sixth form. On those benchmarks which relate most to TVET¹ colleges tend to score higher on each sub benchmark, the main exception is encounters with universities. Progressing on to higher levels of study (including TVET options), greater pay and positive outcomes are correlated with higher Year 11 attainment.

For 16-18 year olds, Level 3 TVET options and apprenticeships have increased but this has stalled over the past ten years. Whichever pathways young people choose, they tend to be satisfied with them and their education and training provider.

Whilst much is known about apprenticeships, data on other TVET options is limited. Technical education routes have increased in recent years but detailed information about specific programmes, subjects, where they are being studied and progression is not readily available.

The number of apprenticeships starts for older apprentices has increased significantly over the past decade but 16-18 year old apprentices have declined. This is because employers

¹ Those which are most related to TVET are: 5 - Encounters with employers and employees; 6 - Experiences of workplaces; and 7 - Encounters with further and higher education.

have expanded their recruitment of Level 3+ apprentices, especially Higher level apprentices, and reduced their intake of Intermediate apprentices. Employers are also much more likely to recruit existing employees rather than hire new apprentice recruits. These were existing trends but have been exacerbated by the introduction of the apprenticeship reforms in 2017, especially the apprenticeship levy.

The full impact of Covid-19 on apprenticeships is difficult to gauge given the range of measures introduced to support businesses, employment and apprenticeships, and the changes that were happening longer term and as a result of the 2017 reforms. The pandemic did lead to a reduction in starts and this impacted leisure, travel and tourism the most, but also engineering and manufacturing, and retail. However, the full impact of COVID-19 may continue into the medium term, as the backlog of apprenticeship starts takes time to clear.

Greater support for young people is required when it comes to Technical Education options because they are more complex choices (e.g. often involving a change in provider). This is especially true of apprenticeships which can involve applications through dedicated portals. There is a lack of open data on the apprenticeship application process, for example, how many applications young people make to which apprenticeships and their success rates.

Conclusions

Young people's career decision making is complex with a variety of influences and influencers. These affect not only the types of decisions made, but also the ways in which they are made, and when they are made.

This study has drawn together research and analysis from a range of sources which cover different cohorts of young people, geographical areas, research, sampling strategies and methodologies, and that use a range of indicators and survey questions that are not always consistent. The study was tasked with addressing a number of research questions, and the extent to which the authors were able to do this depended on the information and data available:

- There is a wide range of data available about the TVET career pathways young people choose, and the careers information and advice informing these decisions. However, there is little linking the two together enabling an analysis of the outcomes from different types and sources of careers education, and other information and advice.
- Whilst much is known about apprenticeships relatively little is known about other TVET routes in KS5 (and beyond). This makes it difficult to assess the range of TVET opportunities available to young people post-16. Furthermore, it makes it difficult to assess the supply side. Technical education has expanded but which programmes, subjects and at which providers is not known. This is important for informing the implementation of T levels.
- Much of the literature has focused on the relationship between lower attainment/SES and post-16 choices because this is the main outcome from the analysis. Research based studies on effective practice to address these barriers are limited.

Enablers supporting the take-up of TVET options by young people:

- Presenting and discussing the full range of options as appropriate, authentic and auspicious choices. This involves the training and networking of teachers, careers advisers and education and training providers. It also requires schools allowing external providers access to young people at KS4 so they can present and explain the

benefits of undertaking TVET options, and the potential pathways (including HE) beyond them.

- The Gatsby Benchmarks in England's schools and colleges has significantly raised awareness of young people's needs for good career guidance. Initiatives such as Careers Hubs and Careers Leaders training have an impact on the quality of careers education as far as TVET options are concerned.
- The evidence suggests that if TVET options are presented equally to all young people in KS4 they are more likely to choose them. Furthermore, participation of schools in Careers Hubs, and Careers Leaders training, is more likely to make this happen.
- Parents are often cited as the main source of careers advice. Studies suggest that parents rate vocational options highly, as do young people. However, it appears that parents are less likely to recommend them than academic routes. This might change if the benefits of TVET options are presented to them, including as a route into HE.
- The role of personal agency is a key factor in decision making and whilst young people are subject to a wide range of influences and influencers, most say that the decisions they reach are 'their own' and based on their career aspirations. Personalised careers education is considered good practice in supporting young people.

Barriers to the take-up of, supply of, and information and data concerning TVET options by young people:

- Being made aware of and understanding (and thereby given the opportunity to choose) TVET options does not always happen, especially if young people have/are of higher attainment levels/SES.
- When TVET options are considered and pursued there appears to be less careers support for young people, even though these choices are often more complex, involve young people with fewer levels of support, and some disadvantaged young people.
- Young people report that much careers education in KS4 emphasises academic routes rather than TVET options. This may be because the main influencers may not be impartial and/or fully understand TVET options and the benefits they bring.
- Evidence suggests that young people are provided with information on TVET options, especially apprenticeships, and that they and their parents think these are good options. However, they tend not to be recommended or chosen by pupils with higher attainment/SES.
- The Baker Clause, designed to increase the exposure of KS4 pupils to TVET options, has been tended to be met with 'selective compliance'. Some TVET providers believe they are only given access to a particular subset of pupils.
- The role of apprenticeships in providing a key transition route for school leavers into the world of work has diminished over the past decade. Part of this is due to the impact of the apprenticeship levy. Smaller employers (non levy payers) were more likely to recruit school leavers on to Intermediate apprenticeships, but their overall recruitment has declined since the levy's introduction.
- T levels are a new TVET option in KS5. So far those introduced have been mostly delivered by FE colleges. If this persists, T levels could also be affected by a lack of promotion to young people in KS4, or from a segmented promotion to particular groups

of young people. Current research into T levels has not covered their promotion within careers education or career guidance support in schools, and how they may be successfully promoted to all young people.

- Surveys and datasets outlined in this report are often ‘stand alone’ research and therefore it is quite difficult to compare and contrast the findings as different age groups, geographical areas and definitions are used. Longitudinal datasets do enable an analysis of the impact of careers education and other support on the routes chosen and outcomes but many are now dated. Some current ones are underutilised.

Recommendations

1. Provider based Compass data from the CEC suggests that there are improvements in careers education in schools and colleges. However, unless there is better, contemporary data at pupil/student level, it cannot be known whether this improved practice is impacting on individual young people’s careers choices across TVET options. Given the primacy of young person’s TVET options and skills development needs in recent Government strategies and White Papers, as well as significant subregional interest and funding, the data limitations identified in this report should be addressed. This will help identify effective practices.
2. There is limited information on the main TVET pathways young people take through KS5 and beyond, especially BTEC and similar qualifications. It is not possible, using published DfE data, to differentiate between TVET provision that is delivered in school sixth forms and that delivered by the FE sector.
3. The evidence suggests that those young people undertaking TVET options (especially in KS5) do not receive as much support as those pursuing academic options, even though these choices are more complicated. Such young people should receive more support to help them traverse these more complex transitions.
4. The progression of young people undertaking TVET routes in KS5 is much lower than those taking academic options. Progression pathways need to be emphasised, and in some cases developed, to enhance this advancement.
5. The Baker Clause is only being selectively implemented meaning that a full range of post-16 options are not being presented to all school pupils. To achieve the intent of the Baker Clause, school leaders must receive support to help them deliver this change, for example, through interaction with local or regional ‘Careers Hubs’.
6. A significant gap of immediate concern is careers education that underpins T levels. Existing DfE commissioned research on T levels does not consider the careers education necessary to achieve future T level enrolments. The CEC could use its influence to suggest that T level careers education is considered in future DfE research and evaluations.
7. There is a need to better understand and make greater use of new and emerging apps and chatbots, powered by AI and machine learning. These can potentially be used to good effect in promoting TVET pathways with embedded links to professionally trained careers advisers. There is scope for a directory of reliable careers apps for young people and parents to draw upon. They present new and exciting possibilities on how TVET careers information, advice and guidance can be accessed by young people, teachers and parents 24:7.

8. The LSYPE has provided a great deal of analysis and informed debates around careers information and advice but is now out of date. Other longitudinal datasets – the MCS, Understanding Society and LEO – have the potential to address some of the research questions of this study but tend to be underutilised. The role of school sixth forms in affecting the options presented to young people (and thereby the choices) is an issue that has been discussed for many years but does not appear to have received attention from researchers. This is a research question that the LEO dataset could help inform.
9. Whilst there is a large amount of official data regularly published on the pathways and destinations of young people, much of which is available at the local authority level, it provides too broad an analysis to be useful to practitioners and strategists. The underpinning data does exist that could allow presentation by academic and TVET options within different types of provision, and CEC with its partners can potentially lead the debate on effective ways of doing so.
10. There are a number of regular national surveys that do provide data on careers information and advice and its impact on TVET choices. However, data is often not presented (or able to be presented due to sample size) by age and for England. Given the amount of interest in these questions from a number of career, employer, research and policy organisations, a larger national survey might be organised that allows for more forensic analysis by learner age, regions and demographic groups.
11. Following on from these last three points, the CEC may, through discussions with its partners and with research organisations undertaking longitudinal and other research, explore opportunities to embed key questions on careers information and advice and TVET in order to better understand trajectories and enablers and barriers that impact on participation in TVET pathways.
12. Much data is available on the impact of TVET pathways, and the high levels of satisfaction of those who choose them. This could be utilised by the CEC to highlight the appropriateness and benefits and promote them via its contact with schools. The CEC could explore the option of a joint national campaign with DfE/ESFA (and with other partner organisations) to effectively promote good careers education and TVET pathways for all young people, including role models and employer champions.

All of the above, suggests there is scope for the CEC to work with its research and other partners at a local, regional and national level to fill the gaps in information and data in careers information and advice, young people's career decision making and consideration/choices of TVET options.

1. Introduction

The Careers and Enterprise Company (CEC) needs deeper insight into the journeys that young people experience to uncover the barriers and enablers to following apprenticeship and technical education routes. They also want to understand the range and quality of data measuring each step of the journey. This insight on evidence and data will enable the CEC to provide more effective support to key stakeholders, pinpoint opportunities with partners to target activity, and enable the organisation to track change and measure impact. This literature and data review sets out key findings on careers education² for young people, focusing on apprenticeships and technical education at different levels (including degree level), within the wider context of supply.

Understanding the timing and formation of, and influences on, learners' career choices is important in designing policy and practice to maximise the impact of careers provision, particularly in schools/academies, colleges, and technical vocational education and training (TVET). This is to ensure that each young person is properly supported so that they can understand and consider the full range of education, training and other career options available to them, especially at the key transition points.

The study focuses on careers education, and careers information and advice more broadly, available to young people up to and including Key Stage 4 (KS4) and KS5.

1.1 Aims and objectives

The main aim is to produce an evidence-base drawing on robust research findings to inform the CEC's work with key stakeholders. There are two main objectives of the study:

- Firstly, to review research evidence and data on what drives and hinders young people's participation in vocational learning pathways. This is to be undertaken from a variety of perspectives (young people, providers, employers and parents/carers) focusing on:
 - The provision of careers education in relation to ATE, and how careers education is presented and used (formal and informal, physical and virtual);
 - the ATE market: what opportunities exist; how they are presented; access and recruitment to, and take-up of opportunities; what are the main trends in the ATE market;
 - the supply, awareness of, access to, and take-up of apprenticeship opportunities;
 - outcomes: what are the financial (short- and longer term pay, careers pathways), non-financial (e.g. satisfaction and wellbeing), and other (for example, addressing skills issues – gaps, shortages and utilisation) outcomes from the various pathways.

² Careers education includes the range of provision included in the Gatsby benchmarks. Personal guidance includes one-to-one careers guidance with an adviser. Careers information and advice covers the full range of information, advice and guidance available to young people, for example, that covered in careers education as well as that provided by parents/carers and generally available on the internet.

- Secondly, to review the full range of data sources – official data, learner/employer/provider surveys, management or administrative information (such as the Individual Learning Records (ILR)), Big Data (e.g. online vacancies) and other data such as longitudinal studies (for example, the Longitudinal Study of Young People in England [LSYPE] or 'Next Steps') and merged data (Longitudinal Education Outcomes [LEO]) – and how this currently maps and describes young people's journeys (i.e. supply of opportunities, awareness and take-up of opportunities, engagement, participation, retention and re-engagement, completion and immediate and longer term progression).

The review should also assess the evidence as to how effective and appropriate the data is to be used for intelligence and to assess impact.

1.2 Methodology

The document review element of the study was based on the successful approach used in Dickinson (2019) combining a bibliographical search with a grey literature search. In both cases, the study focused on UK sources published after 2017.

The first approach was to search through the websites of a range of UK and international organisations which were known to publish careers education research. In consultation with the CEC, 64 organisations were identified (see Appendix 2). Each of their websites were visited, and a search undertaken for relevant reports and other outputs (e.g. blogs and briefings). This identified 203 reports.

Secondly, a bibliographic search was undertaken using the EBSCOhost databases. The following search terms were used iteratively:

- 'career' with 'information', 'advice', 'guidance' and 'support', with;
- 'technical education', 'vocational education' and 'apprenticeship'.

This identified 159 sources.

Finally, a Google search was undertaken (using the above search terms) to see if there were any additional recently published reports in 2021.

The abstracts or summaries of the downloaded documents were read and included or omitted from the study. On this basis 156 reports and other documents were included in the study. The final listing was shared with Deirdre Hughes, an international expert on careers education, and an additional 11 documents were included.

For the data review, an original listing of data sources was derived from the author's previous work on local area skills reports, a national study on Skills Advisory Panels, and recent work research apprenticeships. Additional data sources identified in the document were also included in the review.

1.3 Structure of the report

There are three further sections in this report:

- Section 2 includes an analysis of how young people engage with careers education and make choices;
- Section 3 focuses on evidence of the opportunities, applications and outcomes from TVET options; and
- Section 4 contains the main conclusions and recommendations.

There are also two appendices which contain the bibliography, and the organisations used in the web search.

2. How young people engage with careers education and make choices

2.1 Introduction

This section describes young people's decision making processes when deciding on options in Key Stage (KS) 4 and KS5 (reference is also made to KS2 and KS3). It provides details of the careers education activities they engage in, their main influencers, the pathways chosen and which major factors underpin those choices. It provides information on the exposure to and presentation of TVET options³, including apprenticeships and T levels.

2.2 Career decision making, pathways and exposure to TVET

2.2.1 Brief overview of young people's career decision making and access to careers education

There is a significant UK and international literature on how young people make decisions about their future education, training and employment options (inter alia: Archer et al., 2014 CEC, 2016; CfE, 2017; Indecon, 2019; Covacevich et al., 2021). The main factors can be broadly grouped into economic, psychological and sociological approaches which give various weights to different factors (for example, future financial returns, individual agency, social structures and constraints) (Dickinson, 2019).

Other approaches accept that there are a range of extrinsic factors (e.g. subject to social/contextual influences such as expectations of reward or consequence) and intrinsic (such as an individual's disposition and/or personal goals), and influencers that emerge and vary over time (starting from a young age). It is within this milieu that options are presented and assessed, and choices are made. The decision-making process is a complex construct and one that individuals do not always undertake using 'rational' behaviour (NPC, 2020).

Careers education should ideally vary across the learner journey (from consideration to take-up and completion of chosen options). For example, in the early stages of decision-making (pre-contemplation), careers support should focus on encouraging self-reflection. As young people become more engaged with the idea of learning, more specific, detailed information becomes valuable.

Behavioural analysis illustrates how intrinsic and extrinsic motivations interact with external or situational factors to determine learning behaviour. Such models are useful in identifying the implications for policymakers, practitioners and researchers concerned with increasing participation rates in TVET, highlighting potential behavioural levers and barriers.

The COM-B model and Moments of Choice

The COM-B model (see Figure 1) is such an approach combining the domains and influencers from a number of disciplines. In the COM-B model behaviour is a function of 'capability' (physical and psychological), 'opportunity' (physical and social) and 'motivation' (automatic and reflective). In turn, these three fundamental components are subject to several domains

³ For the purposes of this study, TVET options include: apprenticeships (including Traineeships and Degree Apprenticeships); T Levels; and other professional and vocational diplomas and certificates regulated by Ofqual. See <https://www.gov.uk/government/statistics/vocational-and-other-qualifications-quarterly-july-to-september-2021/background-information-for-vocational-and-other-qualifications-quarterly-july-to-september-2021>

of influence, which are affected by a number of influencers – course, social and external (Social Mobility Commission, 2021a).

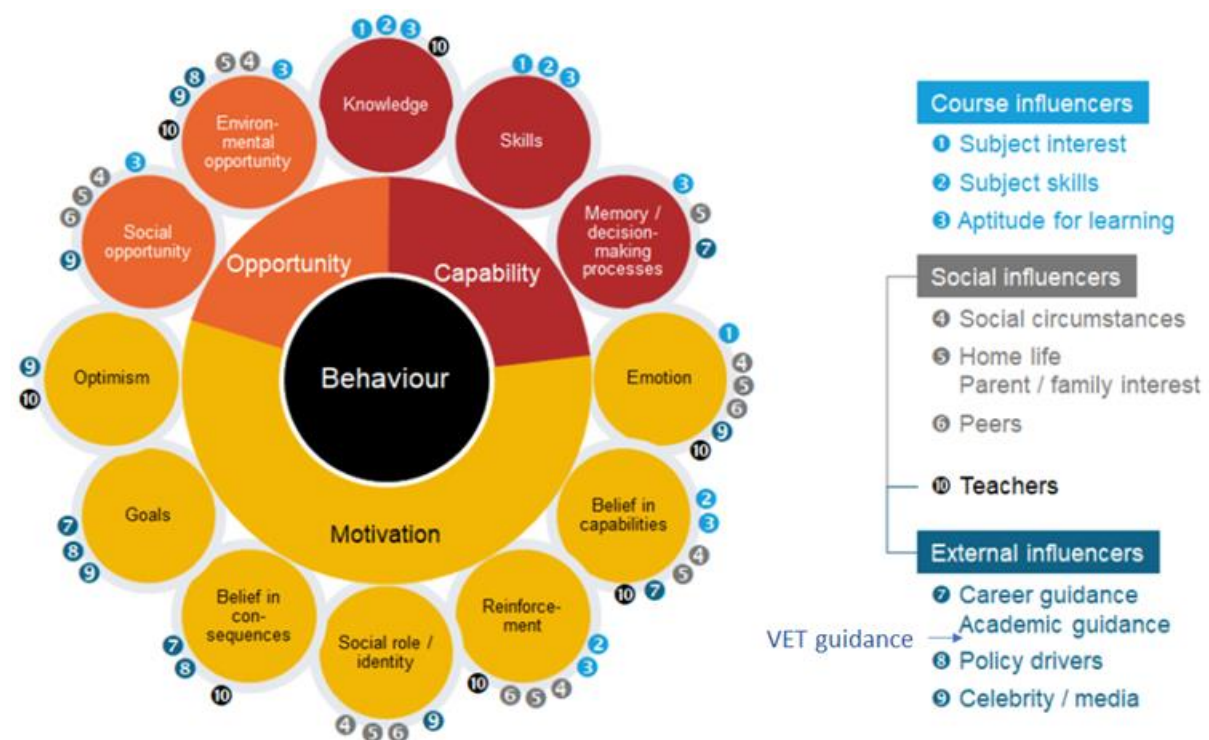
The strength and characteristics of the influencers and domains will vary throughout an individual’s life, giving different weights to opportunities, motivations and capabilities. For example, as young people move closer to and into the labour market, ipso facto the influence of employers will increase and that of subject teachers will decrease.

The elements in the COM-B model are many and varied and they coalesce in a multitude of ways. So, people in seemingly similar circumstances and situations can end up making quite different choices.

As young people develop throughout their compulsory education, they develop soft (and later hard) choices or preferences as to their future options. Some young people decide on an option in their early teens and stick with it (‘early deciders’). Others are unsure until quite older (‘drifters’), some switch options (‘switchers’), whilst some remain ‘undecided’ (CFE Research, 2017).

As far as this study is concerned, it is important to see where apprenticeship and technical education (ATE) options fit within this model, when they emerge and how they are sustained as young people develop choices and then make decisions. For example, are apprenticeship opportunities available and accessible in their area compared to A level subjects (environmental opportunity) and is the learner aware of them (knowledge). Furthermore, do the key influencers present a balanced and informed array of both ATE and academic options? And what evidence is there of effective ways to generate and sustain interest in ATE options?

