



CENTRE
FOR DEGREE
APPRENTICESHIPS

Sustainable Degree Apprenticeships

Stan Lester and Darryll Bravenboer



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Section 1

Introduction, purpose and methodology

Introduction

Summary

- Degree apprenticeships were intended from the outset to bring the worlds of work and higher education together under a policy initiative that was designed to increase productivity and social mobility.
- Higher education providers and employers have invested significantly in the development and delivery of degree apprenticeships and in this sense, the policy has been a clear success.
- Degree Apprenticeships challenge all aspects of higher education provision and some existing models will need to adapt to sustain the initiative and prevent the risk of policy failure.
- The purpose of the research project is to explore the changes to the organisational conditions, structures and practices of higher education provision that are required to deliver the sustainable benefits of degree apprenticeships.
- A mixed-methods research approach has been adopted to provide a rich array of perspectives on the complex issues around the sustainability and value of degree apprenticeship provision.

On the 12th March 2015, the UK Government launched degree apprenticeships. The then Prime Minister David Cameron said:

“Equipping people with the skills they need to get on in life and backing businesses to create jobs are key parts of our long-term economic plan. Degree Apprenticeships will give people a great head start, combining a full degree with the real practical skills gained in work and the financial security of a regular pay packet. They will bring the world of business and the world of education closer together, and let us build the high-level technical skills needed for the jobs of the future. I want to see many more businesses and universities begin to offer them.”
(BIS, 2015a)

Since this call for more universities to offer degree apprenticeships 107 higher education institutions have successfully registered with the Government to be a provider of apprenticeships, which represents 96% of all higher education providers in the country. Of these, 87 are already delivering degree apprenticeships (House of Commons, 2019, p6). The range of higher education providers that have registered include all mission groups including the research-intensive Russell Group of universities and notably the University of Cambridge. To date, there are 88 approved degree apprenticeship standards at Bachelor and Master’s level ranging from Architect to Ecologist, from Civil Engineer to Registered Nurse, from Police Constable to Senior Leader and from Data Scientist to Arts Therapist. In fact, degree apprenticeships have been approved in all but two (Catering and Hospitality and Hair and Beauty) of the 15 occupational routes defined by the Sainsbury Review (Sainsbury, 2016).

Employers recruiting degree apprentices are primarily large private sector organisations such as British Telecom, Rolls Royce, Royal Mail, Santander, GlaxoSmithKline, Goldman Sachs, and public sector organisations such as the NHS, police services, the Government Economic Service and local authorities. Employers have increasingly sought to invest in degree apprenticeships as the number of starts had grown to 13,587 in 2018/19 (House of Commons, 2019, p8), which more than doubled the starts in 2017/18. This growth mirrored the growth in higher level apprenticeships (levels 4-7), from 48.2k starts in 2017/18 to 75.1k starts in 2018/19, which represented a rise from 13% to 19% of all apprenticeship starts. Notably, during the same period employers chose to recruit far fewer

apprentices at level 2 (intermediate level) falling from 161.4k starts in 2017/18 (43% of all apprenticeship starts) to 143.6k starts (37%) in 2018/19 (House of Commons, 2020, p8).

This clearly suggests that both universities and employers have risen to the challenge set in 2015 by investing significantly in developing, recruiting and delivering degree apprenticeships. However, this investment has come at a time of great uncertainty during the last five years, including major staffing shortages in the public sector, Brexit and now the global pandemic of Covid-19. It is in the context of these historic challenges that providers of degree apprenticeships have been required to rethink many traditional assumptions about the role, purpose and future of higher education.

As Bravenboer (2019) has argued, the advent of degree apprenticeships creatively disrupts our understanding of the relationship between higher education and work. Degree apprenticeships have the potential to transform our cultural understanding of the role of higher education providers and employers, placing learning at the centre of our working lives, aligning the learning worlds of work and higher education. Operating as an apprenticeship provider has comprehensive and

significant strategic and operational impacts on all aspects of higher education. Assumptions about the presumed differences between academic and professional standards, knowledge, skills and behaviours, on-and off-the-job learning, are all challenged by the introduction of degree apprenticeships. New thinking about the roles and responsibilities of universities and employers in developing and delivering degree apprenticeships presents an opportunity for sustainable collaboration. However, without a good understanding of the value of degree apprenticeships to all stakeholders and the significant challenges that face higher education providers, there is a high risk of policy failure. In this complex and highly uncertain context, there is a need to find answers and build links between providers in order to support and sustain the delivery of the degree apprenticeship policy initiative to increase productivity and social mobility. In this sense, sustainability means providing degree apprenticeships in a way that delivers lasting benefits for the economy, for society, for employers, for providers and for apprentices. This Edge Foundation funded research project sought to examine and challenge existing organisational structure and practices to enable higher education providers to deliver these lasting benefits.



Purpose

Productivity and social mobility

In 2015, the Government set out its 5-year vision for apprenticeship reforms, to be realised by 2020 (BIS, 2015b). The economic case for apprenticeship reform was predicated on increasing productivity by addressing the nation's skills shortages and stimulating economic growth. At the time, the UK's productivity was identified as standing at 20% below the rest of the G7 and employer investment in apprenticeships, through the levy, was identified as a key part of the solution. Productivity is defined by the Office for National Statistics as follows:

“ Productivity is a measure of the amount of output a business produces for a unit of input. In its simplest form, labour productivity measures the amount of output produced per worker: higher productivity means that a business produces more output for each worker it employs.
(Office for National Statistics, 2018)

However, for the purposes of the research, productivity was defined as 'enhancing service / product efficiency and quality', which reflects that 'output' can include delivering a service to a higher quality standard as well as relying solely on quantitative measures of input and output. This is perhaps most clearly relevant when considering increased productivity for public sector job roles, such as in healthcare professions (see Dawson and Rigby-Brown, 2019 for example) but this more qualitative definition also allows increased productivity to include professional practice enhancement in any sector.

The Government's 2020 vision also identified that:

“ We remain committed to making apprenticeships accessible to people of all backgrounds. Making apprenticeships accessible to the widest possible range of people will not only benefit many individuals, but will help to grow apprenticeships in a way that helps businesses draw on diverse skills and talents.
(BIS, 2015b, p38)

The twin aims of increasing productivity and social mobility for the apprenticeship reforms apply no less to degree apprenticeships and arguably the access to professional careers afforded by degree apprenticeships may be particularly pertinent. For the purposes of the research, social mobility was defined as 'widening access to professional careers for under-represented groups'. This reflects the UK Social Mobility Commission (2020) definition of social mobility.

“ Social mobility is the link between a person's occupation or income and the occupation or income of their parents. Where there is a strong link, there is a lower level of social mobility. Where there is a weak link, there is a higher level of social mobility.
(Social Mobility Commission, 2020)

In 2015, the Government's 2020 vision also identified that apprenticeships should provide a route to professional recognition and the definition of social mobility used within this research project also reflects the findings of Universities UK's (UUK) Social Mobility Advisory Group that:

“ Having graduated from university, students from disadvantaged backgrounds are less likely to go into professional jobs, and if they do, they are likely to be paid less.
(UUK, 2016, p2)

The research UUK undertook indicated that parental and social background was the key determinant regarding access to professional job roles. The strong alignment between degree apprenticeships and access to professional careers could potentially provide a means for the higher education sector to address this key social mobility factor.

The project sought to find ways to sustain the degree apprenticeship policy initiative by exploring the changes to the organisational structures and practices of higher education providers that are required to achieve this. The project recognised that higher education providers (such as universities) are purposeful, integrated, economic entities that operate to sustain the knowledge, practices and behaviours of professional higher education for the benefit of wider society and communities. It is also recognised that the diversity of the higher education sector is a strength that should be celebrated. However, this diversity is predicated on a practice of continuing challenge to drive innovation that reflects and creatively responds to broader societal, economic and cultural change. In this sense, the advent of degree apprenticeships represents a major opportunity for reassessing the provision of higher education in the context of a policy initiative that is, by design, intended to bring economic and societal benefits.

The need for the project is premised on the assumption that if the context for degree apprenticeship policy innovation is insufficient to sustain it, then the associated societal effort and public investment will be wasted, and the intended policy aims of increasing productivity and social mobility will not be realised. Furthermore, ad hoc additions to existing higher education practice are not likely to be sufficient to build the dialogue, trust and behaviours needed to sustain the initiative while responding to the challenges of operating in new, complex and often contested terrain. This includes the need to advocate a whole institutional approach to work-integrated and practice-based learning to facilitate a reconstituted notion of higher education that recognises the workplace as a source of learning rather than only a site for its application. Degree apprenticeships necessitate collaboration with employers and professional bodies which stimulates valuable innovation in approaches to learning, teaching, assessment and curriculum design but the enhancements identified need to be nested in conducive organisational environments to be sustained.

The research project set out to investigate the practices and structures that enable the provision of degree apprenticeships to be sustainable and successful for higher education providers, employers and apprentices, and to identify barriers and potential solutions. It is also recognised that significant barriers continue to exist which higher education providers may not be able to address as a consequence of external factors or a lack of institutional focus and expertise. Similarly, the current form, structure and cultural understanding of higher education may also present barriers to the sustainability of provision, serving to reproduce myths and misconceptions about the role of universities and degree apprenticeships from both within and outwith the higher education sector. The learning achieved from the research undertaken, as well as from the ongoing engagement of higher education providers (described in the outcomes below), is intended to inform the discourse that relates to degree apprenticeships and to advocate positive change at policy, sector and organisational levels. By doing this, the project seeks to support and promote the development of a sustainable system for the provision of degree apprenticeships that delivers increased productivity and social mobility for the country, while meeting the skills needs of employers as well as providing professional learning opportunities for apprentices.



Methodology and data sampling rationale

Project outcomes

The research undertaken resulted in the delivery of three main outcomes that were designed to achieve the purposes of the project. These included:

- A published research report (this document) that details the research undertaken, findings and recommendations to enhance the sustainability of degree apprenticeship provision.
- Dissemination activity to stimulate higher education provider engagement and to share findings from the research undertaken and promote ongoing discourse within the higher education sector. The dissemination activity undertaken to date has included the presentation of findings at:
 - University Vocational Awards Council (UVAC) National Conference 2019, 27th November 2019, Manchester
 - Universities UK (UUK) Degree Apprenticeships Conference 2020, 5th February 2020, London
 - Centre for Degree Apprenticeships (CDA) dissemination event, 2nd March 2020, Middlesex University, London
 - Linking London Higher and Degree Apprenticeships Group, 5th March 2020, Birkbeck University, London
- The creation of the Centre for Degree Apprenticeships (CDA) as a self-funded research and think-tank network, convened and managed by UVAC, designed to investigate and secure the best conditions for sustainability of degree apprenticeships. CDA offers a place for strategic exploration of policy and a look at structural models and curriculum needs to support sustained success. CDA supports and advocates the implementation of significant changes in higher education practice in response to the challenging context of degree apprenticeship provision. CDA is specifically designed to help higher education providers, leaders and practitioners develop and deliver high quality degree apprenticeships that enhance productivity and social mobility. CDA promotes links and collaborative ventures between members, employers, professional bodies and other organisations with an interest in degree apprenticeships. CDA provides and promotes events and networking opportunities to facilitate the sharing and promotion of best practice and innovation. CDA publishes resources and research for the benefit of all UVAC member organisations (cda.uvac.ac.uk).



Project partners

The project was led by Middlesex University but was constituted as a collaborative endeavour including Staffordshire University, Sheffield Hallam University and the University Vocational Awards Council (UVAC) as project partners. Each partner university has a strong track record of developing and delivering work-integrated higher education programmes and degree apprenticeships in collaboration with a wide range of employers in a variety of sectors. The dispersed geographical location of each university partner (London, Midlands and Yorkshire) also provided a variety of regional perspectives on the provision of degree apprenticeships. All partner universities are also members of UVAC, which is a national not-for-profit organisation that provides an independent voice for its 92 higher education provider members on matters relating to technical and professional higher-level learning, including higher and degree apprenticeships.

The data-gathering aspect of the project consisted of three phases: a literature review; a series of semi-structured interviews; and a questionnaire survey. The literature review sought to ground the research within the relevant specialist field of work-integrated higher education and provide productive themes to inform the development of both the interviews and the survey. The investigation gathered the views of a wide range of apprenticeship stakeholders including employers, apprentices and providers. The approach was designed to gather data that was both wide (survey distributed to cross sectoral stakeholders) and deep (interviews with identified stakeholders in the digital, engineering and nursing sectors). The interview and survey phases partly overlapped, enabling the early findings from the interviews to inform the design of the questionnaire survey.

A strength of the mixed-methods research approach adopted is that it combined qualitative and quantitative methods to provide richer perspective on the complex issues around the sustainability and value of degree apprenticeship provision. Employing an embedded research design within the approach, enabled the qualitative and quantitative strands to be incorporated in both a sequential and concurrent manner. For instance, the initial set of semi-structured interviews (qualitative strand) partly informed the survey design and development (quantitative strand) of the research. This provided interface points for mixing methods during data collection and analysis, as well as the interpretation of the results.