Figure 1: Capability-Opportunity-Motivation Behaviour (COM-B) model of decision making



Source: Social Mobility Commission (2021).

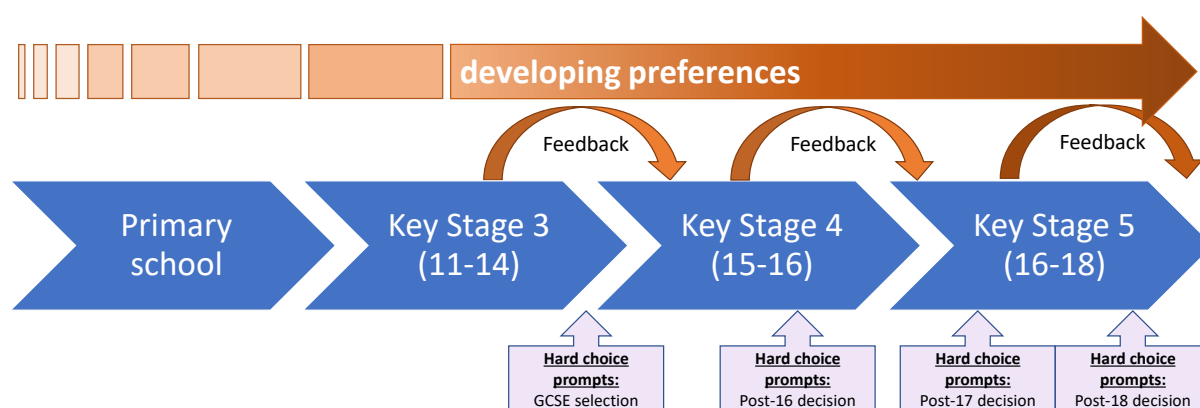
NB: VET guidance has been added because it was not in the original diagram.

Within and across this range of influences and influencers most young people say it is their 'own choice' and their own 'careers aspirations' which determine which pathways they follow (Youth Employment UK, 2020).

Irrespective of the types and strengths of the domains and influencers, and the type of decision maker they are, young people are faced with 'moments of choice' when they *have to* make decisions (see Figure 2). This could be choosing GCSE subjects at the end of KS3, or deciding to continue in education and training or enter employment at the end of KS5 (and beyond).

In these choices, young people may be helped by feedback from previous experiences. For example, undertaking a work placement in KS4 and that reinforcing or rejecting an occupational preference planned for KS5.

Figure 2: Moments of choice



Source: Developed from The Careers and Enterprise Company (2016) and CFE Research (2017).

Decision making can start as early as primary school

Research suggests that young people are developing their broad careers preferences and pathways as early as primary school. UCAS (2021) found that one third of university students started thinking about Higher Education (HE) when in primary school. In Ireland, Indecon (2019) found that one in four young people first considered career choices in primary school, whereas in England 7% first thought about post-16 options prior to KS3 (CFE Research, 2017).

Even at a young age, pupils are starting to include and exclude options based on their background and environment (Kashefpakdel, Rehill, and Hughes, 2019) and this shapes their later decisions (Mann, Kashefpakdel and Rehill, 2018). Some research has found that options developed at an early age remain relatively stable throughout compulsory education (Archer, et. al., 2020, Education and Employers, 2018; Pye Tait Consulting and Carol Stanfield Consulting, 2021). This suggests the need to start early in primary schools and to continue in post-primary schooling from Year 7 onwards to broaden children and young people's horizons, to raise aspirations and to tackle gender stereotypes (see later). A retrospective study found that 23% of adults aged 40-55 had made decisions about their current professions in childhood (Trice and McClellan, 1994).

Post primary: Careers education

The Department for Education's Careers Strategy was published in December 2017. It set out a series of measures to be implemented between 2018 and 2020 to improve careers guidance in England, including the introduction of new benchmarks for careers education, an

investment fund for disadvantaged pupils, and a named Careers Leader in every school and college. The Government's 'Skills for Jobs' white paper on further education and skills, published in January 2021, included further plans to strengthen careers advice. These changes are included in the Skills and Post-16 Education Bill (Department for Education, 2021e) which also seeks to extend further and technical education provision and expand the post-16 education and training options to every young adult.

Careers education at the start of post-primary schooling is variable across England. On 16 June 2021, Mark Jenkinson MP presented the Education (Careers Guidance in Schools) Bill, which would extend the duty to provide careers guidance in schools. In his announcement of the Bill, Mr Jenkinson stated that the Bill would extend the requirements to provide careers guidance to children in year 7, and also implement the proposals in the Skills White Paper. Both the Government and Opposition have expressed their support for the Bill.

Destinations

Table 1 shows the long-term destinations of young people from their Year 12 in 2014/15 (when they would have been aged 16/17) and four years later when they would be aged 20/21. Most young people continued in education either at a further education (FE) college or a school sixth form (SSF) or sixth form college (SFC). In 2014/15, relatively few young people started an apprenticeship at this age (6%, compared to 3% in 2019/20). In the year after compulsory education and training ended (when aged 18/19), most were in HE (24%), employment (22%) or at a further education (FE) college (18%). The proportion undertaking an apprenticeship had doubled to 13% (compared to 8% in 2019/20). Therefore, apprenticeships have not been a significant option for many young people for a number of years.

Table 1 does not show the type of education young people were receiving in the main institutions. Those in FE were most likely to be undertaking TVET courses, whilst those in SFCs and SSFs were most likely to be undertaking A/AS Levels⁴.

⁴ Wilson, T. et. al. (2021) found that school sixth forms mostly offer GCSEs (96%) and A levels (92%), with 71% offering BTECs. SFCs mostly offer A levels (100%) and BTECs (86%). FE colleges mostly offer a range of TVET (to people of all ages) primarily BTECs (98%), HNDs (65%), NVQs (56%), HNCs (56%) and apprenticeships (54%). 61% offer GCSEs and 49% A levels.

Table 1: Long term destinations of young people after Year 11

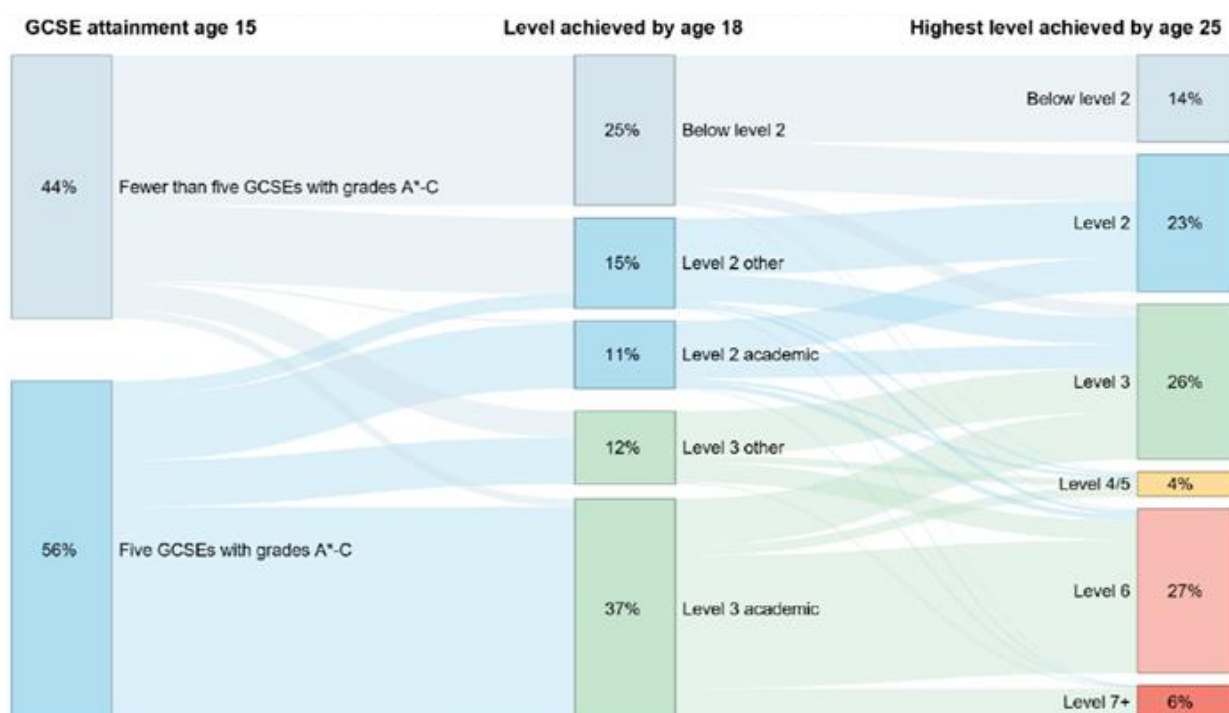
	Year 1: Aged 16/17 in 2014/15		Year 3: Aged 18/19 in 2016/17		Year 5: Aged 20/21 in 2018/19	
	No.	%	No.	%	No.	%
All Education, of which:	196,096	83%	106,931	45%	84,331	36%
FE college	97,754	41%	42,941	18%	6,372	3%
HE	0	0%	57,461	24%	76,796	32%
SFC and SSF	95,804	40%	8,797	4%	24	0%
Other education	2,573	1%	2,493	1%	1,028	0%
Apprenticeships	13,724	6%	30,792	13%	14,988	6%
Employment	65,91	3%	51,057	22%	83,974	35%
Not sustained	19,156	8%	37,567	16%	39,319	17%
Unknown	1,641	1%	10,856	5%	14,626	6%
Total cohort	237,218⁵	100%	237,218	100%	237,218	100%

Source: <https://explore-education-statistics.service.gov.uk/find-statistics/longer-term-destinations>, May 2021

Figure 3 shows the type of programme, by level, young people take after their Year 11. It shows that those with higher levels of attainment (5+ GCSEs A-C*) mostly progress in their level of programme usually via the academic route into HE. Those with lower levels of attainment generally do not progress by age 18, although most achieve Level 2 equivalence by age 25. Most of the programmes for the lower attainment group will be TVET qualifications or vocationally oriented programmes below Level 2 (albeit classroom based) (Department for Education, 2018a; Department for Education, 2020b; Lupton, R. et. al., 2021).

⁵ The total cohort in 2014/15 was around 550,000 young people. The total figures are for those young people where data was available for the complete time series.

Figure 3: Post-16 pathways by type and level of programme, and by level of attainment



Source: Department for Education (2018a). Post-16 education: highest level of achievement by age 25.

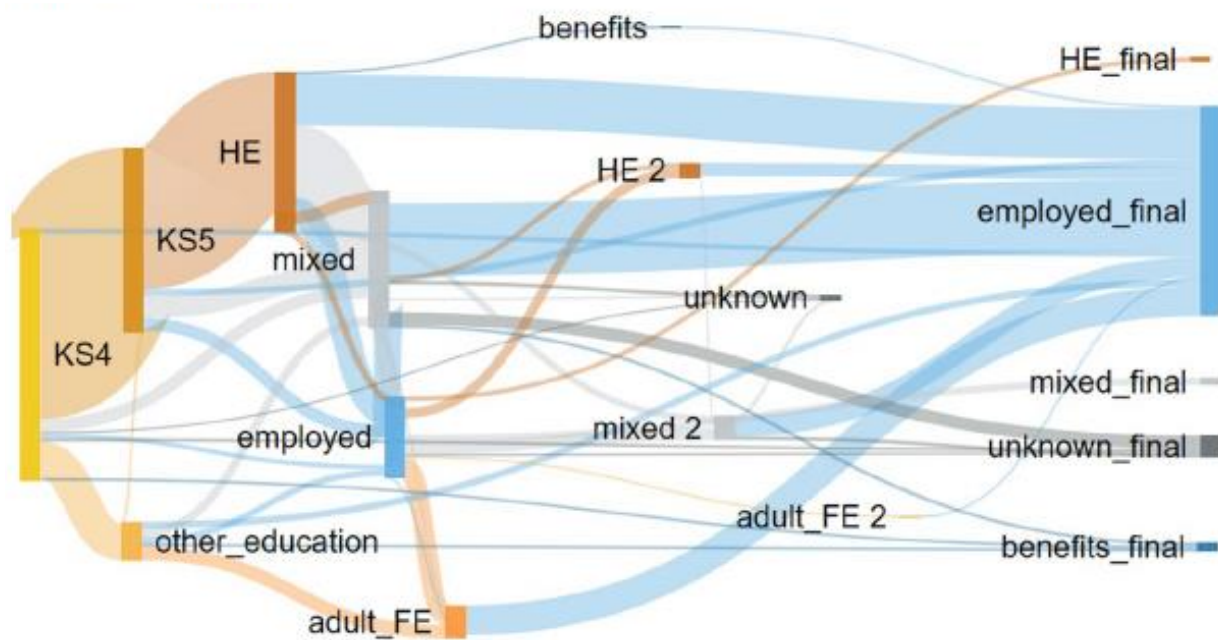
The post-16 pathways through education and training and into economic activity and inactivity are even more complex. Anderson and Nelson (2021) analysed the Longitudinal Education Outcomes (LEO) dataset for all KS4 cohorts from 2001/02 to 2006/07 until the respective cohorts reached their mid-late twenties in 2017/18 (i.e. by age 31 for the oldest cohort). Whilst Figure 3 shows the pathways from age 15-25 by eight categories of programmes and levels, Figure 4 shows the pathways to age 31 by nine categories of economic activity⁶.

Figure 4 below shows the 50 most common pathways, but this only accounts for less than one third of young people (31%). The top 10 pathways accounted for 16% of young people, with the KS5 to HE to employment accounting for only 5%.

This underlines the variety and complexity of transitions into the labour market and early career routes. It also reinforces the point that even similar young people can vary significantly in their decisions and chosen pathways. It also suggests that there is a key role for careers education not only in supporting the decisions of young people, but in providing them with the tools, confidence and motivation to source and access careers provision. As young people enter employment, the employer becomes much more important in decisions about training because they are the main funder of adult VET (Luchinskaya and Dickinson, 2019).

⁶ The categories are: KS4; KS5; HE; other education (classroom learning at Level 2 or below; employment; adult FE (including apprenticeships); claiming out of work benefits; mixed (i.e. no sustained activity), and; missing (activity not captured). If people undertake an option twice (e.g. adult FE) then this is recorded as an additional activity (e.g. adult_FE 2). The final destination at age 31 is shown on the right hand side of the diagram.

Figure 4: Most common education and labour market pathways of individuals



Anderson, O. and Nelson, M. (2021), Post 16 education and labour market activities, pathways and outcomes (LEO): Research report. Department for Education.

There is significant research and information on who the main influencers are, the types of careers education young people receive, and whether these are trusted and relied upon. What is not known are the types of careers education young people actually receive - and from whom - that lead them to develop or reject career choice preferences and lead them to select TVET options at the key transition points. This means that it is difficult to analyse the effect of enablers and influencers which lead young people to choose or reject TVET options. The longitudinal studies do provide most evidence on these effects, but they are now several years old.

2.3 Access to careers education

Comparative international studies find that school pupils in the UK are more likely to receive careers education than those in some other countries. The OECD report (Mann, Denis and Percy, 2020) shows results from the PISA 2018 involving c.30 countries that responded to set statements in nine domains⁷ relating to young people's experience of careers activities age 15. The UK results are broadly in line with the OECD countries average scores; however, young people speaking to a careers adviser outside of school is lower (21% and 24% respectively). Since then, the OECD has undertaken further work on merging data⁸ e.g. in school and outside of school personal guidance with an adviser. The UK results are 71% compared to an OECD average of 58%. When data is combined across job fair, job

⁷ The domains include: I did an internship, I attended a job shadowing or work-site visit, I attended a job fair, I spoke with a careers adviser in my school, I spoke to a careers adviser outside of my school, I completed questionnaire to find out about my interests and abilities, I researched the internet for information about careers, I went to an organised tour in an ISCED 3-5 institution, and I researched the internet for information about ISCED 3-5 programmes.

⁸ The text below has been verified for accuracy with Dr Anthony Mann, Senior Policy Adviser, OECD, January 2022.

shadowing/work-site visit, careers adviser contact, questionnaire and researching the internet, the results show 17% of UK 15 year old say they have done all of these against an average for participating OECD countries of 16%. More than 30% of these young people in Iceland, Denmark and Malta report they have done all of these type of activities by 15 years old.

Many young people in England get access to some form of personal guidance in KSs 3, 4 and 5 and this tends to expand close to the key transition point at the end of Year 11 (Key Stage 4). However, a significant minority of young people do not receive (or at least recall receiving) any personal guidance before age 16. Archer et. al. (2021) report that around 40% of young people did not receive any careers education before 16 (Year 11 in 2015/16). Hughes (2021)⁹ found that 59% (total sample equals 174) of those in Year 10 and 50% of those in Year 11 (136) did not know where to get careers education in school, and 58% of Year 11s (136) and 44% (174) Year 10s reported that they did not get sufficient careers education in school.

The Youth Employment UK's 'Youth Voice Census 2021' stated that 29% of young people (aged 14-24) found the careers education they received in secondary school good or excellent but a similar proportion (27%) found it poor or very poor. A number of reports published over the past five years suggest that there exists a dominant emphasis on academic routes and a limited presentation of vocational routes (*Inter alia*: Mime, 2020; House of Lords, 2021; Hicks, Raidos, and McGarry, 2021; Wilson, T. et. al., 2021). Therefore, if young people want to find out about TVET routes they have to make more effort, and often outside of school based careers education activities.

A major DfE commissioned study in England compares the career guidance young people received by the options (technical or academic) they went on to after Year 11 (CFE Research, 2018). The findings indicate grammar school pupils, learners on academic pathways, young people with a least one parent with a university education, and those with Special Educational Needs (SEN) start thinking about their post-16 options earlier than other groups. Young people typically leave the final decision until the final year of study prior to making a transition – Year 11 for those progressing into some form of FE and Year 13 for those progressing into HE. However, those on academic routes are more likely to make a final decision earlier than those on a technical pathway. The authors report:

“Although the information that young people most commonly seek is easy to find, accessing information, such as what learners do and earn after the course, dropout rates and the financial support available, is perceived to be more difficult, particularly for learners with special educational needs (SEN)” (p.9).

2.4 Engagement with different career guidance activities

Key Stages 3 & 4

As we have seen, young people start to develop ideas about future careers and pathways at quite an early age. Research from 2018 also suggests that young people received careers information and advice early on in secondary school: 60% of Year 7 pupils received careers advice from their parents/carers in Year 7; 88% in Year 8; and 75% in Year 9. The respective figures for careers advice from teachers was 30%; 40% and 59%; and from a careers adviser who came into their school – 22%, 29% and 44%. The large majority of pupils of all ages

⁹ This study was based on survey responses from 3,615 pre-GCSE pupils from 52 schools/academies in 7 regions across England. The survey was distributed in 2021 through schools and LinkedIn contacts, both online and in hard copy.