A rationale for selecting industry sectors

In order to maximise the extent to which the findings from the research were generalisable, industry sectors were identified that encompass significant representative differences with regards to range of factors including:

- Spanning both public and private sectors
- The profile of employer organisations and workplace environment for apprentices
- The relationship with professional bodies and routes to professional recognition
- Expectations and practices regarding on and off-the-job learning/training

While each partner university has experience of delivering apprenticeships across a wide variety of industries, the sectors selected also sought to draw on the specific expertise and experience of university partners in developing and delivering

apprenticeships in identified sectors that could provide the opportunity for gathering focussed and in-depth qualitative data. In consideration of these requirements each university project partner identified a specific sector focus, which included the digital, engineering and nursing sectors. These sectors feature strongly in the national skills landscape and their varying nature provides a rich context with regards to the sustainable conditions for the development and delivery of degree apprenticeships.

Staffordshire University was awarded £8m of Government funding to establish a Digital Apprenticeships and Skills Hub to drive up the number of digital apprentices in the region in 2018. The Hub (due to open in 2020) will deliver over 6,500 apprentices and involves working with partners such as Microsoft to help businesses large and small to develop the digital skills of their workforce and provide opportunities for diverse communities to access professional careers in the sector. Sheffield Hallam University has a track record of delivering engineering apprenticeship frameworks well before the advent of the degree apprenticeship in 2015, working with a range of national and regional employers. Their experience of the process of change from apprenticeship frameworks to the new apprenticeship standards in the engineering sector provides a rich source of expertise and institutional learning that is directly relevant to the sustainability of degree apprenticeship provision. Middlesex University has championed work-integrated and practice-based learning within healthcare professions for many years and is one of the largest providers of professional nursing education including higher and degree apprenticeships. Since 2017, Middlesex has played a part in pioneering the national development of the new Nursing Associate professional role as a destination in its own right and has also focused on how it provides a route through to Registered Nurse status.

Digital sector

A 2018 report published by global consultancy firm Accenture in collaboration with G20 Young Entrepreneurs' Alliance highlighted the chronic digital skills talent shortage with an estimated 3 million jobs projected to be left unfilled by 2030. It is suggested that this will result in the UK and 14 of 20 G20 countries missing out on the economic promise of intelligent technologies and the potential to innovate and adapt as an estimated 51% of workers time is predicted to be subject to automation (Accenture, 2018). More fundamentally, the UK Digital Strategy and accompanying policy on digital skills proposes that a significant part of the population remains digitally excluded and one in 10 adults has never used the internet (ONS, 2016). The report challenges that 'individuals, businesses, government and other

organisations must take steps now to ensure that we have the skilled and capable workforce needed in an increasingly digital world' (DCMS, 2017) and acknowledges that a lack of digital skills is a barrier to economic growth and productivity.

The size of the challenge is crystallised by UKCES's (2015) suggestion that 1.2m more digital skills will be required by 2022, just a few years away and still not close to ensuring the gap is filled. Apprenticeships will be one of the main contributors to the development of vocational and academic digital skills. The specialist digital route sees employers setting standards and specifying the knowledge, skills and behaviours that individuals will need. There are now 28 digital apprenticeship standards in development or fully approved with 18 fully approved for delivery. 7 of the 28 standards in development are at level 6 or above and 4 of these are fully approved for delivery. Since the introduction of the Digital Technology Solutions Professional (DTSP) Degree apprenticeship in March 2015, starts have steadily increased year on year. The standard includes a degree which is an integral part of the apprenticeship. In 2017-18, 1310 apprentices started on this standard (OfS, 2019).

The 'degree' element of the DTSP is under threat as the standard is reviewed, with the IfATE applying its mandatory qualifications rule. Under the mandatory qualifications rule, a qualification can only be included if it is a requirement of a professional body, regulator or used in hard sifting for job interviews. Employers and apprentices have been absolutely clear that the degree is a crucial part of the standard and without it they would not attract the talent they need, thus affecting the very purpose of the apprenticeship. The Trailblazer chair continues to lobby to retain the degree using the argument that it attracts talent, diversifies the future workforce and it is what employers and learners want.

Engineering sector

Engineering and manufacturing is one of the UK's broadest sectors with specialisms in a number of areas. The sector employs approximately 19% of UK total workforce (Engineering UK, 2018) and is of critical importance as a driver for growth and innovation regionally and nationally. Advanced manufacturing has proven to be a focus for productivity growth – with a shrinking employment footprint focusing on the most skilled, most productive members of the workforce. Engineering skills are vital for the future of the UK economy, but the cutting-edge nature of manufacturing shows through in the ceaseless change – with industries ranging from engine manufacture to pharmaceuticals seeing rapid growth throughout the 2000s.

The rise of engineering apprenticeships, as well as career and work experience opportunities within engineering companies, are helping to supply the 124,000 skilled workers needed to keep up with demand in the sector between now and 2024. However Degree Apprenticeships are very new and the sector has only recently moved from Frameworks to Standards. There are 21 approved engineering (or related) degree apprenticeships with 15 at Level 6 and 6 at Level 7. The development of the engineering Standards has been, and continues to be, complex due to the various specialisms across strands of engineering and manufacturing.

The original Automotive Engineering standard was too narrow and had specific requirements only an Automotive company could use despite it being a broader engineering topic e.g. including Electrical Engineering. However, In April 2018 the Institute for Apprenticeships and Technical Education (IfATE) provided written notification that the



Standard could be used in any engineering sector and also announced the removal of the previously mandated National Vocational Qualification (NVQ) from this and a number of other Engineering Degree Apprenticeship Standards (e.g. Product Design and Development). This meant that higher education providers (with degree awarding powers) were then able to deliver those apprenticeships potentially more cost effectively against the ESFA funding cap and without the sub-contracting complexities of the NVQ.

Sheffield Hallam University led a national project, funded by the Education and Training Foundation's Outstanding Teaching, Learning and Assessment (OTLA) initiative and project managed by SDN, with FE partners to ensure a smooth transition with the removal of the NVQ. The outcome of the project is the development of a "Professional Development Programme" to complement the professional body accredited degree. The action research project aimed to specify the valued approaches and content of an NVQ, but identify for removal any unnecessary burden, not deemed helpful to employers and their apprentices in terms of attainment.

There is no doubt that the UK economy needs more highly skilled engineers; Covid-19 will have an immediate impact on the Engineering sector, however there may also be an increased need to onshore manufacturing to mitigate the risks to secure supply chains, which could result in an upturn for UK manufacturing. To that end, higher education providers have a role to play in the development and delivery of Degree Apprenticeships. However, there remain challenges in the delivery of engineering apprenticeships to meet the complexity of the standards and the increasing funding band pressures. Furthermore, there remains work to be done on the alignment of Engineering Degree Apprenticeships and to ensure that degree apprentices achieve the apprenticeship standard, the degree and Professional Body recognition.