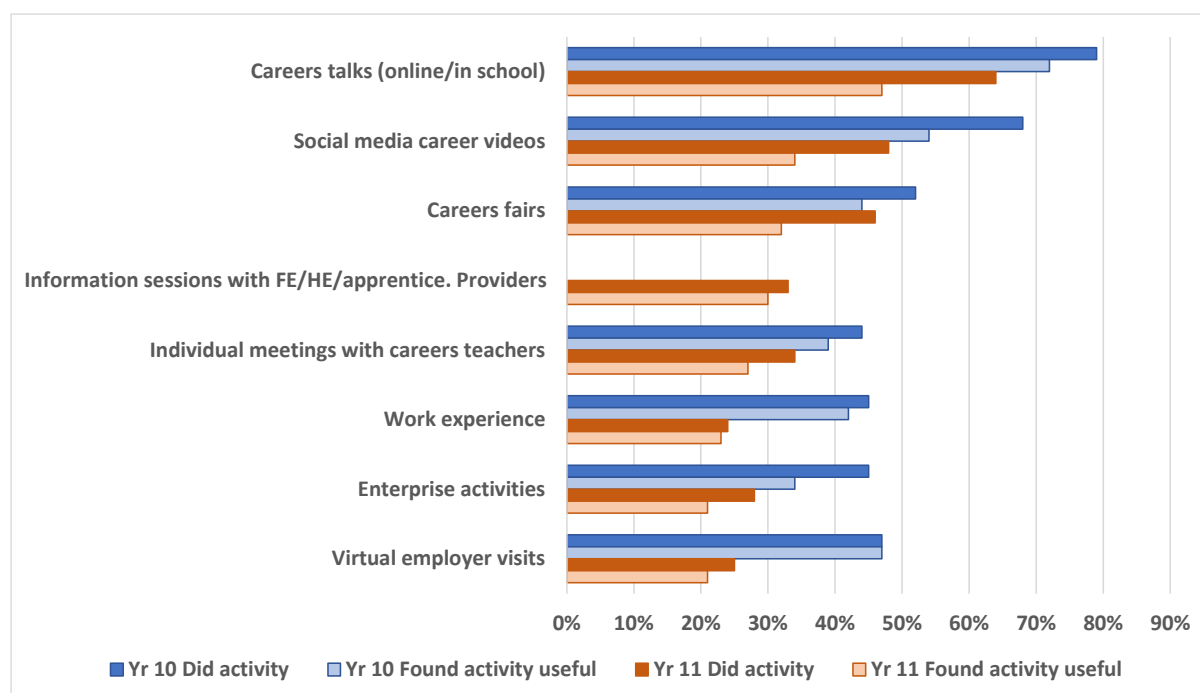
found this careers advice helpful (author’s own analysis of Omnibus Survey of Pupils and their Parents/Carers: Wave 4 data in Knibbs, S. et. al., 2018¹⁰).

However, it is in KS4 where careers education is mostly delivered. A number of sources identify the different types of careers education that young people receive (Covacevich, 2021; Youth Employment UK, 2021; Hicks, Raidos and McGarry, 2021). The latest survey focusing on young people in KS4 in England is based on a survey (online and hard copy) of 3,615 pre-GCSE pupils in England (Hughes, 2021). The study found that most careers education activities are undertaken in Year 10. It must be remembered that during 2020/21, careers education would have been heavily affected by the pandemic and this may have affected the number of face-to-face encounters, especially young people’s exposure to work experience.

Figure 5 shows careers education activities undertaken by Year 10 and Year 11 pupils. Whilst most pupils undertake careers education activities, a significant proportion of young people do not undertake a number of key career activities whilst at school (Ibid.). These findings are supported by other studies (Youth Employment UK, 2020; 2021).

There is also an issue of how useful young people find these activities. Figure 5 shows that, for those in Year 10, in only two activities (careers talks and social media careers videos) did more than half of respondents find the activities useful. Research suggests that personalised support can have the greatest impact (Orlando, 2021).

Figure 5: Careers education activities undertaken by Year 10 and Year 11 in England



Source: Hughes, D. (2021). The Big Career Conversation with Young People in England.

Note: Sample sizes Year 10 174; Year 11 136.

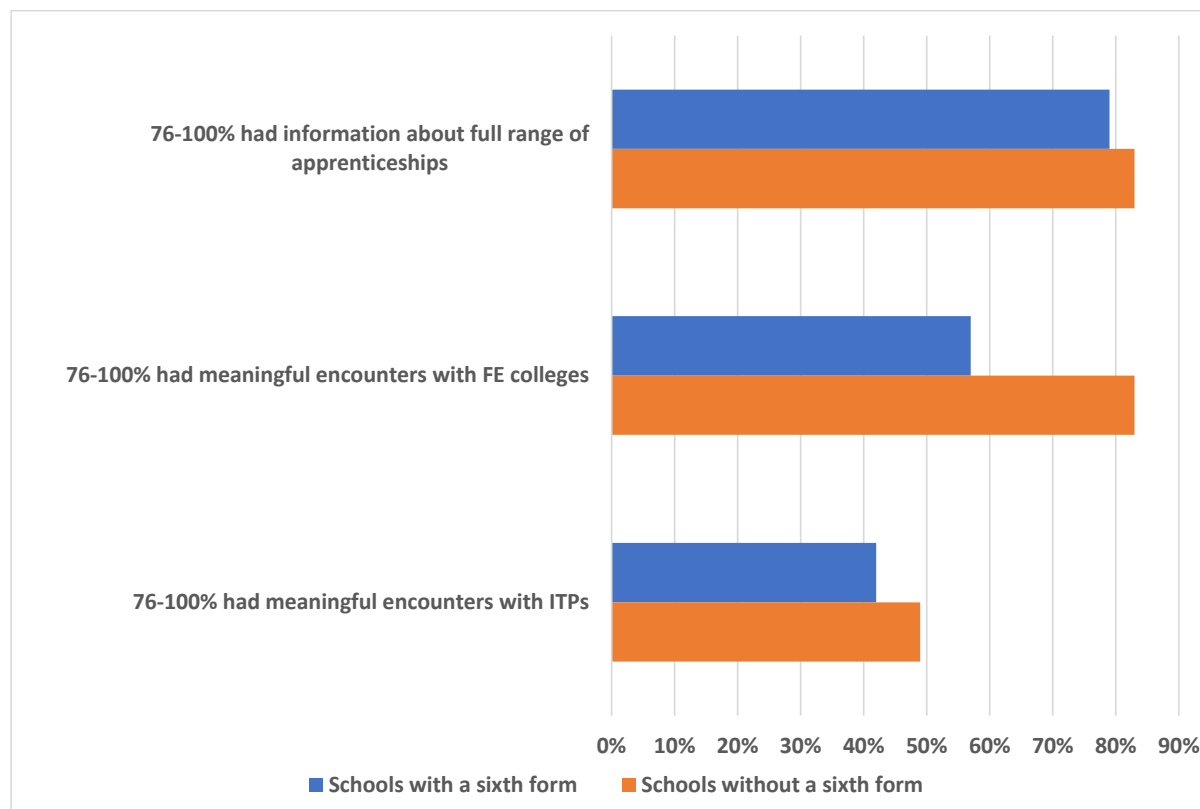
The Careers & Enterprise Company (2020b and 2020c) found that careers education activities in England’s schools/academies expanded over the past several years with significant

¹⁰ The omnibus survey was undertaken in December 2017-January 2018. There were 2,590 paired responses from school pupils and their parents/carers (from the NPD), and 206 paired responses from college students and their parents/carers (from the ILR).

increases across all of the eight Gatsby Benchmarks¹¹. However, this varies depending on whether the school has a sixth form or not. For example, in 2019, schools without a sixth form were more likely to have provided pupils with information about the full range of apprenticeships; meaningful encounters with FE colleges; and ITPs. Although the gap in information about apprenticeships had closed by 2020/21¹².

Figure 6 can be considered in two ways: either schools with sixth forms provide less careers education about the full range of TVET¹³ options, or that it is not required by many of their pupils because they progress into the school's sixth form.

Figure 6: Full achievement of Benchmark 7 sub benchmark by type of school



Source: The Careers & Enterprise Company (2020b). Careers and enterprise provision in England's secondary schools and special schools in 2019: Detailed Gatsby Benchmark Results.

There is a difference in perception of provision by what schools themselves believe they provide, and what pupils perceive they receive. Wilson, T. et. al. (2021) found that schools were more likely to report that they provided careers education on TVET options than students believed they had received. This may be because students are offered careers education on these programmes but do not take it up. Hughes (2021) found that young people reported undertaking a wide range of careers education activities, especially in Year 11 (see Figure 5). However, many did not find them useful suggesting that such careers activities need to be

¹¹ The Gatsby Foundation (2017) Good Career Guidance - <https://www.gatsby.org.uk/education/focus-areas/good-career-guidance>

¹² Data from the 2020/21 Compass survey shows that the gap between schools with and without a sixth form has closed to 84% each.

¹³ In the report TVET is used interchangeably with ATE, and mean the same range of provision. Reports use a variety of terms but TVET is the most common for the provision that is this study's focus.

presented in a way that is relevant, understandable and timely to individual young people and their parents.

The evidence suggests that if TVET options are presented to young people they are more likely to take them up, especially if they are presented in an equitable way alongside academic options, and in a personalised way so they are relevant to the individual young person.

Key Stage 5

Relatively few studies provide analyses of careers education activities and influences in KS5, other than from the perspective of the dichotomy between HE (and by default non-HE options) (see below). Stewart (2021), based on the analysis of the LSYPE in 2018, found that there were higher levels of undertaking, and satisfaction with, careers education activities in KS5. This study of 18-19 year olds found that 93% had received formal careers education support in the past year. At least 85% of these young people reported that the amount of careers education was about right for them, was available at the right time and was appropriate to them. Conversely, Wilson, et. al. (2021) reported that students aged 11-15 were much less likely to report that academic and TVET options were discussed with them on a regular basis.

Youth Employment UK (2021) also asked questions specifically about careers education in colleges and school sixth forms. More than two thirds of young people said that they had had a one-to-one meeting with a careers adviser and 65% had received an employer visit.

This underlines the findings (see below), that young people in KS5 tend to get higher levels of careers education in KS5 and have higher levels of satisfaction with it.

The Careers & Enterprise Company (2021) found that, overall, the achievement of Gatsby benchmarks was higher for 16-18 providers than schools without a sixth form. On those benchmarks which relate most to TVET¹⁴ colleges tend to score higher on each sub benchmark, the main exception is encounters with universities (The Careers & Enterprise Company, 2020b).

The role of technology

The use of websites to identify apprenticeship opportunities is higher than other options (Youth Employment UK, 2021). Furthermore, the use of websites and portals to identify opportunities is now commonplace in society. In 2021, most apprentices found their places through the 'Find and apprenticeship' (FAA) website, an employer website or another technology sources, such as the Indeed app (Ibid.).

There are many ICT based sources of careers information, advice and guidance but little research and data is available about their use, validity and impact. There is therefore scope for an evaluation and directory of reliable careers apps for young people and parents to draw upon, for both academic and TVET options.

In addition, artificial intelligence (AI) and chatbot developments are on the increase and offer an opportunity to develop improved public and other services, including careers education (HM Government, 2021b).

¹⁴ Those which are most related to TVET are: 5 - Encounters with employers and employees; 6 - Experiences of workplaces; and 7 - Encounters with further and higher education.

The 2020 Nesta CareerTech Challenge¹⁵ provided some useful insights into AI and career chatbot developments, some of which report they provide information and advice on pathways and specific apprenticeship opportunities. However, the competition ended in 2021 and the current state of play two years on for each of the 20 national finalists is unknown. Moreover, the impact of careers apps and chatbots requires further evaluation to assess their effectiveness.

The role of technology does not feature greatly in most of the sources used in this review. Where it does feature, it is as a route to sources of careers information and advice rather than an end in itself. In part, this appears to be because there is so much information available and young people often tend to be overwhelmed with the volume of data.

The pandemic has altered behaviour with more young people using technology to access careers education. In its 2021 survey, Youth Employment UK, found that career and employability websites (39%) were the second most useful source of career support behind parents/carers (44%), but ahead of teachers (24%), friends (29%) and careers advisers (22%). Over one quarter found social media (26%) and online forums (22%) useful or extremely useful (26%).

According to Hughes (2021), 34% of Year 11 pupils found Vlogs, YouTube or other social media careers videos 'useful' or 'extremely useful' and this ranked third behind careers talks or presentations in assembly. More than half of Year 10 pupils (57%) had undertaken a virtual employer visit with 47% finding it 'useful' or 'extremely useful'.

Therefore, technology has increased in significance as a means of accessing careers information and advice (in some cases career guidance too) or as an information resource supporting careers education and career guidance in itself.

The Social Mobility Commission (2021b) undertook a review and a randomised control trial of online careers advice for disadvantaged young people (aged 13-19). They concluded that the two interventions¹⁶ did not increase the engagement or aspiration levels for disadvantaged young people. However, there was low uptake of the interventions and this may have affected the results.

2.5 The role of influencers

2.5.1 Key influencers

KS3, KS4 and KS5

There are a number of surveys which ask young people about the sorts of careers information and advice they rely on. The findings from these studies are quite varied because they often include different age ranges and geographical areas. These studies generally identify 'informal sources' including parents/carers, teachers and friends. Although more limited use is made of careers advisers and local employers, those who do consult them find them useful

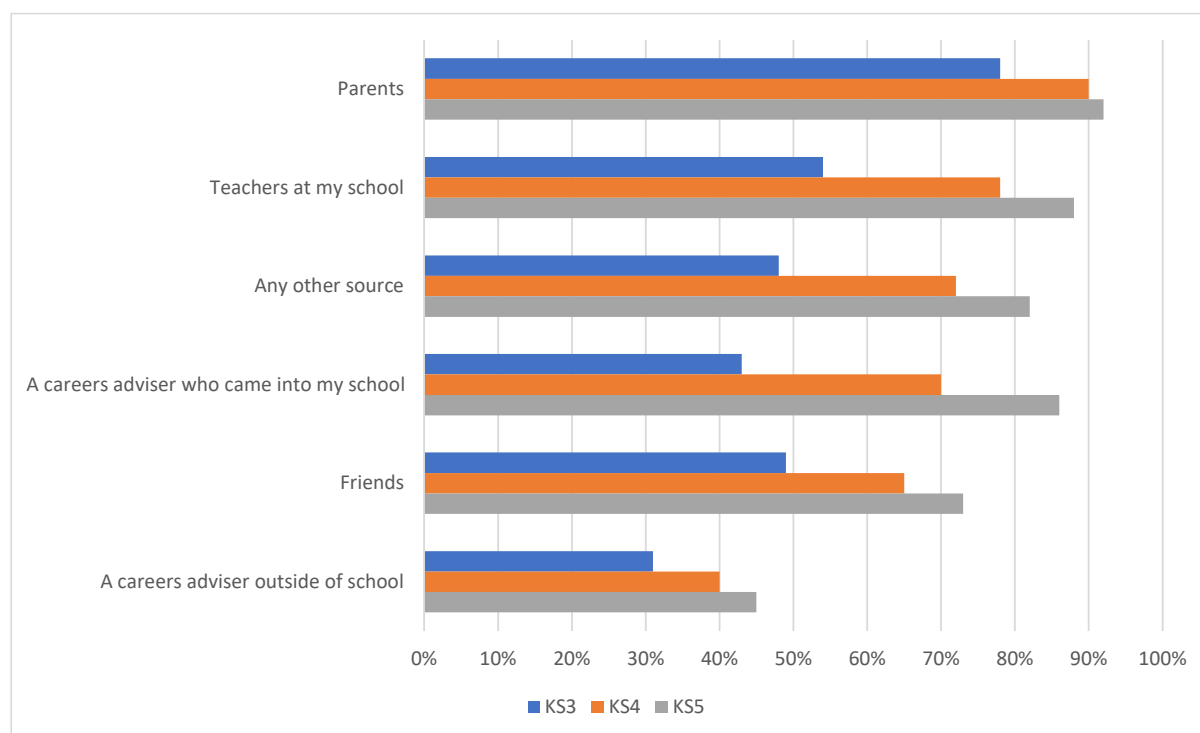
¹⁵ The NESTA Prize challenge competition was primarily aimed at adults 18+.

¹⁶ Based on an evidence review two 5-minute interventions were designed, customised to the careers advice platforms young people were using: a motivational activity that prompted young people to reflect on the value of learning about careers and then set goals for completing activities on the career advice platform; this motivational activity plus nudges. The nudges prompted young people to consider more aspirational (in terms of qualification level or earnings) courses, jobs or careers.

(Inter alia: CFE Research, 2017; EngineeringUK, 2019 & 2021; Mann, Denis and Percy, 2020; Youth Employment UK, 2021; Stewart, 2021; Hughes, 2021).

One study identified the main influencers at different transition points (see Figure 7). Knibbs et. al. (2018)¹⁷ - in keeping with the aforementioned studies - found that parents/carers and school teachers were the main sources of careers information and advice for school pupils, along with friends and career advisers. Figure 7 also shows that the range of careers information and advice sources increased through KS4 so that by KS5 more than 70% of school pupils were getting advice from at least five different influencers.

Figure 7: Careers information and advice received from each source, by key stage – school pupils



Source: Knibbs, S. et. al. (2018), Omnibus survey of pupils and their parents/carers Research report Wave 4, Department for Education.

Not only were these influencers a key source of careers information and advice they were also a trusted source, especially parents/carers, teachers and careers advisers. Furthermore, the levels of trust increased in all cases from KS3 to KS5. Parents/carers (along with teachers) were the most trusted sources with 78% of pupils/students in KS4 and KS5 reporting that the advice they received was 'helpful'. For college students, parents/carers, college tutors, other sources¹⁸, careers advisers and friends were also the most utilised and helpful sources of careers information and advice (see also: Youth Employment UK, 2021). Only a minority of school pupils and college students received careers information and advice from an external careers adviser, even in KS5.

¹⁷ The study was a survey of pupils/students attending all mainstream education and training providers except for apprenticeships. Where school is mentioned we assume this means provider, although no clarification is given in the report. There were 2,590 paired parent/carer and school pupil complete responses, and 206 college paired parent/carer and college student complete responses.

¹⁸ It is not specified but we assume other sources includes the internet, social media, other adults etc.

2.5.2 Impartiality of influencers

Whilst the main influencers are seen as helpful sources of careers information and advice, research suggests that they may have their limitations, especially where TVET options are concerned. In Knibbs, et. al. (2018), school pupils in Year 9 and above were asked whether they had received any information on TVET options (excluding apprenticeships). Just under two thirds (60%) of school pupils said they had received 'some' or 'a lot' of information. But this rose by age so that 71% in Year 11, 76% in Year 12 and 70% in Year 13 had received at least 'some' information. When asked specifically about apprenticeships, 36% of those in Year 9, 61% in KS4 and 80% in KS5 had received at least some information about apprenticeships (Knibbs, et. al., 2018).

As far as schools are concerned, The Careers & Enterprise Company (2021) reports that the presentation of TVET options is increasing. Both schools with, and those without, a sixth form have increased information about the full range of apprenticeships. Networking and support have played a role in this. Schools and colleges in a Careers Hub, and those in the Careers & Enterprise Company network are much more likely to achieve Gatsby Benchmarks 5, 6 and 7 (The Careers & Enterprise Company, 2020c). Williams (2020) also found that Careers Leaders training increased the communication of TVET options.

Parents/carers

Most parents/carers draw their career knowledge primarily from their own experiences (Knibbs, et. al., 2018; and Barnes, et. al., 2020). This experience is unlikely for many to include certain TVET options such as apprenticeships. J.E.E.P. (2018) found that 36% of parents did not know what an apprenticeship was¹⁹.

Ipsos-MORI (2019) found that whilst 57% of parents/carers said they had enough information on academic options to inform their child's future career options, only 43% did so about vocational options. Only 44% of parents/carers said they had received some or a lot of information about apprenticeships, and other TVET options.

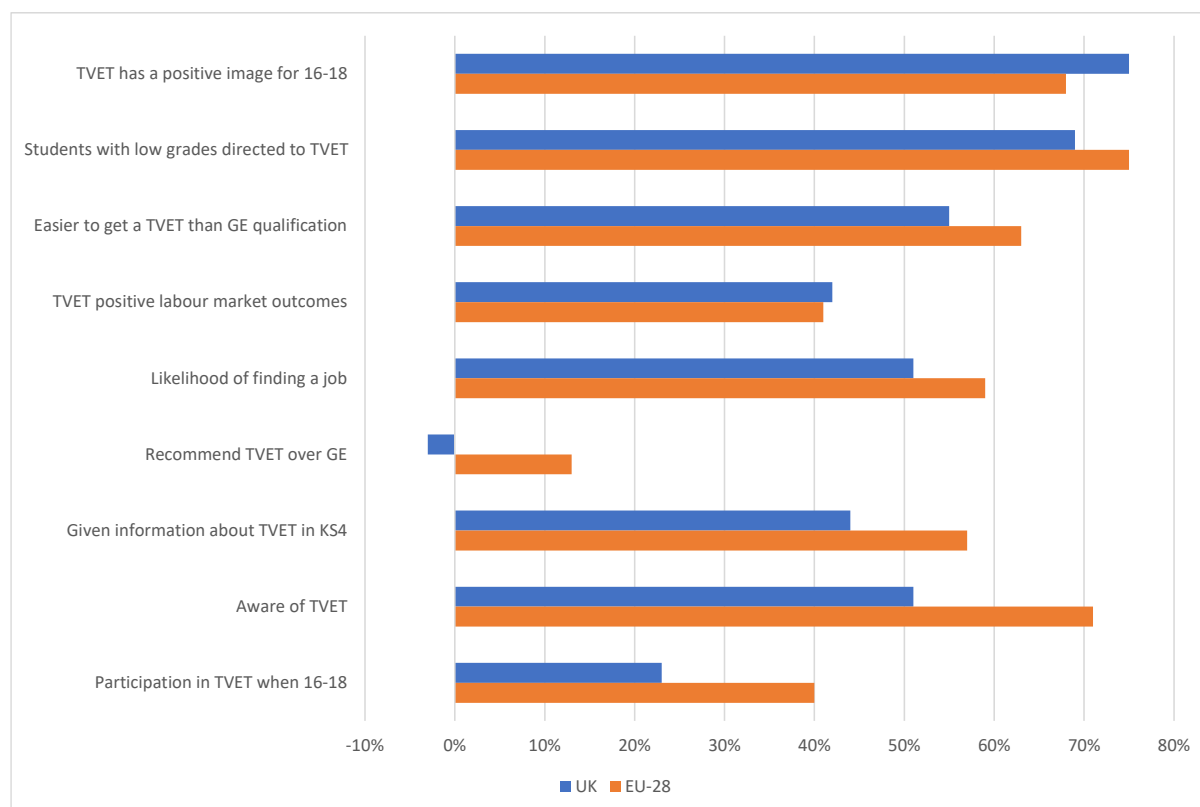
Figure 8 provides a comparison of the views of UK adults on TVET, compared to those in other EU countries. It shows that UK adults themselves were amongst the least likely to have been given information about TVET options whilst in KS4, ranking fourth lowest of EU-28 countries.