Nursing sector

The BBC reported in September 2018 (Triggle, 2018) that it was a 'national emergency' that '11.8% of nursing posts were not filled – a shortage of 42,000'. The nursing workforce shortages have been exacerbated by a number of factors including Brexit, significant financial challenges for NHS Trusts and the removal of NHS bursaries to fund nurse training. The advent of the Registered Nurse degree apprenticeship and the Nursing Associate apprenticeship have been positioned as key means to address workforce shortages as the NHS pays more in Apprenticeship Levy than any other employer. More than

this, the public sector statutory duty to employ at least 2.3% of its workforce as apprentices by 2020 adds further weight to the need to make nursing apprenticeships work for the NHS.

However, NHS Trusts have in some cases struggled to find ways to make the Registered Nurse degree apprenticeship work as their primary means of addressing their workforce shortages. Challenges including managing the supernumerary status of apprentices, affording apprentice salary costs, funding the off-the-job learning requirement and backfill have all acted as a break on the level of take up by NHS Trusts. One of the solutions to this has been the use of the Nursing Associate apprenticeship as a route into nursing for diverse groups that provides a stepping-stone to progress to the Registered Nurse degree apprenticeship after two years. This 'two-plus-two' route has been widely procured by NHS Trusts in significant numbers nationally and regionally. For example, the London Nursing Associate Apprenticeship Framework launched on behalf of Health Education England sought to procure 1,710 Nursing Associates in London for 2019 alone.

Other issues have included the division of responsibilities for nursing apprenticeships between the Nursing and Midwifery Council (NMC) who have a statutory duty to safeguard nursing standards and the IfATE, with regards to how responsibilities for professional competence and apprenticeship End-point Assessment should be aligned. Issues have also arisen regarding the ability of End-point Assessment Organisations to conduct End-point Assessments for nursing apprenticeships and their availability. As a consequence, the IfATE have agreed that, unlike for other non-integrated apprenticeships, End-point Assessment can be carried out by the provider of the apprenticeship training as long as the requirements for independence are met.

The Covid-19 crisis of 2020 has also presented major challenges for all public sector apprenticeships and specifically in nursing, as front-line staffing resources have been stretched increasingly as the virus has taken hold. Apprentices have also been called on to support service priorities and this has affected the structure of learning opportunities. Unsurprisingly, the availability of employers to support apprentice progress reviews has diminished significantly.

It is in this significantly challenging and changing context that universities are working closely with NHS Trusts to develop and sustain collaborative employer-provider partnerships and try to develop and deliver nursing apprenticeships that continue to meet their workforce development needs.

The literature review

A literature review was undertaken to provide a contextual background to the development of Degree Apprenticeships, and explore the current state of knowledge on successes, issues and good practice in relation to implementation. The review was conducted between the outset of the project and October 2019, drawing on the project partners' knowledge of current literature along with systematic searches of Google Scholar, Access to Research and Core. Due to Degree Apprenticeships being very recent, some literature on work-integrated higher education and apprenticeships in general was included in the review.

The interviews

A semi-structured interview guide (see appendix A) was designed and developed collaboratively by the three project partners. Guide questions were tailored towards the expected participants in each stakeholder group (university staff, employer staff, and apprentices), and adapted for each sector (Digital, Engineering, Nursing). Each partner identified a suitable sample of interview participants to address the research requirements and interests of the project, particularly focussing on issues of social mobility, productivity, and the sustainability of apprenticeships.

Potential participants were contacted by email, provided with a summary of the project, and asked if they would be willing to take part. The interviews were carried out by an independent researcher working with one of the partners.

Twenty-nine individual interviews and one group discussion took place across the three sectors between May and September 2019, as shown below.

	Total	Apprentices	Employer Staff	University Staff	Other
Digital industries	4	1	2	1	0
Engineering	18	5	2	7+4 ¹	0
Nursing	11	2	3	5	1 ²
Total	33	8	7	17	1

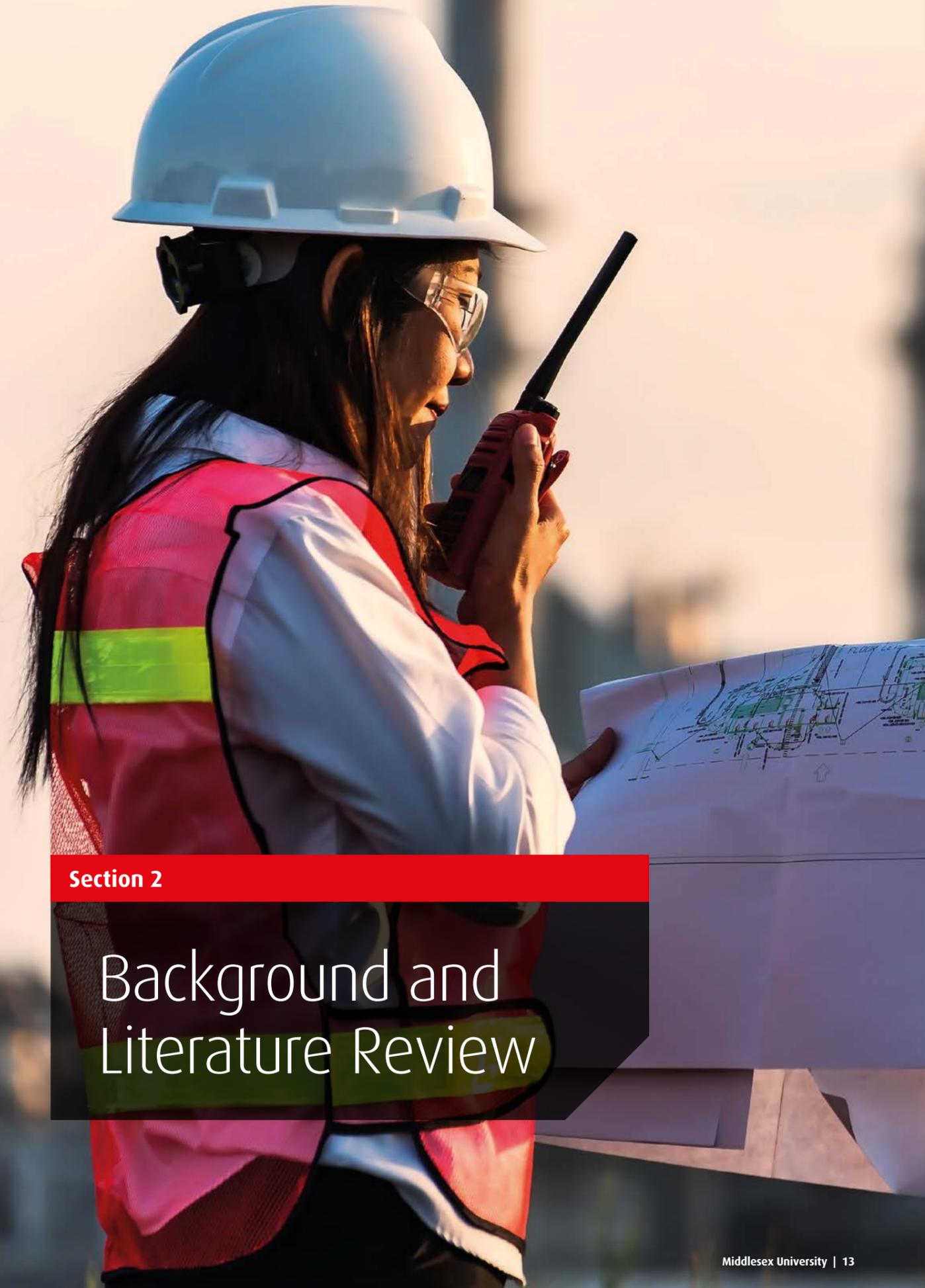
1. Group discussion with 4 members of staff. 2. Sector education body.