In the UK, vocational options are held in relatively high esteem by parents. Robinson (2019) found that the UK (of EU-28 countries) had the third highest net agreement of adults when asked whether vocational education has a positive image. UK adults also had relatively positive views of the image of TVET (fifth highest) as an option for 16-18 year olds; and associated it with positive labour market outcomes (above the EU-28 average).

Figure 8 shows that in 2017 on a range of questions, UK adults rank TVET higher than other EU countries. For example, UK adults are more likely to agree that TVET options have a positive image for 16-18 year olds, have positive labour market outcomes, and are not an easier qualification to achieve than a general education qualification.

¹⁹ The research was based on a survey of 2,000 British parents of young people aged 11 to 16, and 2,000 young people aged 11 to 16.

Figure 8: UK adults views on TVET compared to EU countries



Source: Figure based on data in Cedefop (2017). Cedefop European public opinion survey on vocational education and training.

Hughes, D. (2021) also found that young people also see TVET as a positive option. Two thirds of all young people (64%) in the survey believed that apprenticeships were of equal importance compared to sixth form, FE college or university. Responses were similar for those who received and did not receive FSM. Therefore, for both parents/carers and young people apprenticeships and other TVET options are not viewed negatively but they are not chosen by the majority. For apprenticeships this may be because relatively few are available to young people.

However, whilst UK adults may rate TVET relatively highly, they are amongst the least likely to recommend them (Robinson, 2019). On the balance of recommending TVET over general education options, fewer UK adults (-3%) would recommend TVET, compared to +13% for EU-28. UK adults were the fourth least likely to recommend vocational education to a 16-18 year old.

It is difficult to square the relatively high regard of UK TVET with the low levels of recommendation. It is worthy of note, that the TVET landscape is changing with the introduction of T levels. As a result, it is not yet fully known how employers will receive and value this new qualification. However, the Social Market Foundation (2021) found that UK adults rated TVET highly and would recommend it. Asked which options they would recommend to an 18 year old about to leave school, 48% would recommend a vocational qualification whilst 37% would advise them to go to university. However, this varied by SES of the adults with those adults of higher SES (ABC1) more likely to recommend university.

UK adults are likely to have low awareness of TVET. They are less likely to have been given information about TVET options when their children were in KS4, and also less likely to have participated in TVET when they themselves were aged 16-18.

When comparing England and Denmark (both countries with a similar lack of parity between TVET and general education), Kersh and Juul (2015) found that in Denmark employers hold TVET in higher esteem. It was suggested that this was because in Denmark TVET students are paid a higher wage by employers, and businesses are more involved in decision making and the day-to-day running of the programmes along with other social partners.

Teachers

Research suggests that teachers are also often limited in their understanding of TVET options. Pye Tait Consulting (2019) found that teachers were unfamiliar with TVET options post-18, and the Social Mobility Commission (2021) found that teachers' advice on post-16 options was influenced by pupils' attainment levels, with higher attaining pupils less likely to receive advice about TVET. Archer, et. al. (2021) found that not all schools provide a "balanced view of all post-16 options" with less focus on TVET routes. Therefore, the independence of careers advisers and the breadth of their advice is important. CfE Research (2018) found:

"Most teachers are well rehearsed in what to do when it comes to applying to uni, but few really know about apprenticeships and work opportunities. If you're going to uni that's fine, but what about everyone else? I had to be strong and stay determined with my decision not to follow everyone else." (Apprentice) p.56.

Careers advisers

Based on the Compass survey of providers, CEC (2021) reports that providing personal guidance interviews had increased in schools from 2018/19 to 2020/21. In the latter year 80% of schools said that 76-100% students had an interview with a qualified adviser by the end of Year 11, an increase of six percentage points over the two year period.

The research data from pupils about their access and usage of careers advisers is confusing, with different studies reporting varying levels of access and take-up. According to Youth Employment UK (2020) 59% of school pupils had an interview with a careers adviser. This dropped to 38% in the 2021 Youth Census (p. 29). EngineeringUK (2019²⁰) reported that careers advisers are second to parents in terms of where young people would like to get careers advice from: 57% of 11-16 year olds and 63% of 16-19 year olds would select a careers adviser which is higher than teachers and friends²¹. Hughes (2021) found that only 34% of Year 11 pupils and 54% of Year 10 pupils had an individual meeting with a careers teacher.²²

One reason for this variation may be data sources often do not distinguish between types of career adviser i.e. those who are employed by the school/college/other provider, or those that are external. Careers advisers employed by the provider may be more readily available to

²⁰ The report is based on survey responses from 1,912 young people aged 11-19.

²¹ Different surveys present different rankings. For example, Youth Employment UK (2020) found that teachers were the second most influential behind parents.

²² Different sources present different results in part because they are based on interviews with different groups of young people, especially different age groups. Furthermore, the sample sizes and sampling methodologies also vary.

pupils. In the analysis of LYSPE, Stewart (2021) found that, for 18-19 year olds, only one third had consulted a careers adviser in their school/college, with fewer than one in ten naming it the most useful source of careers information and advice. According to The Careers and Enterprise Company Compass data (2020/21), 96% of colleges and 93% of 16-18 schools make available careers adviser interviews with students. However, one third (36%) of colleges and schools (37%) said that only a 'few' or 'some' students actually take it up (The Careers & Enterprise Company, 2020 & 2021).

Percy and Tanner (2021) found that the uptake of apprenticeships was much higher in schools where these options were presented to young people compared to where they were not. The support and training of careers advisers and Careers Leaders is important as recognised by the CEC. Finlay and Tanner (2021) found that 33% of those who had undertaken Careers Leaders training supported participants to 'improve encounters with providers of vocational qualifications and apprenticeships'. However, more needs to be done as 58% reported that they had not done this since the training. The Careers & Enterprise Company (2020) reported that achieving Gatsby Benchmark 8 – Personal guidance was much higher amongst schools and colleges who were in the CEC network and part of a Careers Hubs, compared to those who were not.

Peers

Dickerson, Maragkou and McIntosh (2018) reported that friends also influenced choices after Year 11. The results show that pupils who attend school with lower achieving peers, a greater proportion of peers from a lower socio-economic background, and with peers who are less likely to aspire to an academic post-16 route, are more likely to aspire to follow a TVET route themselves. Battiston et. al. (2020) also found a similar relationship between peer attainment levels and post-16 choices, the higher the attainment level the less likely the young person is to enrol on a TVET course. The magnitude of the peer ability effect is approximately half as large as the own ability effect on the choice of post-compulsory education pathway. Battiston also found that the peer effect is greatest on males.

Employers

Whilst not listed as an important influencer in surveys of young people, employers are an important element in careers information and advice. Employer engagement is widely seen as a required element of effective careers education (Cedefop, 2021b; OECD, 2021), and this is reflected in the Gatsby Benchmark framework followed by schools and colleges in England. Studies on the role of employer engagement in guidance emphasise the importance of interactions being perceived as authentic; frequent and often mandatory; begun early in school life; personalised; and contextualised by guidance counsellors (Mann, Rehill and Kashefpakdel, 2018; OECD, 2021c). This is because engagements with employers are often effective in broadening, challenging, clarifying and confirming the career plans of students, and employers can talk authoritatively and practically (and respond to direct questions) about apprenticeships and similar opportunities. This is highly relevant in the context of TVET in England and presents opportunities for the CEC to co-design effective ways to breakdown and overcome the academic and TVET divide.

2.6 Education and training pathways in KS5

2.6.1 Level of pathway

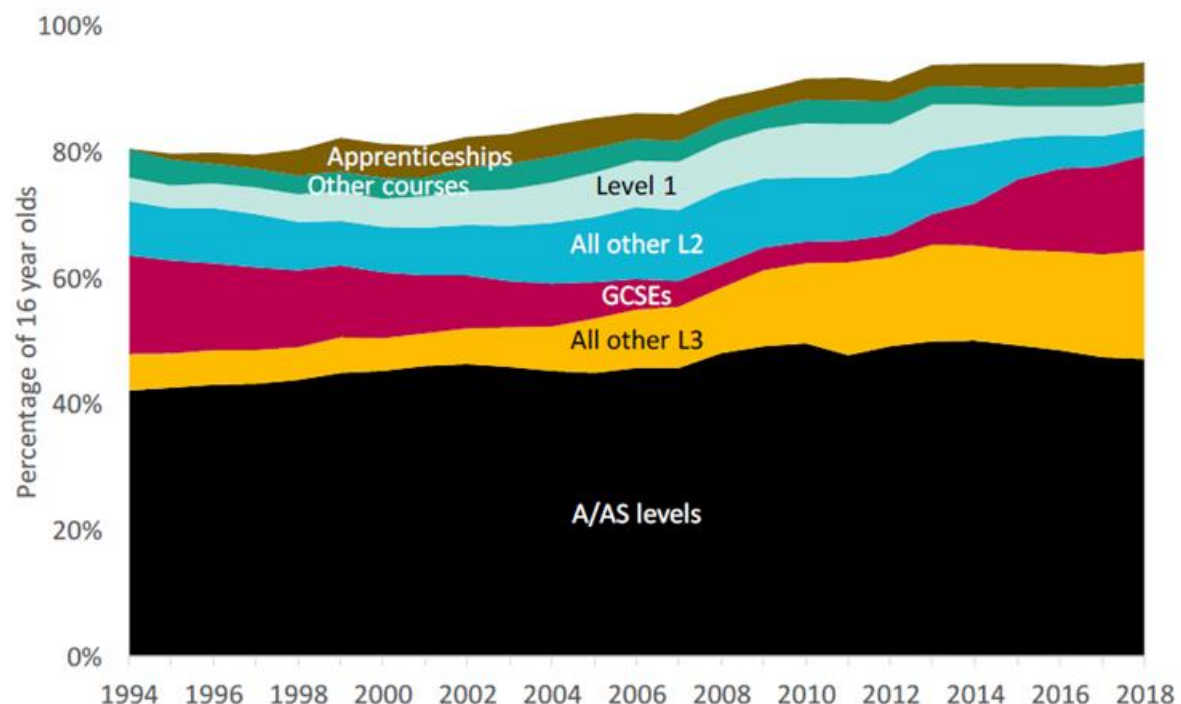
There is much data on KS5 pathways but relatively little on the role or impact of careers information and advice activities or influencers at an individual level. For example, are the options which a young person is presented with in KS4, and pursue in KS5, based on careers information and advice they receive or is it determined, for example, by predicted grades or the structure of local provision?

Figure 9 shows the long-term trends in qualification aims of 16 year olds. A/AS levels are the most popular option, but this increasing trend levelled off since the middle of the past decade. Other Level 3 qualifications (mainly vocational qualifications such as BTECs) have increased, along with (more recently) GCSEs (due to the requirements to achieve maths and English).

In 2020, 47% of young people in Year 12 studied A/AS Levels, and one in five (21%) studied an 'other' Level 3 qualification including Applied General, and Tech Level qualifications. In 2020, only 3% were involved in an apprenticeship programme (Department for Education, 2021a). Most Year 12 young people were in a school sixth form (37%), one third in a general FE college (32%) and 8% in a Sixth Form College.

Around one in ten (13%) study qualifications equivalent to Level 2, mostly GCSEs but also Technical Certificates (Robinson 2019). Four percent study Level 1 or other qualifications (Department for Education, 2021a). Currently 6% of 16 year olds are not in education, employment or training (NEET).

Figure 9: Participation of 16 year olds by highest qualification aim, England 1994-2018



Source: Robinson, D. (2019), Further education pathways: securing a successful and healthy life after education.

Aggregated national data is not readily available on which qualifications are studied where. However, Robinson (2019) reports that in 2018, A/AS Levels are being studied predominantly in school sixth forms and, to a lesser extent, Sixth Form Colleges, with a small proportion in

FE colleges. Other Level 3 programmes are mostly followed in FE colleges, with around one quarter in schools.

Cullinane and Doherty (2020) highlight the expansion of Degree Apprenticeships in recent years. In the year before the apprenticeship levy was introduced (2016/17), there were 1,634 Degree apprentices and 63 apprentices undertaking other Level 6 and 7 apprenticeships. By 2018/19 the figures had risen to 13,587 and 8,892 respectively. However, most of these (51%) are undertaken by people aged over 30. Cullinane and Doherty (2020) found that only 2,000 (or 20%) of those starting a Degree Apprenticeship at an English University in 2018/19 were aged 20 or under.

2.6.2 Determinants of KS5 pathways

As mentioned above, there is no or very limited information on the specifics of the careers education young people receive in KS4 (beyond schools' self-assessment data held by the CEC) and how this affects their outcomes. However, there is a great deal of information and analysis on the characteristics of young people relating to which KS5 pathways they undertake.

Prior attainment/disadvantage

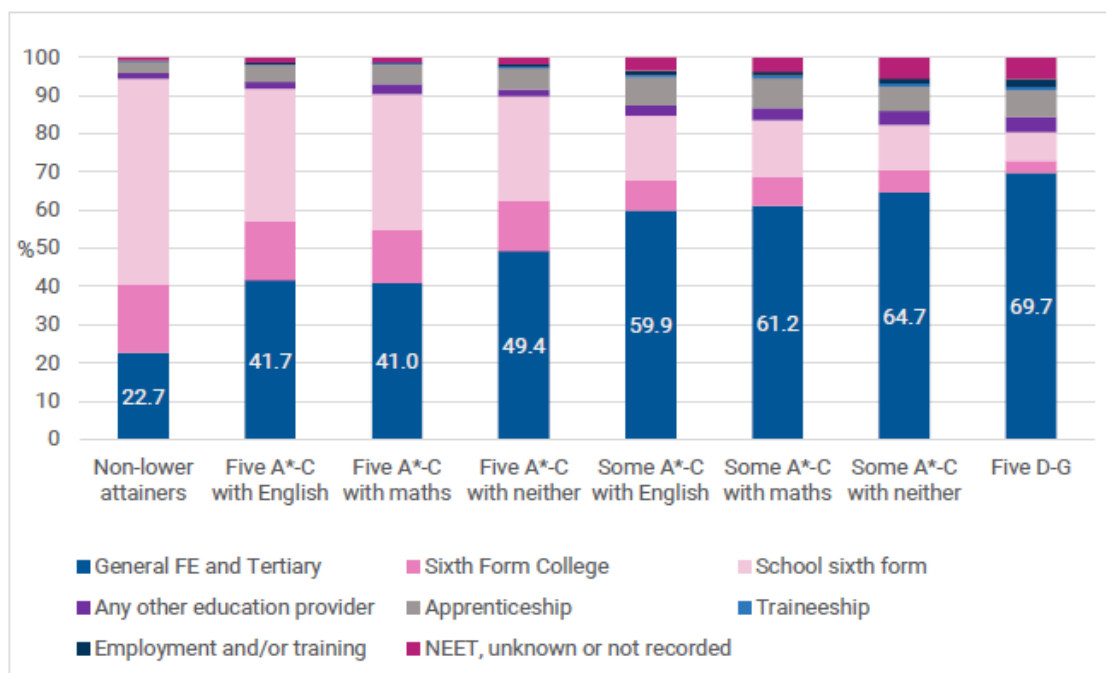
Prior attainment is highly associated with socioeconomic status (SES) and other measures of disadvantage, such as, receipt of Free School Meals (FSM) and Indices of Multiple Deprivation (IMD). Simply put, young people with lower prior attainment/SES are more likely to progress on to vocational options and lower level options in KS5, and the careers education they receive is often targeted towards these options. For example, many young people with higher attainment levels are not presented with TVET options when making decisions (Social Mobility Commission, 2021).

According to Archer et. al. (2020) careers education is 'patterned'. Year 11 pupils of lower SES and in lower sets receive significantly less careers education and report being less satisfied with it. The authors posit that this is because such pupils are likely to attend less well resourced schools or institutions that do not prioritise careers education, and are therefore less likely to self-refer to careers education provision.

Lupton, et. al's. (2021) analysis of 2015 ILR and National Pupil Database (NPD) data shows post GCSE destinations for lower attainers (see Figure 10)²³. Most non-lower attainers are likely to progress on to school sixth forms or Sixth Form Colleges and, by implication, pursue academic pathways. The destinations of lower attainers (again by implication) are TVET options with General FE, apprenticeship and traineeship, other education providers and NEET being the main provision. As Figure 10 shows, undertaking the latter set of provision increases by lower level of attainment.

²³ A lower attainer is someone who does not achieve 5 or more GCSEs (or equivalent) that includes English and Maths.

Figure 10: Post GCSE destinations for ‘lower’ attainers by category 2015



Source: Lupton, R. et. al. (2021), Moving on from initial GCSE ‘failure’: Post-16 transitions for ‘lower attainers’ and why the English education system must do better: Final Report. Nuffield Foundation.

Whilst GCSE attainment impacts on future options, failing to achieve specific and critical GCSEs can also have a critical effect on future pathways. Machin, McNally and Ruiz-Valenzuela’s (2018) analysis of NPD linked LEO data, found that those failing to achieve GCSE English were much less likely to enter higher level academic and TVET options, progress on to HE, and were more likely to drop out of education and training completely by age 18.

The evidence suggests that young people are less likely to be presented with vocational than academic options. Youth Employment UK (2021) asked young people (aged 14-24) how frequently various options have been discussed with them. Around half of young people had had apprenticeships discussed with them three or more times (51%), compared with more than two thirds for A levels (68%) and 63% for university. The survey also found that disadvantaged young people were also less likely to have had school sixth forms and A levels discussed with them. This supports evidence from other studies that suggests the presentation of various options is ‘patterned’. For example, higher attainers/SES groups are less likely to be presented with vocational options, and lower attainers/SES groups are less likely to be presented with academic options (Archer et. al., 2020 reporting on Year 11 pupils in 2014/15). UCAS (2021a) found that three quarters of undergraduates first realised that HE was an option for them when they started post-16 education, and this was higher for disadvantaged students. UCAS (2021b) reported that only just over one third (36% of those applied to a university) found accessing information about apprenticeships ‘somewhat easy’ or ‘very easy’.

The careers education resources available to disadvantaged pupils are less than their more advantaged peers both in terms of the level of support and the options they are presented with (Stewart, 2021, and Archer et. al., 2020). Not only does this relate to careers education in schools but also other important sources of careers information. For example, the parents of pupils on FSM are less likely to draw on their own knowledge and experience, that of family

and friends, and websites (Knibbs et. al., 2018). This, however, need not be the case. In Wales, Davies and Yunus (2019) reported that disadvantaged pupils are more likely to receive support from Careers Wales. For example, 79% of Year 10 and 11 pupils who were eligible for FSM took part in a careers related interview compared to 67% of those not eligible, they also were more likely to receive other careers interventions (e.g. 'keeping in touch'). Those with SEND and those persistently absent were also more likely to participate in a careers related interview.

Lupton, et. al. (2021) describe the situation of lower attainers as a 'pressure cooker'. This is because they have access to fewer careers education resources and face more complex options. The A level-HE pathway is much more straightforward, especially if the school has a sixth form. Choosing vocational options often means changing provider as well adding to the need for more and better careers education to illuminate TVET routes.

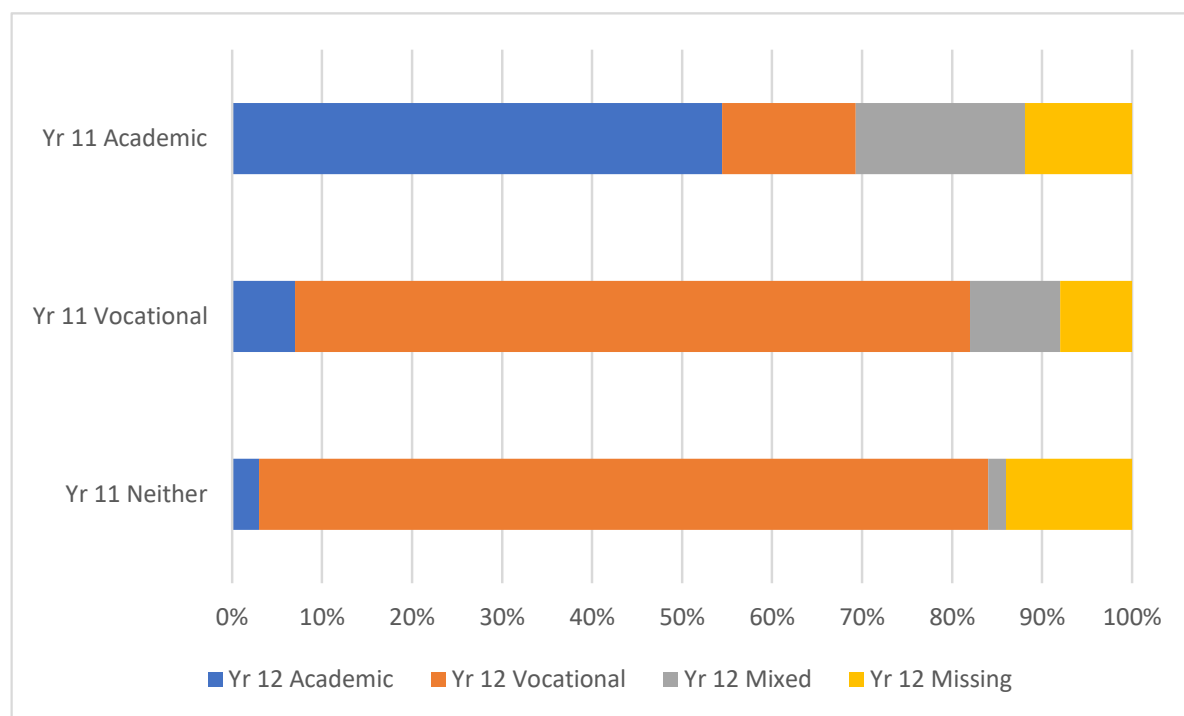
However, it is not just low attainers per se. Higher attainers from lower SES groups are more likely to follow TVET routes than lower attainers from high SES groups (Social Mobility Commission, 2021). This is because:

“The evidence shows that pupils receive guidance that depends on the school they attend, teachers’ views on their academic capabilities and the presence of a sixth form in the school”.

In 2014/15, most young people in Year 9 aspired to an academic route (68%) rather than a vocational route (25%) (McIntosh, 2019). However, in Year 11, the proportion aspiring to an academic route fell slightly (63%) and those wanting to follow a vocational route rose (29%). Lessof (2016) analysing the same data found that those in the highest SES were almost 20 percentage points (18 ppts) more likely to plan to stay on post-16 to do A levels in their Year 10. Those in the lowest SES were 11 ppts more likely to be planning TVET options.

Figure 11 shows that 55% of those who aspired to an academic route in their Year 11, actually took that route in their Year 12 (McIntosh, 2019). This compares with 75% of those aspiring to a vocational route going on to that route in their Year 12.

Figure 11: Year 11 aspirations and Year 12 routes, England 2014/15



Source: McIntosh, S. (2019), Post-16 Aspirations and Outcomes: Comparison of the LSYPE Cohorts

Unfortunately, there is no recent DfE analysis of the level and types of careers information and advice young people received in England’s schools and on which young people’s decisions are based. The evidence that is currently available, and most recently published, is from the LSYPE. But this is for Year 11 pupils in 2014/15. Understanding Society is a more recent longitudinal survey which has questions that includes careers information and advice, but there have not been any studies that have analysed it to date.

The Year 12-13 choices young people make at Year 11 affect post-18 options as well. McIntosh (2019) found that only 22% of those following a Level 3 vocational route applied to university compared to 71% of A level students. Why there is such a large difference between vocational and academic options is worthy of further research.

Using the LEO dataset, De Coulon (2017) analysed the pathways of young people starting below Level 2 vocational programmes in their Year 12 2011/12. Almost half of these (45%) progressed on to higher level vocational qualifications (VQs) in Year 13, one in five (21%) moved into sustained employment after their Year 12, the same proportion became sustained NEET (after dropping out in their Year 12), and 13% progressed onto an apprenticeship. This demonstrates that many young people on lower level KS5 vocational courses want to, and do progress on to, higher level qualifications. McGrath (2021) found that students on the KS5 Ark Professional Pathways programme (an enhanced BTEC programme which emphasises progression into HE) had a much greater knowledge and understanding of HE on leaving school than A level students, and also twice that of former BTEC students (prior to the Professional Pathways programme).

Cullinane and Doherty (2020) found that the profile of young people undertaking Degree Apprenticeships is similar to first degree undergraduates. Degree apprentices are five times more likely to come from the most advantaged areas compared to the most deprived, and the gap is growing. In 2018/19, 36% of Degree apprentices came from the least deprived area

(Quintile 5), 25% from Q2, 18% Q3, 14% Q4 and 7% Q5. This is almost the mirror image of the profile of Intermediate apprentices.

Young people with special educational needs and disabilities (SEND)

Many young people with SEND are more likely to follow TVET options, attend FE and progress on to lower level qualifications. There is some correlation between SEND, SES and prior attainment, for example, young people from lower SES groups are more likely to be diagnosed with SEND. Young people with SEND are also more likely to be male.

Velthuis and Chatzitheochari (2021), in common with other studies, found that young people with SEND are more than twice as likely to be unemployed from Year 12-14, and more likely to undertake apprenticeship and training pathways in their Year 12-13. Year 12 young people with SEND are also much more likely to attend a general FE college and less likely to attend a school sixth form or Sixth Form College.

However, pathways also vary within the SEND group. This is because the SEND cohort is very broad with different levels and multiplicity of barriers and support needs. Velthuis and Chatzitheochari (2021) reported that young people who have SEN without a statement are more likely to be in employment and less likely to be unemployed by Year 14 compared to those who have SEN and a statement because they have fewer support needs.

Dickinson and Cullen's (2018) analysis of the 2016/17 LFS/APS found that young people with less complex SEND were closer in profile in terms of attainment, economic activity and progression to those who did not report a disability, than those with complex SEND. Furthermore, the latter group of young people (aged 16-18) consistently have lower percentages achieving positive outcomes. Disability Rights UK (2017) found that disabled young people are less likely to undertake a one-to-one meeting with a careers adviser and undertake work experience. They also do not always receive careers education which is appropriate to their disability, and their aspirations. The Careers & Enterprise Company (2020) reported that special schools were less likely to have fully achieved on the eight Gatsby Benchmarks, including encounters with employers, experience of workplaces, and encounters with FE and HE. However, the most recent (2020/21) Compass data suggests that special schools have overtaken schools on these three measures. In 2020/21, a majority or all Year 11 special school pupils had one interview with a careers adviser in two thirds of special schools (65%), a majority or all had two interviews by their Year 13 in 60% of special schools. The figures for mainstream schools are 80% and 58% respectively.

Gutman and Schoon (2018) report that increasing the career aspirations of young people with SEND impacts on their educational and occupational outcomes. Using the LYSPE to analyse the pathways of young people in school with and without SEND they found that:

"...high career aspirations at age 14 were more predictive of later educational and employment outcomes from ages 16 to 20 for adolescents with SEND compared to those without SEND"

Young people with SEND also were less motivated in school, had lower confidence in their academic ability and had parents who had lower expectations for their educational future compared to their peers without SEND. Improving careers aspirations in early adolescence to raise ambition would increase their own self-concept of ability, school motivation and parental expectations and impact on educational attainment and higher occupational outcomes. Parents and teachers can then play a role in supporting and encouraging them to

fulfil these ambitions, along with work experience via skills training, internships and apprenticeships.

Gender

Gender impacts on young people's pathways in two ways. Gender stereotypes affect choice within the various broad pathways with certain subjects, sectors and occupations attracting disproportionately more males or females. For example, Dickinson (2019) found that whilst the proportion of males and females on apprenticeships is similar, in 13 of the top 20 frameworks/standards the percentage point difference in the gender split is greater than 50pps. More recently, EngineeringUK (2021) reported that the sectoral appeal and careers choices amongst 11-19 year olds differed significantly by gender with males favouring/choosing engineering, business and technology and females preferring healthcare. Also, for some pupils, there is an interaction of lower attainment and SEND with gender. The first two factors are associated with choosing TVET options, and male pupils are more likely to be in these groups (Cavaglia, et. al., (2020); Youth Employment UK, 2020).

Egglestone, Jones and Aldridge (2018) found that it is the propensity to apply for different apprenticeship opportunities rather than the outcome of the application that is at the root of the gender disparity. Girls/Women (of all ages) were much more likely to apply for health and social care, public services and education and far less likely to apply for engineering, construction and ICT apprenticeships. However, whilst females are less likely to apply, there is far less gender difference in the success rate of their applications. And there is no significant difference in the success of their applications for male and females applying for engineering, manufacturing and technology apprenticeships.

EngineeringUK (2021) found that differences emerge with age and there is far less difference between boys and girls in the understanding of STEM careers amongst 11-14 year olds, than those aged 14-16 and 16-19. This supports an earlier study (EngineeringUK, 2019) that also found that gender differentials in knowledge about engineering options increased with age. Stoet and Geary (2018) suggest that, as far as STEM options are concerned, it is not the appeal or interest in STEM subjects but rather a greater attraction to non-STEM options where their personal strengths lie (e.g. greater reading ability than boys). This may explain why a number of girl-focused school based STEM initiatives have had limited impact (Plaister and Thomson, 2020; Department for Education and Behavioural Insights Team, 2020).

Overall, the research, in general, supports earlier careers education interventions to help address sectoral and occupational gender differentials. In England many Opportunity Areas, with support from the DfE, CEC and Cabinet Office, are in the process of addressing this major challenge at a local and regional level.

Ethnicity

There is a complex interaction between ethnicity and choice of pathways because the specific ethnic groups within the broad Black and Minority Ethnic (BAME) category are so diverse. In particular, attainment levels vary significantly and this is most highly associated with whether young people undertake education or TVET routes, and the careers information and advice which such decisions are based on. Whilst attainment levels vary across specific BAME groups, all BAME groups of young people have higher attainment levels than young people of White ethnicity (Department for Education (2020b).

Archer, Moote, MacLeod, Francis and DeWitt (2020) reported similar levels of aspirations across all ethnicities of young people. However, they also found that BAME young people

(aged 15-16 in 2016/17) were less likely to receive careers education (as defined earlier in this report) than those of White ethnicity (Archer and Moote, 2016; Moote and Archer, 2018). Furthermore, BAME young people were less likely to undertake work experience (which is also related to the choice of TVET options). This supports the findings of McIntosh (2019) who found that BAME young people were more likely to favour academic routes, with young people of White ethnicity more likely to undertake TVET options, including apprenticeships. In Anderson and Nelson's (2021) analysis of LEO data they found that in the years after KS4 all specific BAME groups (except for Black Caribbeans) were more likely to take the KS5 school to HE route, whereas Black Caribbean and White young people were more likely to take TVET and adult FE options before entering the labour market. This is broadly the finding from Dickerson, Morris and McDool (2020) in their analysis of the LYSPE.

There are few studies which compare careers education between different ethnic groups. This may be because BAME groups are a relatively small group in the population and so sample sizes are low. Knibbs, et. al. (2018) found that BAME young people (compared to White young people) were more likely to seek advice from parents/carers, and that their parents/carers felt more confident in providing that advice. IFF Research Ltd. (2021a) found that whilst the ranking of factors was the same for BAME and White school leavers, BAME school leavers rated all of them much more highly, for example: picking a route that would lead to a good job; and one that employers valued. In particular, BAME school leavers were more likely to rate the importance of the time and cost taken to study and choosing a route their parents approved of much more highly than White school leavers.

2.7 Exposure to TVET options

This section explores to what extent young people are presented with or find out about TVET options.

2.7.1 Presentation of TVET options

Youth Employment UK (2020 and 2021²⁴) found that young people in Years 9-10 were mostly presented with academic options such as GCSEs (93%) and A levels (60%). Whilst 57% were spoken to about BTECs, only one in five (22%) were spoken to about other vocational options (including apprenticeships).

Table 2 below shows the frequency that various options were discussed with young people in school e.g. A levels (49%), joining a sixth form (42%), going to university (43%) and getting a job were the most frequently discussed. However, this varies between different TVET options. Whilst over one third of young people (35%) reported that apprenticeships were discussed with them four times or more, but very few young people said they'd been spoken to about Traineeships and T levels (but it must be remembered that only 3 of the 23 T Level programmes had been rolled out by 2021).

In the same survey, whilst two thirds (65%) said they were likely/very likely to apply to university, only 29% said they were likely/very likely to apply for an apprenticeship.

²⁴ The Youth Employment UK 2020 survey had 1,390 respondents, 57% of which were aged 14-16. The 2021 survey had 3,400 respondents but no age profile was provided.

Table 2: How often were the following options discussed with you in schools

	Never	Once	Twice	Three Times	Four Times	Five Times
Traineeships	65.6%	16.8%	8.4%	4.5%	1.4%	3.3%
Apprenticeships	14.2%	16.5%	17.7%	16.8%	8.9%	25.9%
Going to University	12.6%	12.6%	11.7%	12.7%	7.4%	43%
Starting your own business	58.4%	19.5%	8.9%	5.6%	1.5%	6.1%
Getting a job	12.8%	12.7%	13.1%	13.5%	7.5%	40.4%
Joining a sixth form	24.2%	9.5%	7.9%	8.9%	7.5%	41.9%
A levels	13.6%	9.4%	9.3%	11.3%	7.5%	49%
T levels	72.7%	10.3%	6.2%	5.6%	2.1%	3%

Source: Youth Employment UK (2021). Youth Voice Census 2021 Report.

Presentation of apprenticeships

As we have seen earlier, many adults value TVET options but do not then promote them as much or as positively as academic options. Similarly, 11-16 year olds are interested in apprenticeships but report that they are not discussed with them as much by the main influencers so they tend not to be chosen (Sutton Trust, 2018). This Sutton Trust survey of almost 2,500 11-16 year olds and 1,200 teachers found that two thirds (64%) of young people would be very or fairly interested in doing an apprenticeship after leaving school. However, many (40%) did not have this option discussed with them and if they do it is in Year 11 when this may be too late.

Knibbs et. al. (2018) found that whilst one third (36%) of school pupils reported that they had not received any information on apprenticeships and 34% for other TVET options, this increased to 60% and 52% for parents. This is despite the fact that most parents would like greater information about apprenticeships. Pupils are much more likely to have received careers education about apprenticeships in KS5 rather than in Years 10-11 i.e. when their schooling is coming to an end.

However, Youth Employment UK (2020) found that 86% of young people had had apprenticeships discussed with them at least once which is lower than university (92%) and college (91%) but higher than sixth forms. However, as Table 2 above shows they were discussed less often than A levels, sixth forms and university. Stewart (2021) also found that apprenticeships were discussed with most young people through formal IAG sources (second behind a degree). But they were more likely to be discussed with lower attainers.

If TVET options, including apprenticeships, are effectively promoted young people are more likely to take them up. As we have seen, Percy and Tanner (2021) found that uptake of apprenticeships was significantly higher where they were presented to all students rather than a subset. This also impacts on overall positive destinations. Hicks, Raidos and McGarry (2021) in their survey of young people found that if young people in school had been told about apprenticeships more would have taken them up. In some cases, the lack of information is due to school teachers and careers advisers not understanding TVET options generally and

apprenticeships in particular (Sutton Trust, 2018; Straw, 2019). The Careers and Enterprise Company's Careers Leaders training and schools' involvement in Careers Hubs does appear to lead to better promotion of TVET options.

Youth Employment UK (2021) asked respondents a number of questions about apprenticeships. Most young people were left to their own devices in finding out information about the apprenticeship. Very few said that they found out about their apprenticeship from their school (5%) or their parent/guardian (5%). Most (33%) found information on an apprenticeship website. Whilst most found the recruitment and application process good or excellent (79%) fewer than one in five (19%) got any support from their school, college or sixth form. Over half (58%) of apprentices said the education provider focused too much on the university route. Four out of five (78%) said they believed they had made the right career choice, and 85% rated their apprenticeship as good or excellent.

Presentation of T levels

T levels are new qualifications that have been piloted and rolled out in stages since 2018, and the subjects available are being expanded (in the 2021/22 academic year T levels in 10 subjects were available). Whilst they are predominantly classroom based, they include significant time in a work placement (20% or a minimum of 315 hours). Delivered by schools, colleges and private training providers, T levels are equivalent to three A levels and are targeted at students in KS5. They attract UCAS points and are therefore a step into HE. There is also an option of a T level Transition Year for young people who are uncertain of which careers they want to pursue (HM Government, 2021a).

There is a great deal of T level guidance aimed at students, parents, employers, teachers and careers advisers²⁵. However, little information is available about the careers education and processes young people and providers respectively use. In DfE commissioned evaluations during the piloting and roll-out of the programme, careers education prior to students' take-up of T levels was not explored (Newton, et. al., 2019; CFE Research, 2021).

A DfE and Behavioural Insights Team jointly designed study (Behavioural Insights Team, 2020) set out to test the extent to which the behavioural interventions would support preferences towards TVET options. The approaches trialled were based on the Transtheoretical Model of behavioural change. This suggests that that adopting a new behaviour requires people, in the first instance, to be aware of that behaviour as an option and then to recognise the benefits of adopting the behaviour. The study trialled four different behavioural approaches, two of which had impact: motivating young people to engage with information about technical options; and encouraging the pursuit of TVET options. Both interventions increased the likelihood of pursuing a TVET college course.

The study concluded that:

“...although the Baker Clause should help to reinforce the ATE deficit in schools, there remains value in exploring evidence-based approaches to understand how young people and parents can engage effectively with the information provided to them by schools and employers.”

²⁵ For example, see <https://www.gov.uk/government/publications/t-levels-resources-for-teachers-and-careers-advisers>

In January 2021, the government's Skills for Jobs white paper revealed the requirement to provide careers education will be extended to year 7s:

"...we will lower the age range of the duty on schools to provide independent careers guidance, requiring schools to offer this support from year seven, bringing it in line with the Gatsby Benchmarks.²⁶"

A number of broader surveys have asked young people and employers their awareness of T levels.²⁷ Youth Employment UK (2021) reported that 73% of young people had never heard of T levels. MakeUK (2021) found that in 2019, 65% of manufacturers had heard of T levels, and 28% had heard of them but had limited knowledge of them.

Straw (2020) undertook a survey of 732 senior school leaders and teachers and found that less than one in five (18%) were fairly or well informed about T levels. In an early study, Straw, et. al. (2019) reported that schools were planning to utilise existing careers education processes to inform pupils of T levels. Some had already developed their T level awareness raising plans to promote them to pupils and parents/carers.

CBI (2019b) found increasing levels of awareness of T levels. In 2018 48% of employers were somewhat/very aware of T levels but this had risen to 79% in 2019. Furthermore, 71% of employers were somewhat/very likely to offer T level placements.