The questionnaire survey

A questionnaire survey was designed to focus particularly on matters of social mobility, productivity, and the sustainability of apprenticeships (see appendix B). The definitions of social mobility and productivity mirrored those used within the interviews described above. The survey was tested within the project partners and administered on Survey Monkey. Email invitations were sent to all apprenticeship employers, apprentices and staff involved with the delivery of apprenticeships by the three university project partners. In addition, invitations were posted online and promoted by a range of relevant organisations including:

- UVAC
- SEEC
- Linking London
- Skills for Health

This resulted in a wider range of higher education providers, employers, apprentices and sectors being represented than in the interviews to provide a broader data sets, which could also provide meaningful quantitative analysis. The survey was held between December 2019 and January 2020 and this resulted in a total of 165 responses. Respondents could identify as being in more than one role; 89 identified as being providers, 69 employers, 46 apprentices, and 16 in other roles (most of these also identified as having one of the other three roles). The majority of overlap was due to respondents having a dual provider/employer role; three nurse apprentices also had a dual or triple role, for instance relating to other apprentices such as healthcare assistants. The majority of provider respondents (65%) led or managed apprenticeship programmes, whereas the majority of employer respondents organised or supported learning and development for apprentices (67%), as opposed to being apprentices' managers or mentors.



Section 2

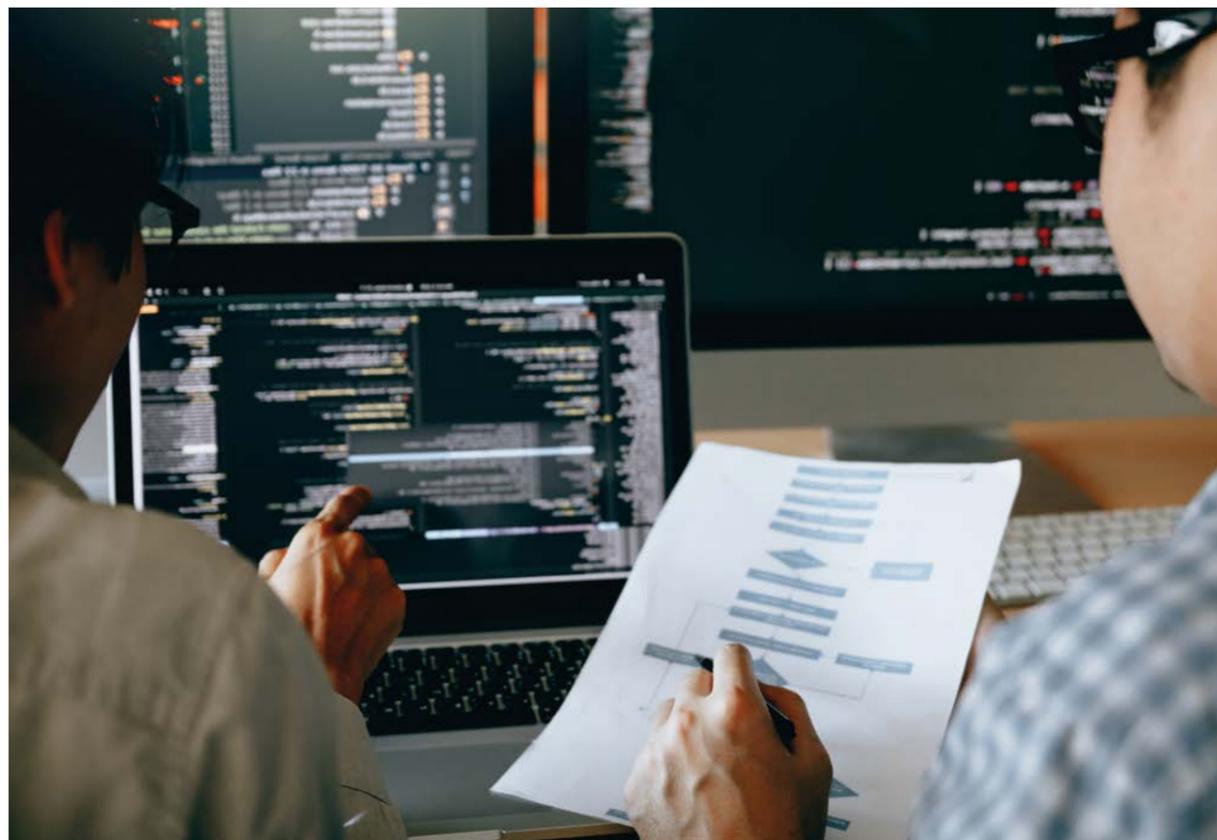
Background and Literature Review

Introduction

The purpose of this chapter is to contextualise the development of higher-level and degree apprenticeships, summarise benefits and tensions arising from policies and practices at a national level, and identify effective principles and practices that support the sustainable provision of degree apprenticeships and similar work-integrated programmes. It draws on literature, including official documents, research reports and journal papers, relating specifically to Degree Apprenticeships, as well as earlier relevant literature on work-based and work-integrated learning, other higher-level apprenticeships, and professional entry programmes. The aim is to provide pointers to effective and sustainable practice within the current operating requirements for Degree Apprenticeships, as opposed to a detailed review of relevant practices.

The chapter begins with a short background to apprenticeships in England, followed by discussion of the evolution of Degree Apprenticeships and parallel developments in higher education and professional entry. The two main sections then focus on issues at a national level and discuss effective practices within institutions.

The review is focused on developments and policy in England. Policy, funding and implementation rules differ in other parts of the UK, although much of the discussion of practices is equally applicable to Scotland, Wales and Northern Ireland.



Apprenticeships in England

Summary

- Apprenticeships evolved during the 20th century into a 'parallel' model with day-release for off-the-job training; until mid-century this was also a common model for professional training.
- There was a severe reduction in apprenticeship training after 1960, partly precipitated by industrial decline. Professions moved increasingly to full-time higher education followed by work-based training.
- The apprenticeship revival after 1980 responded to concerns about youth unemployment and was limited to qualification levels 2 and 3.

Apprentice derives from the old French 'apprendre', with the implication of acquiring or learning from another. Apprenticeships are recorded in England from the thirteenth century, and regulations for their conduct date from the fifteenth century. The Statute for Artificers of 1563 laid out terms and conditions for training, such as the requirement for a seven-year apprenticeship before being registered for a craft. This model remained the norm for nearly 300 years, until the Industrial Revolution created a need for engineering and shipbuilding expertise and better facilities for technical education. In the nineteenth century a national system for technical education began to emerge under the City of London and the 16 Livery Companies, culminating in the City and Guilds of London Institute in 1900. Most occupations that today would be regarded as professions – with the principal exceptions of medicine, some aspects of law, the clergy, and university teaching – were at this time still entered through apprenticeship-type training, although their training requirements and examinations were governed by professional institutes or, in a few cases, the state.

The early part of the twentieth century increasingly saw the inclusion of an 'off-the-job' component to apprenticeship training, often initially in the form of evening courses followed later by day- or block-release classes. This 'parallel' training model was accompanied by the introduction of free-standing qualifications, typically awarded by City & Guilds, in addition to sign-off by the relevant craft or trade body. The 1944 Education Act created an entitlement to day-release training for young people under the age of 18 who were in employment, although

this was never fully implemented (Field 2018). The majority of professions initially followed the parallel model, but the increasing need for practitioners to have a theoretical base to their knowledge, together with a desire to claim standing equal to that of the university-based professions, led from the middle part of the century to a shift to full-time courses in universities or other institutes of higher learning. In this 'sequential' model, 'on-the-job' learning was delayed until after completion of the course, sometimes accompanied by further classes to prepare for a final professional examination. One result of this shift was a tendency for professions to conceptualise their training in principally intellectual rather than practical terms, with the apprenticeship becoming seen as the territory of industry and crafts rather than as an appropriate means of professional entry.

From the middle of the century, declining employment and investment in crafts, manufacturing and heavy industry, along with changing attitudes to workplace training, started to erode the numbers of young people entering work through apprenticeships. The total number of apprentices in training dropped from 3% of the workforce in 1964 to 1.1% in 1990; if all trainees are included the figures are 4% and 1.7% respectively, still a significant decline (Gospel 1995). It is notable that particularly in engineering some employers supported apprentices to achieve higher qualifications such as Higher National Certificates and Diplomas, and in a few cases to progress to part-time degrees.

Modern state intervention in apprenticeships can be traced back to two initiatives. The Industry Training Boards (ITBs) set up in the mid-1960s aimed to broaden, rationalise and fund apprenticeship and other training through a levy and grant system, while the Youth Opportunities Programme (YOP) of 1978 provided on-the-job training generally for six months, as a measure to counter youth unemployment. YOP, which did not need to include off-the-job training or qualifications, was replaced by the Youth Training Scheme (YTS) in 1983. YTS programmes could last for up to a year, included a minimum off-the-job component, and led to a certificate of completion. The successor Youth Training (YT) programme normally ran over two years and led to a nationally recognised qualification, typically at what is now level 2. Initially associated with YT, though soon taking on the wider (and ultimately unsuccessful) purpose of reforming the entire vocational qualifications system (Raggatt & Williams 1999), a new framework of National Vocational Qualifications (NVQs) was initiated in 1986; these were developed by nominally employer-led bodies (in several cases ITBs or successor bodies) and based on the demonstration of workplace competence to agreed national standards (Jessup 1991). NVQs were quickly

The development of Higher and Degree Apprenticeships

extended to levels 4 and 5, and therefore later became a component of Higher Apprenticeships; however, they have been criticised as being based on too narrow a model of competence to be entirely suitable at these levels (e.g. Hodgkinson 1995), and professional bodies have subsequently developed broader and more sophisticated ways of describing competence and effective practice (Lester 2014, 2017).

Youth Training was replaced in 1994 by National Traineeships, leading to a level 2 qualification normally over one or two years, and Modern Apprenticeships, at level 3 and typically taking between two and four years. These programmes were renamed several times before arriving at the current

terminology of Intermediate (level 2) and Advanced (level 3) Apprenticeships. Qualification content expanded from NVQs alone to include key skills units, operator or similar certification where relevant, and a 'technical certificate' or 'knowledge-based qualification'. One limitation of the apprenticeship system was that due to its location in the further education and skills sector, apprenticeships could not be funded beyond level 3, when in some industries there was a demand for apprentices to have skills at a higher level than this. Funding imbalances also made some programmes more attractive to deliver than others, leading for instance to an oversupply in the number of hairdressers alongside a shortage of engineering and electrotechnical technicians.

Summary

- Apprenticeships at levels 4 and 5 were introduced after the Leitch review of 2006, focusing on higher technical skills and industry needs.
- Revised specifications in 2013 added levels 6 and 7, were more aligned to higher education qualifications and the needs of professional bodies.
- The Richard review of 2012 led to further changes to specification, including the introduction in 2013 of 'standards-based' apprenticeships leading to an end-point assessment.
- The Richard review also called for apprenticeships to become an effective route into professional and senior-level work roles, heralding the introduction of Degree Apprenticeships in 2015.
- Apprenticeship standards, including Degree Apprenticeships, are developed by employer-led 'trailblazer' groups overseen by the Institute for Apprenticeships and Technical Education.
- Apprenticeships at levels 6 and 7 can currently include an end-point assessment only (no separate qualification is awarded), a degree and a separate end-point assessment, or an integrated degree and end-point assessment.