Impact of the Baker Clause

Since 2017, there has been a statutory requirement for all secondary school students to receive independent careers advice. The Baker Clause stipulates that schools have to allow colleges and training providers to talk to their pupils about apprenticeships and technical education. However, some studies have found 'selective compliance' with the Baker Clause. For example, House of Commons Education Committee (2018) reported that only one in five large multi-academy trusts were fully compliant. The latest House of Commons Education Committee report (2021) backed up its 2018 findings of low compliance.

Hochlaf and Dromey (2019) found that only two in five schools published a provider access statement, and 70% of TVET providers say it is difficult to access schools in their area. Even when providers are allowed access, they believe that they are only able to speak with selected pupils including those who perform less well in academic subjects. This reinforces a perception that TVET options are for lower attainers. Schools without sixth forms are more likely to ensure pupils have encounters with post-16 providers whereas schools with sixth forms are more likely to facilitate encounters with HE providers (The Careers & Enterprise Company, 2020).

Youth Employment UK (2021) stated for young people:

"Traineeships and T Levels were never discussed with 65.6% and 72.7% of young people; 6.6% of young people are 'Likely' or 'Very Likely' to apply for a T Level; 28.6% of young people are 'Likely' or 'Very Likely' to apply for an apprenticeship" (p.11).

²⁶ Section 42A of the Education Act 1997 requires governing bodies to ensure that all registered pupils at the school are provided with independent careers guidance from year 8 to year 13.

²⁷ Both Youth Employment UK and MakeUK were UK wide surveys. As T levels are only being developed in England, it is not clear whether only England based respondents were asked these questions.

Even though TVET options may be the most appropriate study option for many learners they are undervalued by parents and schools and thereby young people themselves (Mime 2020). In many cases young people have to find out about TVET themselves whereas they receive a lot of support in deciding on HE options.

2.8 Conclusion

Much of the research and data available does not systematically track the careers information and advice process from actual provision and utilisation into post-16 outcomes, especially in TVET. This has implications in knowing which students from differing SES groups receive trustworthy information on TVET options, how they engage with that information and make choices. Analyses of longitudinal data show that there are myriad pathways young people take post-16 through their initial entry into the labour market and then into their late teens to mid-twenties. The longitudinal surveys that provide most insights cannot provide an up to date picture, especially since the 2017 DfE Careers Strategy was published. They also tend to focus on provider pathways (e.g. school and FE) rather than types of education and training (academic and vocational within providers).

The decision making processes of young people are complex and often start at an early age in primary school. Later, decisions are based on a complex interaction between a number of influencers and domains which affect a young person's assessment of the opportunity for, motivation to, and capability of pursuing different choices. However, most young people are clear that the decisions they make are their own and based on their career aspirations.

The findings show that amongst the most important influencers, and within a number of domains, that not all options are presented or presented equally. Careers education activities young people undertake vary between different data sources, mainly because they are surveys of different age groups and geographies.

In KS4 most young people have access to a range of information, including about apprenticeships and other TVET options. However, a significant minority do not. There is less research and data about career decision making in KS5, and most focus on the HE option rather than TVET options.

Parents, teachers, peers and careers advisers are the primary influencers. However, their knowledge of TVET options is limited compared to academic options. In most cases they are less likely to promote TVET options, despite the fact that most parents/carers and young people have a positive view of TVET options.

Significant factors affecting how careers education is provided to young people in Key Stage 4, and the pathways they choose, appear to be level of attainment and whether a school has a sixth form or not. Careers education concerning TVET is 'patterned'. Pupils with lower attainment are directed more towards TVET options, and schools with sixth forms have an incentive to direct (mostly higher attaining) pupils to their provision. This may include TVET options such as BTECs but is mostly A levels. Socio-economic status, gender and whether a young person has SEND all play a role but there is intercorrelation between these factors which makes them difficult to disentangle.

Pupils are often presented with TVET options, especially apprenticeships, but this is not as prevalent as A levels and HE options. Whilst the introduction of the Baker Clause made it a statutory requirement for external providers to have access to school pupils, compliance appears to be selective. Some providers feel they do still not have access to school pupils, and if they do, it is only to a particular subset.

T levels provide an additional TVET option to young people, however, little is known about how T levels are presented to young people, what sorts of young people select them and the careers education support they receive.

3. Opportunities, applications and outcomes

3.1 Introduction

This section focuses on TVET opportunities, applications and outcomes. It follows on from the previous section in looking at the different pathways young people choose, and how these vary between different groups of young people, especially lower attainment and the impact of this. It analyses changes in apprenticeships and the underlying reasons for these trends, including job adverts, vacancies and employer recruitment. It also provides information on employer training. We conclude with evidence on outcomes of choosing TVET options.

This section starts at the end of KS5, as post-18 pathways are embarked on.

3.2 TVET participation

Progressing young people on to higher level qualification pathways is important for future impacts. The research later on in this section shows that positive outcomes from education and training increase by level of qualifications.

It is difficult to assess the availability of TVET opportunities overall because, other than apprenticeships, detailed data is not available. It tends to be available by type of provider and assumptions drawn from this. For example, those choosing FE providers are much more likely to be undertaking vocational programmes rather than academic programmes. However, this will exclude young people undertaking vocational programmes (such as BTECs) in school sixth forms. As we have seen (Figure 9) the number of young people taking 'other' Level 3 programmes in KS5 (i.e. non A/AS levels) increased over the last ten years. From this it is assumed that part of this increase is likely to be due to young people undertaking these programmes in school sixth forms, but the data is not available to be certain. Other TVET options, apprenticeships, 'other' Level 2 (i.e. non-GCSEs), Level 1, and apprenticeships have declined.

Between 2018/19 and 2020/21 the number of 16-18 year olds studying A levels fell by 18,551 or 6% whilst students the number of applied general students rose by 21,010 or 32% (National Statistics, 2021). However, this increase might have been expected as it was preceded by a decline in VQs undertaken by 16-18 year olds following the vocational qualification reforms introduced by the Government. The nature of these changes - which specific TVET programmes were being studied, the subject area and at which provider – is not known because detailed information and data describing them is not readily available.

It is not known what has driven overall changes in TVET numbers. For example, whether the changes in the take-up of TVET options in KS5 are the result of pre-16 careers education, changes in the availability from providers, school sixth forms increasingly offering certain types of VQs (such as BTECs), VQs not being seen as a route into HE (and therefore less attractive) or a combination of these. Certainly, there has been a decline in young people undertaking apprenticeships in KS5 (see next section) and this is due to longer term trends in the age profile of apprentices, and as a result of the apprenticeship levy.

3.3 Apprenticeship opportunities

Apprenticeship starts

A lot is known about the availability and take-up of apprenticeship programmes, much more than other TVET options. There are regular published updates on starts, and regular surveys of both apprentices and apprentice employers. This is in contrast to the lack of data on other KS5 TVET options (such as applied general qualifications) even though they attract many more young people.

Figure 12 shows that the number of apprenticeships starts for 16-19 year olds did indeed increase until 2011/12 but then plateaued. Since 2015/16, the numbers declined and has been exacerbated by the introduction of apprenticeship reforms in Spring 2017, of which the apprenticeship levy has had the greatest impact (Dickinson and Hogarth, 2021). In 2010/11, 29% of apprentices were aged under 19 years, 31% were aged 19-24, and 40% were aged 25+. By 2018/19 the respective percentages were 25%, 29% and 46%.

Figure 12: Number of apprenticeship starts by age 2002/03 to 2018/19²⁸



Source: Dickinson, P. and Hogarth, T. (2021). The Benefits of Hindsight: Assessing the impact of apprenticeship reforms on employer behaviour. Edge Foundation and Gatsby Foundation.

The number of apprenticeships starts by 16-19 year olds fell by -26% between 2010/11 and 2018/19, but there was decrease in other age groups as well, -19% for 19-24 year olds and -1% for those aged 25+.

Since the introduction of the apprenticeship reforms, young people's apprenticeship opportunities have been affected by employer's demand for increased level apprenticeships – Advanced but especially Higher – and there have been two elements in this. Firstly, the

²⁸ Whilst there is now full year data available up to 2020/21, 2018/19 has been selected as the latest year but years after this are affected by the pandemic and it is not possible to differentiate between the impact of longer term trends, and the levy, and what effect COVID-19 has had.

impact of the apprenticeship levy on the types of employers recruiting apprenticeships (see below) and, secondly, an increase in the level of apprenticeships they recruit. This has resulted in a fall in the number of Intermediate apprenticeship starts, and an increase in Advanced and Higher Level apprenticeships as Table 3 shows. These trends have been the same for all age groups. The impact on young people was that most of them undertook Intermediate apprenticeships and fewer Advanced and Higher. Therefore, the bigger decline in Intermediate apprenticeships and the increase in other apprenticeships (especially Higher level) has had a greater negative impact on this cohort.

Table 3: Number of apprenticeship starts by age and level 2010/11 to 2018/19

Age group	Apprenticeship level	% Change 2010/11-2018/19	Percentage point change 2010/11-2018/19
Under 19	Intermediate	-44%	-18%
	Advanced	14%	14%
	Higher	2118%	4%
	All	-26%	-
19-24	Intermediate	-56%	-29%
	Advanced	9%	12%
	Higher	1409%	17%
	All	-19%	-
25+	Intermediate	-56%	-35%
	Advanced	17%	7%
	Higher	7356%	28%
	All	-1%	-

Source: Dickinson, P. and Hogarth, T. (2021). The Benefits of Hindsight: Assessing the impact of apprenticeship reforms on employer behaviour. Edge Foundation and Gatsby Foundation.

Data on the geographic area of apprenticeship starts is available down to local authority district and parliamentary constituency level. However, it is not available on a time series data that also includes demographic information including age. Between 2010/11 and 2018/19 the number of all age starts fell in every region. There was a northern divide in that there were above average declines in apprenticeship starts in the North East, North West, Yorkshire and the Humber, and the West Midlands. The number of starts fell by the least amount in the East of England, London and the South East. The introduction of the apprenticeship levy also affected the northern and midlands regions the most where there were larger falls in apprenticeship starts compared to the four southern regions.

Figure 13 shows the percentage and ppt change in apprenticeship starts for young people (16-18 and 19-24) by sector subject area (SSA) between 2015/16 and 2018/19²⁹. In this period there was a fall in total starts of 26% for 16-18 year olds, and 25% for those aged 19-24.

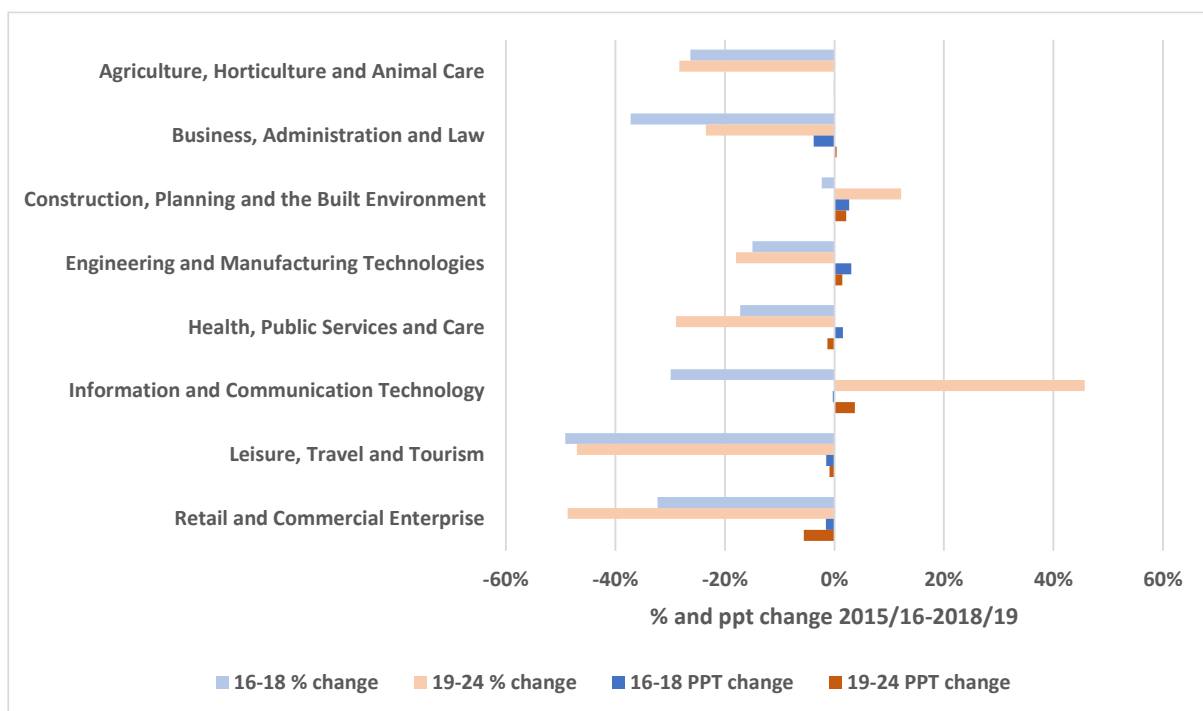
For 16-18 year olds, there were percentage decreases in all SSAs. This ranged from a fall of 2% in Construction, Planning and the Built Environment starts to a decline of -49% in Leisure, Travel and Tourism. Compared to the overall decline in starts for 16-18 year olds, there were above average falls for Business, Administration and Law (-37%); Information and

²⁹ Only those SSAs with more than 3% of total starts have been included. This excludes: Arts, Media and Publishing; Education and Training; Preparation for Life and Work; and Science and Mathematics.

Communication Technology (ICT) (-30%); Retail and Commercial Enterprise (-32%) in addition to Leisure, Travel and Tourism. Because of the overall decline in starts, the change in the percentage distribution of SSAs is also shown (ppt). This shows that for 16-18 year olds, the distribution of starts remained similar. There were ppt increases in Construction, Planning and the Built Environment (3 ppt); Engineering and Manufacturing Technologies (3 ppt); and Health, Public Services and Care (2 ppt).

For 19-24 year olds, there were increases in Information and Communication Technology (46%), and Construction, Planning and the Built Environment (12%). But there were above average falls in Agriculture, Horticulture and Animal Care (-28%); Health, Public Services and Care (-29%); Leisure, Travel and Tourism (-47%); and Retail and Commercial Enterprise (-49%). There were ppt increases in Construction, Planning and the Built Environment (2 ppt); Engineering and Manufacturing Technologies (1 ppt); and ICT (4 ppt). There was a large decline in relative Retail and Commercial Enterprise starts (-6ppt).

Figure 13: Change in sector subject area by age – percentage and percentage point change 2015/16 to 2018/19



Source: Authors own analysis of apprenticeship data <https://www.gov.uk/government/collections/further-education-and-skills-statistical-first-release-sfr>

As far as level is concerned, there was a fall in the number of Intermediate apprenticeship starts for both 16-18 and 19-24 year olds in every SSA, except for Information and Communication Technology (0.5%). At Advanced level, there were decreases for both age groups in Business, Administration and Law, Leisure, Travel and Tourism; and Retail and Commercial Enterprise. But increases for both age groups in Construction, Planning and the Built Environment, and Engineering and Manufacturing Technologies. Starts increased significantly in ICT Advanced apprenticeships for 19-24 year olds but fell significantly for those aged 16-18. There were large increases in Higher apprenticeships starts in all SSAs, mostly 3-digit, but often from a very low base.

The impact of the apprenticeship levy

The second important trend was an increase in apprenticeship recruitment by levy payers and a decrease in that of non-levy payers. Whilst levy payers tend to be larger organisations, this trend is independent of size. Therefore, smaller organisations who were levy payers increased their apprentice recruitment whilst larger organisations who were not levy payers decreased theirs (Dickinson and Hogarth, 2021). There were two aspects affecting younger people. Levy payers were driven by the dynamic to spend their levy pot and in doing so they tended to recruit apprentices who were existing employees. In addition, according to the Employer Skills Survey 2019, smaller employers were more likely to recruit young people on to their apprenticeships and at Level 2 (Dickinson and Hogarth, 2021). The trend towards recruiting existing employees as apprentices was an existing trend throughout the past decade (Speckesser and Xu, 2021). But it has been exacerbated by the introduction of the levy (Dickinson and Hogarth, 2021).

Gauging the impact of COVID-19 on apprenticeship starts

The analysis above deliberately ends before the COVID-19 pandemic which affected starts in the 2019/20 provider year. As with employment and businesses, the impact was less pronounced because of the various protection measures introduced as the scale of the pandemic became apparent (Dickinson and Hogarth, 2021). The government sought to protect existing apprenticeships through a range of policies that, amongst other things, included financial incentives, discretions and flexibilities on assessment and completions.

Nevertheless, the number of apprenticeship starts did decline and programmes were affected. Doherty and Cullinane (2020) found that³⁰: 61% of apprenticeships had been disrupted; 36% of employers reported that their apprentices had been furloughed; and 58% of employers were confident that all of their apprentices would return in due course, but 17% said that fewer than half would do so.

Table 4 provides analysis comparing the number of apprenticeships starts between 2018/19 Q2, and 2019/20 Q2 i.e. before and after the pandemic started. Between these two quarters the overall number of apprentices fell by 14%. Assuming that the number of apprentices continued to fall by this amount between 2019/20 Q2 and 2020/21 Q2 this provides an estimate of fall in apprenticeship starts as a consequence of the pandemic. This suggests that the number of apprenticeship starts has declined by around 14% (2019/20 Q2 to 2020/21 Q2) as a result of the pandemic. This appears to have affected young people the most.

³⁰ This is based on a survey of 500 senior HR decision makers, of which 156 were employing apprentices in March 2020. Fieldwork was undertaken between 9th-16th April 2020. The survey was carried out online.

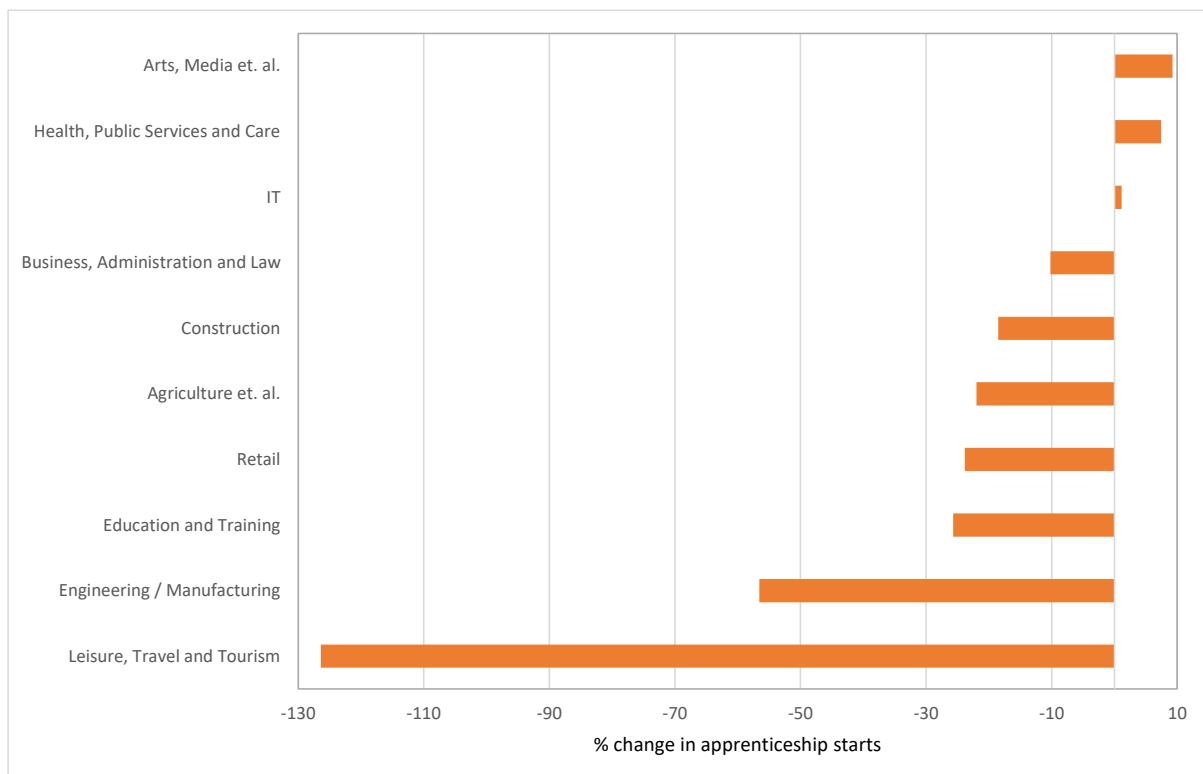
Table 4: Percentage change in apprenticeship starts resulting from the pandemic: 2019/20 Q2 and 2020/21 Q2 compared

Apprenticeship starts	% change in apprenticeship likely to be as a result of the pandemic
Under 19	-32
19-24	-15
25+	-5
19+	-8
Intermediate Apprenticeship	-26
Advanced Apprenticeship	-18
Higher Apprenticeship	-5
Total	-14

Source: Dickinson, P. and Hogarth, T. (2021). The Benefits of Hindsight: Assessing the impact of apprenticeship reforms on employer behaviour. Edge Foundation and Gatsby Foundation.