In 2008, apprenticeships were given additional funding and relaunched under a newly created National Apprenticeships Service. Reflecting the emphasis on higher technical skills in both the Dearing (NCIHE 1997) and Leitch (Leitch 2006) reviews, they were also extended as Higher Apprenticeships to levels 4 and 5. These new programmes followed a similar format to existing apprenticeships in that they generally required achievement of separate 'knowledge' and 'competence' qualifications. Initial engagement from higher education was limited due to the dual qualification requirement, a lack of recognition that 'competence' could be incorporated into university qualifications (foundation degrees for instance were initially classified purely as 'knowledge' qualifications), the fact that HAs need not contain more than 'small' qualifications, and low levels of funding (Anderson *et al* 2012, Bravenboer 2016). A revised Specification of Apprenticeship Standards in England (SASE,

BIS 2013) made significant changes, including allowing for a single qualification that assessed both 'knowledge' and 'competence', further extending apprenticeships to levels 6 and 7, and requiring HAs to include qualifications closer in size to the norms in higher education (90 credits for levels 4 and 5, and 120 for 6 and 7). Professional recognition, or a clear pathway towards it, was to be included in higher-level apprenticeships where relevant. These second-generation HAs proved more attractive to higher education institutions, professional bodies, and employers looking to support professional entry or upskill existing staff (PARN 2015).

In parallel with these developments, there were ongoing concerns about the quality of English vocational education and training, including apprenticeships, and its ability to support the demand for skills needed by the economy and the public sector. Critiques included a tendency to train for jobs rather than careers (Brockmann *et al* 2010), a focus on low-level qualifications with questionable labour market value (Wolf 2011), the short duration and low levels of new learning in some apprenticeships (Fuller & Unwin 2008), and the use of apprenticeship funding – rightly or wrongly – to train existing staff. Following the influential Wolf report on vocational education, along with evidence of fraud and malpractice reported in the press, the Government commissioned the entrepreneur Doug Richard to make recommendations for improving apprenticeship training.

The Richard review (Richard 2012) took place over the summer of 2012 and examined principally level 2 and 3 apprenticeships via evidence from a variety of stakeholders. Although some consultees, including from the higher education sector, commented on both, the review took place in isolation from the SASE reforms that were being consulted on at the same time. Key points from the Richard review included development of apprenticeships by employers to recognised industry standards; the need for a concise specification of the what was to be achieved on completion of the apprenticeship; removal of multiple qualifications and continuous assessment in favour of a single end-point assessment; targeting apprenticeships only at those who are new to a job or role that requires sustained and substantial training; and directing funding for apprenticeship training via employers. Although Richard's review was focused on lower-level apprenticeships, he recognised the high status of the university degree and sought a way for apprenticeships to gain the same level of recognition, forming "an effective pathway for highly skilled work, including professional and senior job roles" (Richard 2012, p35).



Parallel developments: higher education and professions

Following Richard's report the Government instituted several reforms including the introduction of an apprenticeship levy of 0.5% of all payrolls over £3 million, a new process for employer-led 'Trailblazer' groups to design apprenticeship 'standards' in line with Richard's recommendations (gradually superseding the existing 'framework' apprenticeships), and the announcement of Degree Apprenticeships that would incorporate a university degree at undergraduate or postgraduate level. Details of the new approach were set out by the Department for Business, Innovation and Skills in a document that superseded the 2013 SASE (BIS 2015c). For the majority of apprenticeships this removed the requirement for external qualifications, introducing an end-point assessment and certification (by the Education and Skills Funding Agency) for the apprenticeship as a whole. Extension to levels 6 and 7 and encouragement to include trade or professional recognition was carried over from the SASE, although the specification of minimum credit sizes at levels 4 to 7 was dropped; the size of the apprenticeship became defined by its length and a minimum requirement for 20% off-the-job training (equivalent to the day-release entitlement proposed seventy years earlier). A Degree Apprenticeship Development Fund (DADF) was made available from 2016 to aid capacity-building in higher education, embed degree apprenticeships as an accepted alternative to traditional higher education, and support initiatives to improve productivity and social mobility.

The new Degree Apprenticeships (some level 6 and 7 'framework' apprenticeships that included degrees had already been developed under the 2013 SASE) followed the rules set out in the BIS document, including the need for development by a trailblazer group; their distinctive feature was the inclusion of a bachelor's or master's degree. Two models were proposed: 'non-integrated' apprenticeships where the degree sat alongside the apprenticeship, which retains a separate end-point assessment, and an 'integrated' model where the degree includes the end-point assessment and potentially also any professional accreditation requirements. The document states:

“

Employers, universities and professional bodies can come together to co-design a fully-integrated degree course specifically for apprentices, which delivers and tests both academic learning and on-the-job training. We think this will be the preferred approach for many sectors, as the learning is seamless and does not require a separate assessment of occupational competence”

(BIS 2015c, p13).

At levels 6 and 7 this means that three types of apprenticeship are currently available, in addition to any remaining 'framework' apprenticeships: Higher Apprenticeships not leading to a degree (or any qualification); Degree Apprenticeships with a separate end-point assessment; and integrated Degree Apprenticeships. Any of these may incorporate or contribute to professional recognition, so for instance the level 7 professional accountant Higher Apprenticeship covers most of the requirements for Chartered Accountant, the nursing Degree Apprenticeship incorporates registration with the Nursing and Midwifery Council, and the engineering Degree Apprenticeship is aligned with the standards for Chartered Engineer.

Responsibility for apprenticeships moved to the Department for Education (DfE) in 2016, and in 2017 a new body, the Institute for Apprenticeships (and later, also Technical Education, IfA/IfATE) was set up to oversee the development of apprenticeship standards. In response to the Sainsbury review of technical education (Sainsbury 2016), the DfE also instituted reforms to set up a series of 15 'technical routes' at levels 2-5, with the aim of rationalising qualifications and improving alignment between full-time vocational education and apprenticeships (BIS/DfE 2016); these are however already subject to criticism that they exclude too many occupations and do not reflect the evolving nature of the labour market (Foster & Powell 2018). Responsibility for these routes is located with a series of 'route panels' within the IfATE.

Funding for apprenticeships, including Degree Apprenticeships, is provided through the Education and Skills Funding Agency (ESFA) and channelled via employers' digital Apprenticeship Levy account. It covers provider and assessment fees (apart from non-levy-paying employers who are required to contribute 5% towards the cost of training, reduced in 2019 from 10%), while employers are responsible for paying apprentices' wages at or above a national minimum rate.

Summary

- By the late 20th century, the dominant model of professional entry had become a 'sequential' pattern of full-time higher education plus a defined period of work-based training.
- Higher education itself has evolved to include more flexible and outward-facing provision including employer-supported, work-integrated and work-based degrees.
- Professional entry routes have also become more varied, flexible, and outcomes-oriented, though in most professions the sequential route is still the norm.
- Professional registration or licensing remains an important factor in many occupations, with an ongoing trend towards degree-level or postgraduate entry.