A similar set of estimates can be produced for the broad subject area (see Figure 14). As can be seen there has been a major impact on apprenticeships in leisure, travel and tourism where the number of starts has been effectively halved. In contrast, there has been an increase in the number of starts in health and IT respectively.

Figure 14: The change in apprenticeship starts resulting from the pandemic by subject area: 2019/20 Q2 and 2020/21 Q2 compared



Source: Dickinson, P. and Hogarth, T. (2021). The Benefits of Hindsight: Assessing the impact of apprenticeship reforms on employer behaviour. Edge Foundation and Gatsby Foundation.

Dickinson and Hogarth (2021) found that the impact of the pandemic was lessened in the short term because employers had already committed to their recruitment. The true impact of the pandemic is likely to be felt more in the medium term as furlough and changes to non face-to-face assessments delayed completions. This is likely to delay future recruitment as many employers take on new apprentices when the previous cohort have completed. In the case of young people (as they are more likely to be new recruits) there will be a new cohort of would-be apprentices whose opportunities may be squeezed by the backlog of apprentices who are still in the process of completing their training. This may well work its way out of the system by 2022, but nonetheless it suggests that the pandemic will continue to affect apprenticeship starts in the short- to medium term.

Conlon et. al. (2021) found that the trends towards older, higher level and levy paying apprenticeships had increased during the pandemic.

Routes into apprenticeships

The Department for Education regularly undertakes a survey of apprenticeship learners (as well as employers, see below). The latest survey was of 2018/19 apprentices (IFF Research Ltd., 2020c). The report underlines the trend to existing employees and older apprentices and away from the notion of apprenticeships as an entry route into skilled employment for many young people. Most younger apprentices (aged under 19) were new recruits (72%) compared to 11% of those aged 25+. This means that just over a quarter of younger apprentices (28%) were employed by their current employer before starting their apprenticeship (though this could be for a probationary period so the employer can assess them as a potential apprentice).

Three quarters of those under 19s (73%) not previously employed by the apprenticeship employer came from a school or college, whilst 14% worked at another employer, 8% were unemployed.

The main reasons young people (under 19) gave for starting an apprenticeship was to 'enter into or progress in a specific career' (26%); 'to develop work-related skills' (22%); and 'to be paid whilst training' (18%) (author's own analysis of survey data tables). For two thirds of younger apprentices (65%), the apprenticeship was their preferred option with only 3% saying they would have preferred to do something else.

Three quarters of apprentices did consider other options before choosing an apprenticeship. The main alternatives were: staying in your existing job without doing an apprenticeship (39%); going to an FE college (31%); going to university (24%); or a school sixth form or Sixth Form College (17%).

The main apprenticeship vacancy search methods used by young people were: online jobsites (45%); direct approaches to employers (43%); through a college or other provider (35%); and via a personal recommendation or contact (34%) (Ibid.).

The large majority of apprentices (72%) wanted to go on to further training after their current apprenticeship. One quarter had already started further training and 61% were considering it. Over two thirds (68%) said their employer had discussed it with them. Nearly all younger apprentices (96%) expected to complete their apprenticeship, and then continue working for their existing employer (78%) (Ibid.).

The Institute for Apprenticeships and Technical Education (IfATE) undertakes a regular panel survey of apprentices. However, the data reported is not presented by age.

Apprenticeship vacancies and applications

Apprenticeship recruitment has been heavily affected by COVID-19, and so starts, vacancies and adverts were all significantly lower from the 2019/20 academic year due to the pandemic. In 2018/19, there were 147,000 vacancies on the 'Find an apprenticeship' (FFA) website. In 2018/19 there were just under 400,000 apprenticeship starts which suggests that most opportunities are not advertised on the website and are likely to be internal appointments filled by existing employees. No data is available on the age groups employers are advertising vacancies for. In 2018/19, 57% of apprenticeship adverts were for Intermediate, 38% for Advanced and 5% for Higher apprenticeships (author's own analysis of apprenticeship vacancy data).

Faulkner-Ellis (2021) points out that a significant number of apprenticeship vacancies have maths and English requirements (for example, 71% of Intermediate apprenticeship vacancies). As we have seen, this is likely to impact on particular groups of young people (such as those on FSM) with lower levels of maths and English attainment further reducing opportunities in already curtailed pathway options.

Some Government data is available on apprenticeship applications. Department for Education (2021d) reported that in the 12 months to July 2021, 46,984 vacancies posted on the FFA website attracted at least one applicant aged under 25. A total of 142,124 candidates under 25 years old submitted at least one application using the FFA website, of whom 9,587 had an application marked as 'successful'.

Very little data on apprenticeships exists in the other more general sources reviewed. IFF Research Ltd. (2021a) asked school leavers (during the pandemic) who reported that they wanted to start an apprenticeship/traineeship in the next six months how hopeful they were of starting one, but this only covered 30 respondents.

Employer perspectives of apprenticeships

The Department for Education commissions two regular surveys that ask employers about apprenticeships. The Employer Skills Survey (ESS) includes a bank of questions about apprenticeships and some about traineeships, however, the analysis does not differentiate between apprenticeships for young and older people (IFF Research Ltd., 2020a).

There is a regular survey of apprenticeship employers (IFF Research Ltd., 2020b) and some analysis is provided by age. Almost three quarters of employers (74%) currently offer or have ever offered apprenticeships to young people aged under 19. One in six (14%) said they only offer apprenticeships to young people. However, employers are increasingly likely to offer apprenticeships to older people. The proportion offering to those aged 25 plus has increased from 46% in 2015 and 2017, to 57% in 2019 reflecting increases in both provision of apprenticeships to existing employees and an increase in provision at Level 4 and above. Smaller employers (non-levy payers) were more likely to offer apprenticeships to young people.

The main barriers employers reported to recruiting younger apprentices was due to age restrictions on the people they can employ, 30% of employers who did not recruit younger people gave this reason. However, one in five (22%) said they would recruit a 16-18 year old if a suitable one applied or if they had an appropriate vacancy (10%).

For employers that had started to offer apprenticeships in the past five years, the third and fourth most important reasons were to 'help young people' (16%) and to get more young

people into their business (15%). These responses were more likely to be made from employers in the arts and media (28%), construction (26%) and engineering (23%) sectors.

3.4 Employer training opportunities

The main source of data on employer training opportunities is the ESS, which in 2019 included 81,000 employers (IFF, 2020a). In 2019, 16% of employers recruited a school leaver from a school or college. Employers were slightly more likely to recruit 17-18 year olds to their first job than 16 year olds. Larger employers were more likely to recruit a 16-18 year old.

It has been reported how unprepared employers think school leavers are. However, the ESS found that 56% of employers who recruited a 16 year old believed they were very well/well prepared compared to 38% who felt they were very poorly/poorly prepared. For 17-18 year olds the figures changed to 65% and 29% for school leavers and 69% and 26% for college leavers respectively (author's own analysis of ESS data).

Around one in five (17%) employers had used school, careers or university job fairs or career services in the past year, which was a similar proportion to 2016 (19%). A similar proportion (19%) provided school placements and 12% college placements. This increased by size of employer with 67% of large employers (250+) providing school placements and 52% college placements. Employers provide placements for altruistic reasons (66%), rather than for company benefits (35%) e.g. to help with recruitment. A lack of suitable roles and lack of time to supervise were the main reasons for not offering school/college placements (author's own analysis of ESS data).

There is a body of evidence demonstrating the impact of employer engagement in education (Mann, Kashefpakdel and Rehill, 2018). Not only does it provide school pupils with an understanding of jobs and careers, and the skills needed in the labour market, but there are also positive impacts on attainment. Providing 3+ careers talks and business mentoring have the greatest impact according to young people (OECD, 2021c).

Whilst the ESS does ask employers about their training behaviour, including apprenticeships (and to a lesser extent traineeships), this is not differentiated by age.

The CBI undertakes regular surveys of employers, a number of which ask employers about their engagement with providers and young people. The sample size is much smaller than the ESS (208 employers and trade associations in 2019) and tends to survey larger employers. CBI (2019b) reported higher levels of concern over young people's work preparedness with two in five (40%) reporting that they are dissatisfied or very dissatisfied with wider character, behaviours, and attributes.

More than three quarters of employers had links with providers, 78% with primary schools, 95% with secondary schools and 91% with colleges. Mostly this is providing careers advice/talks, providing information about apprenticeships/traineeships, and providing work experience/placements.

3.5 TVET outcomes

Whilst Section 2 reported that young people may be dissatisfied with the careers education they receive (Education and Employers, 2019; Youth Employment UK, 2021), most young people are satisfied with the pathways they choose whether that is TVET or academic (CFE Research, 2017; Youth Employment UK, 2021).

This is likely to be based on high levels of satisfaction with provision, as well as the advantages the pathways bestow on participants. The annual FE Choices Learner Satisfaction Survey

(which ended in 2018) usually had student satisfaction levels at 90%, and the latest apprenticeship learner survey found 86% satisfaction levels.

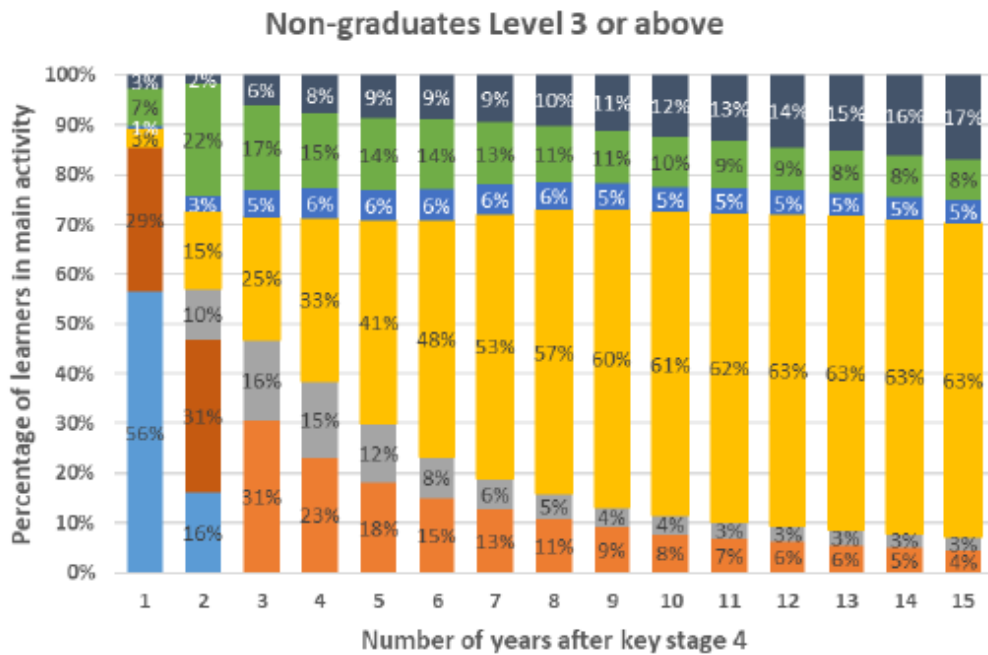
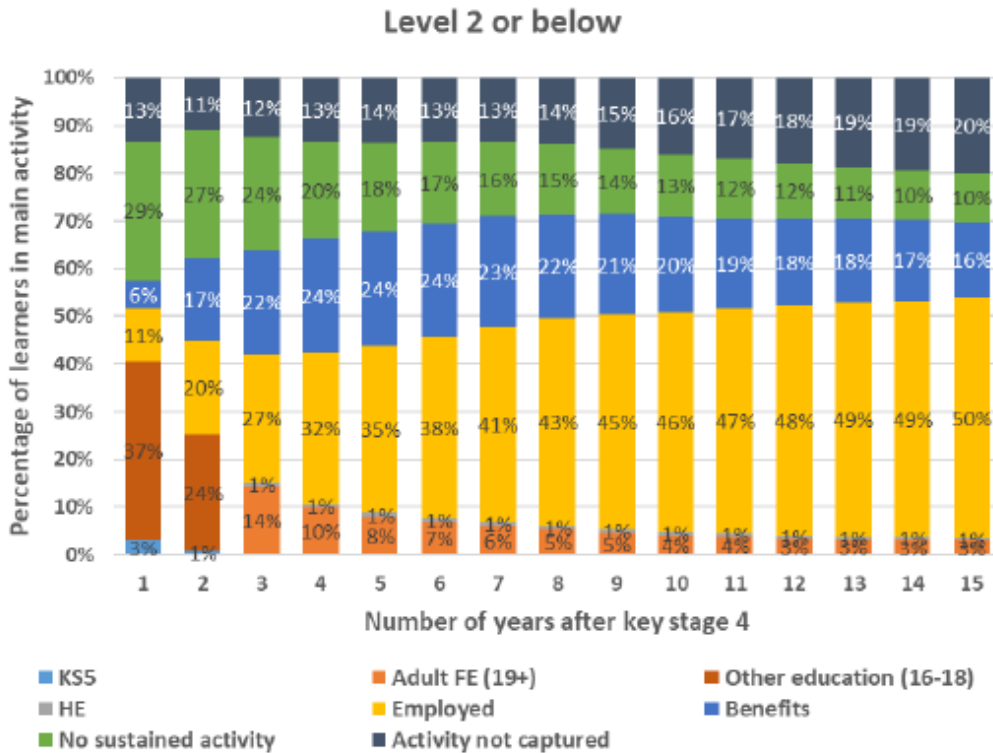
There were a number of studies at the start of the last decade which analysed the returns on TVET qualifications. For example, BIS (2011) found that there was a "...large and significant wage gain for most vocational qualifications". But this varied between type of qualification and level. Compared to those with a Level 2 qualification, those with a BTEC Level 3 were paid 20% more on average, whilst for RSA Level 3 and NVQ Level 3, the wage gains were 16% and 10% respectively. The wage premiums were lower at Level 2. Compared to people with qualifications below level 2 those with a BTEC Level 2 were paid 12% more, RSA Level 2 16%, and 1% for NVQ Level 2. Returns varied greatly by occupation, with higher wage premiums for men working in skilled trades and machine operative occupations, and for women working in personal services.

More recent studies confirm these findings. Pember, et. al., (2019) in their literature review of studies undertaken in the mid-2010s found a positive correlation between vocational qualifications (VQs) and subsequent earnings. They also found that the wage premium and the longevity of that premium increased with level of attainment. The return from apprenticeships was also higher than stand alone qualifications. However, the authors highlighted that there is often an 'age cap' for younger learners i.e. when other people catch up. For Level 2 qualifications this is at age 25, whereas for Level 3 it is 30 and Level 4+ it is 45.

Wage returns also vary by gender. Pember, et. al., (2019) reported that: "...that there is a more positive impact on the pay of men than women for most (but not all) vocational qualification levels and types".

Figure 15 shows that non graduates who progress to achieving at least Level 3 are, at age 21, likely to be in employment (41%), or in education and training, including HE (30%). By their late twenties, two thirds (63%) will be in work. For those with a Level 2 qualification or below, are less likely to be in a positive outcome and more likely to be on benefits (24%), in no sustained activity (18%), or 'activity not captured' (14%). By their late twenties, half will be in employment but they are much more likely to be on benefits.

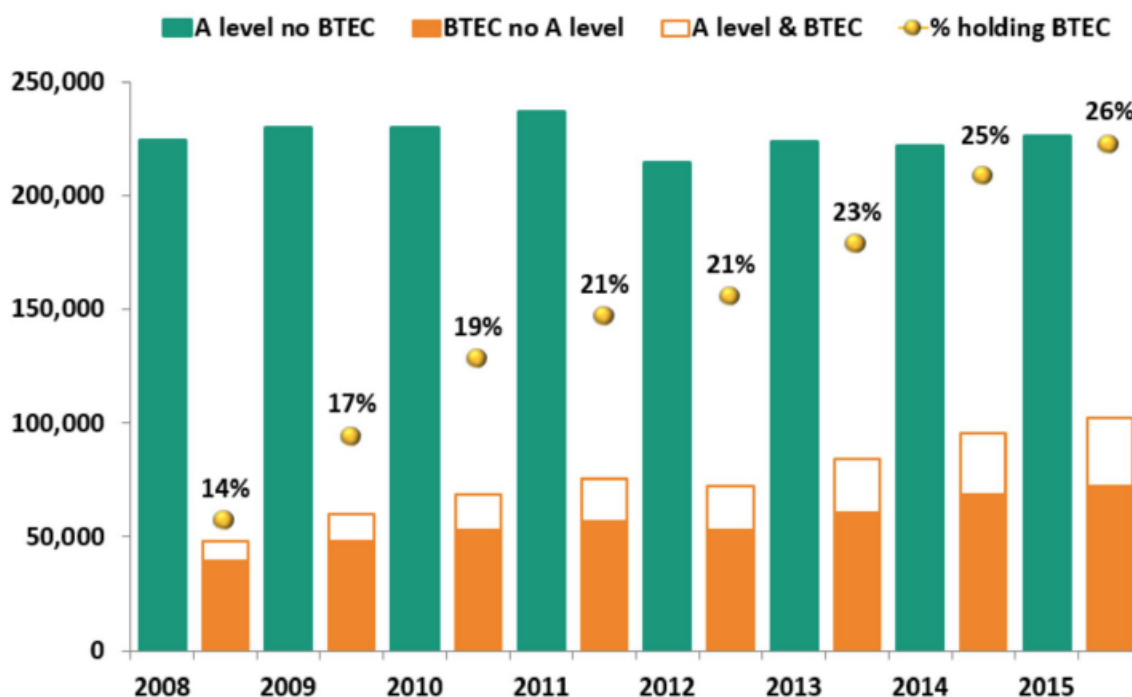
Figure 15: Main activities of individuals without a degree who achieved Level 2 or below or Level 3 and above – KS4 cohorts 2001/02 to 2006/07



Source: Anderson, O. and Nelson, M. (2021), Post 16 education and labour market activities, pathways and outcomes (LEO): Research report. Department for Education.

Pember, et. al., (2019) also found a positive correlation between VQs and employment, and this increased by level of VQ. They also report that VQs are increasingly a gateway into HE. Figure 16 shows that there was a slight fall in the number of A level only entrants to HE 2008 to 2015. However, there was an increase in those holding only BTECs and both BTECs and A levels. This was more noticeable after 2012 (though no reason is provided as to why this occurs).

Figure 16: Acceptances of students into higher education holding A Levels and BTECs –2008 to 2015



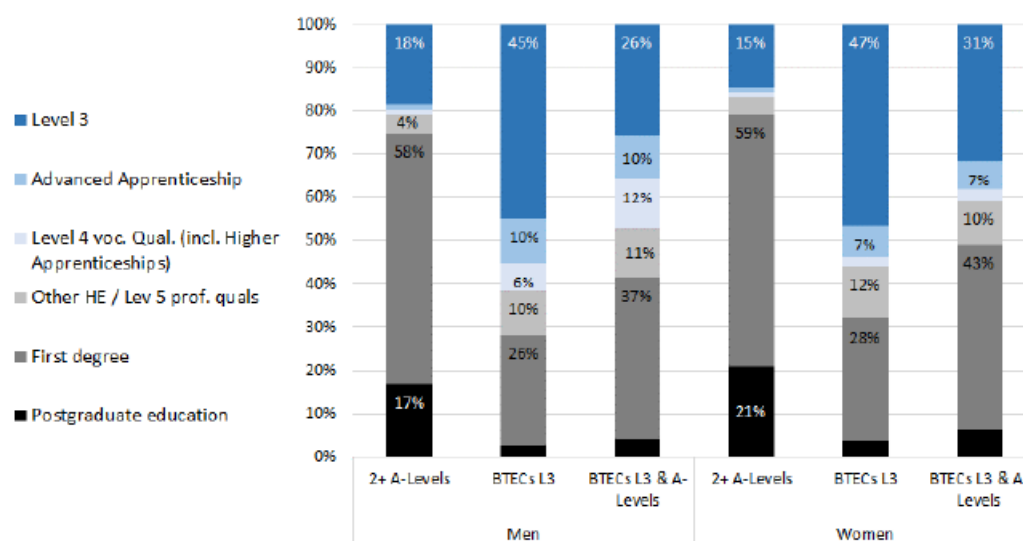
Source: Pember, P. et. al. (2019). 2019 Review of the Value of Vocational Qualifications. NFER.

In a more detailed analysis of LEO data, Patrignani, Battiston and Conlon’s (2019) analysed the returns on BTECs to people aged 28-20 in 2016/17.

Figure 17 shows that 45% of those with a BTEC Level 3 progressed on to a higher level qualification, 39% in HE or a Level 5 professional qualification. One in ten achieved an Advanced apprenticeships and 45% did not progress on to a higher level qualification. For those who attained 2+ A levels, the progression rates into HE and other higher level qualifications are greater, with only 18% failing to improve their highest qualification level. This with a combination of A levels and a BTEC show higher progression rates into HE and higher levels than those with just BTECs. The charts for males and females are very similar, with slightly higher progression and HE rates for women compared to men.

Analysing prior attainment, SEND and FSM within the LEO dataset, Patrignani, Battiston and Conlon’s (2019) conclude that the BTEC route was often a route into HE for those with lower attainment, and within the SEND young people and FSM groups. Given the barriers that these groups face, and the earnings and jobs premium associated with higher level qualifications, BTECs are a steppingstone to higher level careers.

Figure 17: Highest achievement, by gender and Level 3 qualification aim –2008 to 2015



Source: Patrignani, P., Battiston, A. and Conlon, G. (2019). BTECs, higher education and labour market outcomes using the Longitudinal Education Outcome (LEO) dataset. Research Discussion Paper 024. CVER.

3.6 Conclusions

Whilst participation in education and training has expanded over the past 25 years, this is largely due to HE. For 16-18 year olds, Level 3 TVET options have increased but this has stalled over the past ten years. Whichever pathways young people choose, they tend to be satisfied with them and the education and training provider.

Progressing on to higher levels of study (including TVET options), greater pay and positive outcomes are correlated with higher Year 11 attainment.

Whilst much is known about apprenticeships, information and data on other TVET options is not known. These routes have increased in recent years but detailed information about specific programmes, subjects and where they are being studied is not readily available.

The number of apprenticeships starts has increased significantly over the past decade. However, this is due to the expansion in older apprentices, those of 16-18 year old apprentices have decreased. This is because employers have expanded their recruitment of Level 3+ apprentices, especially Higher level apprentices, and reduced their intake of Intermediate apprentices. Employers are also much more likely to recruit existing employees rather than hire new apprentice recruits. The trend to higher level apprenticeships also cuts across different SSAs.

Both of these were existing trends but have been exacerbated by the introduction of the apprenticeship reforms in 2017, especially the apprenticeship levy. Employers trying to spend their levy pot are much more likely to invest it in training existing employees to higher levels. Non levy payers (who tend to be smaller firms) have significantly reduced their apprenticeship recruitment since 2017.

The full impact of Covid-19 on apprenticeships is difficult to gauge given the range of measures introduced to support businesses, employment and apprenticeships, and the changes that were happening longer term and as a result of the 2017 reforms. The pandemic did lead to a reduction in starts and this impacted leisure, travel and tourism the most, but also engineering and manufacturing, and retail. However, the full impact of COVID-19 may continue into the medium term, as the backlog of apprenticeship starts takes time to clear.

Initial analysis indicates that the trend to older, higher level and levy paying apprenticeships has increased.

Employer engagement in education and training will also have been affected. This has been demonstrated to have important effects on young people's access to work experience, including careers education. Around one in five employers engage in employer related activities with schools and colleges (Employers Skills Survey, 2019). These tend to be larger employers. Whilst few employers (one in six) hire a 16-18 year old, they have positive views of the preparedness for work. If employers do recruit a young person as an apprentice or a non-apprentice employee, they mostly do so after the age of 18. Some business surveys suggest employers are getting more involved in education, although this may be because they are surveys of larger organisations.

4. Conclusions and recommendations

4.1 Conclusions

Young people's career decision making is complex with a variety of influences and influencers. These affect not only the types of decisions made, but also the ways in which they are made, and when they are made. Opportunity structures within education, training and the labour market influence horizons for action and are inter-related, affecting perceptions of what might be available and what is an appropriate decision. Also playing a part are whether certain options are available locally and whether the school has a sixth form or not. Within their horizons, people make pragmatically rational decisions, with many unsure about career choices even into KS5 and beyond.

This study has drawn together research and analysis from a range of sources which cover different cohorts of young people, geographical areas, research, sampling strategies and methodologies, and that use a range of indicators and survey questions that are not always consistent. The study was tasked with addressing a number of research questions, and the extent to which the authors were able to do this depended on the information and data available:

- There is a wide range of data available about the TVET career pathways young people do or do not choose, and the careers information and advice informing these decisions. However, there is little linking the two together enabling an analysis of the outcomes from different types and sources of careers education, and other information and advice.
- Much is known about apprenticeships in KS5 (and beyond) but relatively little is known about other TVET routes, even though they are taken up by more young people (and increasingly so). There is limited information, so data about which specific programmes and subjects are studied, and at which providers is now known. This makes it difficult to assess the range of TVET opportunities available to young people post-16.
- It is known that the number of young apprentices has declined due to longer term trends and the impact of the apprenticeship levy. Some technical education has expanded but at this stage there is scant information or evidence-based literature on how this interacts with the supply side of young people in England's schools. This is also important for informing the implementation of T levels.
- Much of the literature has focused on the relationship between lower attainment/SES and post-16 choices. This finds that those with higher attainment/SES are more likely to receive careers education support and take the more straightforward academic options and vice versa. There are a limited number of studies which explore how this situation can be addressed, for example, engagement with Career Hubs and ensuring young people are presented with the full range of academic and TVET options. But research based studies on effective practice to address these barriers are limited.

Enablers supporting the take-up of TVET options by young people:

- If TVET options are to be successfully promoted to young people, especially in KS4, the full range of options (apprenticeships, T levels and other Level 2 and 3 vocational programmes) need to be presented to and discussed with young people as

appropriate, authentic and auspicious options. This involves the training and networking of teachers, careers advisers, and education and training providers. It also requires schools allowing external providers access to young people in their KS4 so they can present and explain the benefits of undertaking TVET options, and the potential pathways (including HE) that they allow access to.

- The Gatsby Benchmarks in England's schools and colleges has significantly raised awareness of young people's needs for good career guidance. The CEC and Gatsby Foundation are key drivers for progress in both improved careers education and TVET pathways. Initiatives such as Careers Hubs and Careers Leaders training are having an impact on the quality of careers education as far as TVET options are concerned.
- The evidence suggests that if TVET options are presented equally to all young people in KS4 they are more likely to choose them. Furthermore, participation of schools in Careers Hubs, and Careers Leaders training, is more likely to make this happen.
- Parents are often cited as the main source of careers advice. Studies suggest that parents rate vocational options highly, as do young people. However, it appears that parents are less likely to recommend them than academic routes. This might be changed if the benefits of TVET options are presented to them, including as a route into HE.
- The role of personal agency is a key factor in decision making and whilst young people are subject to a wide range of influences and influencers, most say that the decisions they reach are 'their own' and based on their career aspirations. Personalised careers education is considered good practice in supporting young people.

Barriers to the take-up of, supply of, and information and data concerning of TVET options by young people:

- There are significant barriers placed in front of most young people in being made aware of and understanding (and thereby given the opportunity of choosing) TVET options, especially if young people have higher attainment levels and are of higher SES.
- When TVET options are considered and pursued there appears to be less careers support for young people, even though these choices are often more complex (e.g. they may involve changing provider), involve young people with fewer levels of support (such as those of lower SES), and some disadvantaged groups of young people (such as those with SEND).
- Young people report that much careers education in KS4 emphasises academic routes rather than TVET options. This may be because the main influencers (i.e. parents, teachers, peers/friends) may not be impartial and/or fully understand TVET options and the benefits they bring.
- Evidence suggests that young people are provided with information on TVET options, especially apprenticeships, and that they and their parents think these are good options. However, in KS4 academic and TVET options are presented differently to different groups of young people, with the latter seen as a choice more for those with lower attainment, lower SES and pupils with SEND.
- The Baker Clause, designed to increase the exposure of KS4 pupils to TVET options, has tended to be met with 'selective compliance'. Some TVET providers report that

when they are allowed into schools, they believe they are only given access to a particular subset of pupils.

- Apprenticeships are currently a limited and declining option for young people. They are undertaken by around 3% of young people and the number of 16-18 year olds starting an apprenticeship has fallen by around one quarter over the last decade. The role of apprenticeships in providing a key transition route for school leavers into the world of work has diminished over the past decade. Employers are far less likely to recruit young people on to an apprenticeship at age 16. They are more likely to recruit young people on to an Advanced or Higher level apprenticeship at a later age. Part of this is due to the impact of the apprenticeship levy.
- Smaller employers (non-levy payers) compared to large employers (levy payers) were much more likely to recruit school leavers on to Intermediate apprenticeships, but their overall recruitment has declined since the levy's introduction.
- T levels are a new TVET option in KS5, they are classroom based but with a substantial work placement element. Those T levels so far introduced have been mostly delivered by FE colleges. If this persists, T levels could also be affected by a lack of promotion to young people in KS4, or from a segmented promotion to particular groups of young people. Current research into T levels has not covered their promotion within careers education or career guidance support in schools, and how they may be successfully promoted to all young people.
- Existing DfE commissioned research on T levels does not consider the careers education necessary to achieve future T level enrolments. Furthermore, careers education is referred to in national guidance as a subset of communications.
- Surveys and datasets outlined in this report are often 'stand alone', point in time research and therefore it is quite difficult to compare and contrast the findings as different age groups, geographical areas and definitions are used. Longitudinal datasets do enable an analysis of the impact of careers education and other support on the routes chosen and outcomes. However, the most relevant to this study (the LSYPE) is now dated. Some current ones are underutilised.

4.2 Recommendations

Based on the document and data review, we provide ten recommendations

1. There is no recent DfE analysis of the level and types of careers education received by individuals in England's schools on which young people's TVET decisions are based. Provider based Compass data from the CEC suggests that there are improvements in careers education in schools and colleges. Unless there is better, contemporary data at pupil/student level, it cannot be known whether this improved practice is impacting on individual young people's careers choices across TVET options. Given the primacy of young people's TVET options and skills development needs in recent Government strategies and White Papers (not including significant subregional interest and funding), as well as the added-value role good careers education can perform in making explicit options and opportunities, the data limitations identified in this report should be addressed. This will also help identify effective practice.

2. Though some data is available, there is limited analysis and presentation of information on the TVET pathways young people take through KS5 and beyond. There is a lot of information from both the learner and employer perspective on apprenticeships but very little on other pathways some of which are a major route for young people (e.g. BTEC and similar qualifications). For example, it is not possible, using regularly published DfE data, to differentiate between some TVET provision that is delivered in school sixth forms and Sixth Form Colleges, and that delivered by FE colleges and ITPs.
3. The evidence suggests that those young people undertaking TVET options (especially in KS5) do not receive as much support as those pursuing academic options. These young people tend to have lower attainment (including SEN), are in lower SES groups and therefore less likely to have access to and receive careers education and support outside of school. Furthermore, the routes they choose are often more complicated, for example, involving a change of provider and less straightforward application processes. Such young people should receive more support to help them traverse these more complex transitions.
4. The progression of young people undertaking TVET routes in KS5 is much lower than those taking academic options, especially into higher levels of learning including Advanced and Higher apprenticeships, and HE. There is no reason why this should be the case. Progression pathways need to be emphasised, and in some cases developed, to enhance these routes including the greater acceptance of TVET qualifications by HEIs.
5. The Baker Clause is only being selectively implemented meaning that a full range of post-16 options are not being presented to all school pupils. Greater enforcement of the Baker Clause is therefore required. To achieve the intent of the Baker Clause, school leaders must receive support to help them deliver this change. Interaction with local or regional Careers Hubs provide such support to schools as well as young people who do not benefit from personal or familial networks have the same access to information and opportunity as their peers. This aligns with findings from the House of Lords (2021b).
6. A significant gap of immediate concern is careers education that underpins T levels. Existing DfE commissioned research on T levels does not consider the careers education necessary to achieve future T level enrolments, and careers education is referred to in national guidance as a low order subset of communications. The CEC could use its influence to suggest that T level careers education is considered in future DfE research and evaluations.
7. There is a need to better understand and make greater use of careers apps, including chatbots. These can potentially be used to good effect in promoting TVET pathways with embedded links to professionally trained careers advisers. There is scope for an evaluation and directory of reliable careers apps for young people and parents to draw on. This presents new and exciting possibilities on how TVET careers information, advice and guidance can be accessed by young people, teachers and parents 24:7.
8. The LSYPE has provided a great deal of analysis and informed debates around careers information and advice but is now out of date. Other longitudinal datasets – the MCS, Understanding Society and LEO – have the potential to address some of the research questions of this study through providing a link between careers information

and advice and TVET options and choices. For example, the role of school sixth forms in affecting the options presented to young people (and thereby the choices) is an issue that has been discussed for many years but does not appear to have received attention from researchers. This is a research question that the LEO dataset could help inform.

9. Whilst there is a large amount of official data regularly published on the pathways and destinations of young people, much of which is available at the local authority level, it provides too broad an analysis to be useful to practitioners and strategists. For example, published destinations data do not differentiate between TVET options within its broad categories. The underpinning data does exist (through the ILR and NPD) that could allow presentation by academic and TVET options within different types of provision, e.g. schools and FE colleges. CEC with its partners can potentially lead the debate on effective ways of doing so.
10. There are several regular national surveys that do provide data on careers information and advice and its impact on TVET choices. However, data is often not presented (or able to be presented due to sample size) by age and for England. Given the amount of interest in these questions from a number of career, employer, research and policy organisations, a larger national survey might be organised that allows for more forensic analysis by learner age, regions and demographic groups. This would enable a better understanding of routes into (or away from) TVET and the key enablers and barriers to their choice for young people, employers and training providers.
11. Following on from these last three points, the CEC may, through discussions with its partners and with research organisations undertaking longitudinal and other research, explore opportunities to embed key questions on careers information and advice and TVET in order to better understand trajectories, enablers and barriers that impact on participation in TVET pathways.
12. Much data is available on the impact of TVET pathways, and the high levels of satisfaction of those who choose them. This could be utilised by the CEC to highlight the appropriateness and benefits and promote them via its contact with schools. For example, embedding it more fully within Career Leadership training and Career Hubs, ongoing careers education awareness, and regularly sharing trends and gaps in provision. Existing data could be supplemented with real live case studies of young people who have successfully transitioned through TVET options. The CEC could explore the option of a joint national campaign with DfE/ESFSA (and with other partner organisations) to effectively promote good careers education and TVET pathways for all young people, including role models and employer champions. This should also be targeted at key influencers such as parents, teachers, careers advisers and employers.

All of the above, suggests there is scope for the CEC to work with its research and other partners at a local, regional and national level to fill the gaps in information and data in careers information and advice, young people's career decision making and consideration/choices of TVET options.

Reaching local communities with a compelling narrative to increase young people's participation in TVET learning is essential. The art of persuasion and education (investment in communications, advertising and marketing) in the form of awareness-raising through a major campaign and/or multiple media campaigns is one way forward.

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Appendix 2: Website search

Organisation	Web address
AELP	https://www.aelp.org.uk/resource-and-information-centre/
Association of Colleges	https://www.aoc.co.uk/
Behavioural Insights	http://www.behaviouralinsights.co.uk/
Campbell Collaboration	https://www.campbellcollaboration.org/
Career and Enterprise Company	https://www.careersandenterprise.co.uk/research
CBI	http://www.cbi.org.uk/
Cedefop	http://www.cedefop.europa.eu/en
Centre for Economic Performance	https://cep.lse.ac.uk/
Centre for Longitudinal Studies	http://www.cls.ioe.ac.uk/default.aspx
Centre for the Economics of Education	http://cee.lse.ac.uk/
Centre for Vocational Education and Research	http://cver.lse.ac.uk/publications/default.asp
Children and Young People Now	https://www.cypnow.co.uk/
CIPD	https://www.cipd.co.uk/
Cochrane Collaboration	http://www.cochrane.org/
Construction Industry Training Board	https://www.citb.co.uk/about-citb/construction-industry-research-reports/
DfE, DWP, BIS, ESFA, SFA etc.	https://www.gov.uk/government/publications
DG Employment, Social Affairs & Inclusion	http://ec.europa.eu/social/main.jsp?langId=en&catId=22
Economics of Education in Europe	http://www.eenee.de/eeneeHome.html
Edge Foundation	http://www.edge.co.uk/

Education and Employers	https://www.educationandemployers.org/research-main/
Education and Training Foundation	http://www.et-foundation.co.uk/
Education Committee	https://committees.parliament.uk/committee/203/education-committee/publications/
Education Endowment Foundation	https://educationendowmentfoundation.org.uk/
Engineering Construction Training Board	https://www.ecitb.org.uk/publications/
Engineering UK	https://www.engineeringuk.com/
EPPI Centre	http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=53
European Expert Network on Economics of Education	http://www.eenee.de/eeneeHome/EENEE.html
FFT Education Datalab	https://ffteducationdatalab.org.uk/category/reports/
Foresight Government Office for Science	https://www.gov.uk/government/collections/foresight-projects
Gatsby	http://www.gatsby.org.uk/
ILO	http://www.ilo.org/global/publications/lang--en/index.htm
Institute for Apprenticeships	https://www.instituteforapprenticeships.org/
IFS	https://ifs.org.uk/research/38
IPPR	https://www.ippr.org/
Joseph Rowntree Foundation	https://www.jrf.org.uk/
Learning and Work Institute	http://www.learningandwork.org.uk/
Living Map of Jobs Innovators	https://jobsinnovators.org/
LLAKES	https://www.llakes.ac.uk/
London Data Store	https://data.london.gov.uk/

Longitudinal Survey of Young People in England	https://www.closer.ac.uk/study/lstype-2/
MakeUK	https://www.makeuk.org/insights/publications
The Mindset	http://www.themindset.org.uk/media/publications/
National Careers Service	https://nationalcareers.service.gov.uk/
National Foundation for Educational Research (Nfer)	https://www.nfer.ac.uk/
National Institute of Economic and Social Research	https://www.niesr.ac.uk/publications/search
OECD - education	http://www.oecd-ilibrary.org/education;jsessionid=1m44398oar1y8.x-oecd-live-02
OECD - employment	http://www.oecd-ilibrary.org/employment;jsessionid=1m44398oar1y8.x-oecd-live-02
OECD library	http://www.oecd-ilibrary.org/
Office for Students	https://www.officeforstudents.org.uk/data-and-analysis/
Ofsted	https://www.gov.uk/government/organisations/ofsted
Partnership for Young London	https://www.partnershipforyounglondon.org.uk/publications
Paul Hamlyn Foundation	https://www.phf.org.uk/publications/
Poverty Reduction in Europe: Social Policy and Innovation (ImPRovE)	http://improve-research.eu/
Rethink Mental Illness	https://www.rethink.org/
SKOPE	http://www.education.ox.ac.uk/our-research/
Social Mobility Commission	https://www.gov.uk/search/all?organisations%5B%5D=social-mobility-commission
Sutton Trust	https://www.suttontrust.com/research/

UK Commission for Employment and Skills	https://www.gov.uk/government/organisations/uk-commission-for-employment-and-skills
UNESCO	http://www.unesco.org/ulis/en/advanced_search.html#6401922
University College London	http://discovery.ucl.ac.uk/
VOCEDplus	http://www.voced.edu.au/
Work Foundation	http://www.theworkfoundation.com/wf-reports/
Youth Employment UK	https://www.youthemployment.org.uk/careers-hub/
YouthSight	https://www.youthsight.com/