By the late twentieth century, a dominant model had emerged where higher education acted as the 'gateway to the professions', predominantly via full-time degrees (Langlands 2005). The great majority of entrants followed a sequential route involving a first degree, sometimes followed by a postgraduate degree or diploma, then a period of work-based training that in many professions was supported by a part-time course (Lester 2008). Increasingly, a degree or equivalent qualification became seen as the minimum for entry to a professional career, and the sequential route as the standard pattern. This accords with the intellectualist stance mentioned earlier, which was archetypally expressed through a 'technocratic' educational process (Bines 1992) that conveys first the field's 'science', followed by its 'applied science', and finally its practices (Veblen 1918). Exceptions to this model have always existed, but the full-time degree and the sequential entry route remain the norm.

Various innovations relevant to higher technical and professional education began to take place from the 1980s onwards, including negotiated credit-based degrees, recognition of previous experiential or otherwise non-accredited learning within degree programmes, more widespread certification of shorter courses, and work-based programmes negotiated with the institution by individuals and small groups. Negotiated work-based programmes (as opposed to employer-sponsored part-time degrees) largely emerged from two initiatives: a series

of work-based learning pilots supported by the Employment Department in the early 1990s (Duckenfield & Stirner 1992), and the University for Industry/LearnDirect Learning through Work scheme at the turn of the century (Ufi Ltd 2001, Stephenson & Saxton 2005). These led to a wide range of variants, including 'top-up' programmes designed to aid progression from assistant to professional roles (such as healthcare assistant to nurse or teaching assistant to teacher), company cohort degrees designed around specific work applications or career transitions, and individual master's and doctoral programmes built around work projects. Some of these programmes were based in existing disciplines and treated work-based learning simply as a mode of study, while others were oriented towards practice in context and took a transdisciplinary perspective rather than sitting within specific academic or professional fields (Lester & Costley 2010).

The Dearing review of higher education (NCIHE 1997) is remembered for heralding the introduction of student fees, but it also called for more attention to graduate skills, work experience and the needs of employers. The report proposed that further expansion of HE was concentrated at sub-degree level in the form of higher technical qualifications such as HNCs and HNDs. Although Dearing rejected two-year associate-type degrees, these were nevertheless introduced in 2000 in the form of Foundation Degrees (FDs), as part of then Prime Minister Tony Blair's 1999 commitment that 50% of young people should enter higher education. The principles underpinning FDs included that they should be developed in conjunction with local or sectoral employers; they should include a substantial, assessed work-based component; and they should act as both a higher technical qualification and a progression route to a bachelor's degree (HEFCE 2000, QAA 2010). In practice, some FDs had a high level of employer involvement and were closely integrated with work (with some programmes later sitting within Higher Apprenticeships), while others were more conventional academic programmes with work placements (Morgan *et al* 2004). FDs enjoyed an initial surge in uptake, partly substituting for HNCs, HNDs and higher-level NVQs, but this has since declined as increasing fees have made the programmes less attractive and many have been redesigned as full degrees (Lester 2016a, Field 2018). Contrary to policy intentions, the post-Dearing funding reforms led to a decline in both sub-degree higher technical provision and part-time higher education more generally, with continuing expansion of full-time first degrees (Hubble & Bolton 2018, Augar 2019).

The Leitch review of skills (Leitch 2006) examined UK skill needs principally from an economic perspective. It highlighted a need for upwards movement across the skills spectrum, from increasing the proportion of adults with at least level 2 skills,

Degree Apprenticeships: successes and issues



(the Association of Chartered Certified Accountants and the Chartered Institute of Legal Executives for instance set up entry-routes for school leavers that incorporated relevant degrees). A trend in some professions has been towards emphasising the standards needed for sign-off as ready to practise as opposed to the routes to be taken to achieve them; although this was partly influenced by occupational standards and NVQs, the way that professions describe what practitioners need to be able to do is typically broader in scope and easier to relate to academic level requirements (Bravenboer & Lester 2016, Lester 2017).

The formal relationship between degrees and professional recognition varies. In many professions a bachelor's and/or postgraduate degree contributes to qualified status, but additional practical training and assessment is required for full accreditation or licensing (Lester 2008). The majority of professions now have entry-routes that include alternatives to full-time higher education and sometimes to any form of academic qualification, the main exceptions being in the medical field. In a minority of fields, including nursing, teaching and social work, the academic qualification leads directly to professional registration, with substantial work experience being integrated within the course; however there is general recognition that there is a gap between the point of registration and being 'fully qualified' in the sense of being able to work proficiently without supervision (e.g. Willis Commission 2012). As will be discussed in the next section, degree apprenticeships are leading to greater integration between academic qualifications and professional recognition, often allowing the two to be awarded together.

The status of professional recognition or registration depends on a mix of factors including statute, customary practices, and the nature of the employment and professional services market. In some fields recognition is required by law in order to carry out all or some of the functions associated with the profession (such as practising law or auditing companies), to work in the public sector (e.g. teaching or nursing), or to use a specific professional title (such as architect, dentist, solicitor or social worker). Responsibility for statutory recognition may sit with a government department, with an independent regulator or registration body, with an arm's-length regulator attached to a professional membership body, or directly with a membership body. In other professions opportunities to work unregistered can be restricted by the regulations of competent authorities, banks or insurers (for instance much of the work done by surveyors, accountants and engineers). In the open market there are, at one end, fields where it is difficult to pursue a career, reach a senior level or practise independently without professional recognition, and at the other, those where market benefits are at best localised or marginal (Lester 2016b).

through the need for more people with higher technical skills, to improving employer investment in higher-level skills. In relation to higher education the report called for greater investment in leadership and management development, more workplace-based degrees, more equitable access to higher education, and the extension of employer-led skills pilots to higher levels. The Government response encouraged more collaborative, rather than transactional, relationships between businesses and higher education institutions, included measures to improve institutions' responsiveness to business (DIUS 2008), encouraged employers to design and deliver programmes in partnership with institutions, and introduced co-funding arrangements (BIS 2009).

In parallel, many professions have made efforts to widen entry-routes beyond the sequential model, both in conjunction with higher education and independently. Critiques of intellectualist approaches to professional development have been made since the 1980s (e.g. Schön 1983). Although these have not affected the trend towards graduate entry (social work for instance incorporated a mandatory degree into its training in 2005 and nursing in 2013, with policing to follow in 2020), they have laid the ground for a turn towards more practice-oriented and often flexible modes of development. A lack of diversity of entrants to some professions led to calls for access to professional careers to be broadened (Milburn 2012), although this was articulated more in terms of access to the relevant degrees than developing alternative entry-routes. Nevertheless, many professions have sought to widen entry-routes at least from a pragmatic perspective (Lester 2008, Williams & Hanson 2011, PARN 2015); approaches have included modular routes from associate or related occupations, portfolio-type assessments for experienced practitioners, and pathways that incorporate professional training and sometimes degrees alongside work

Summary

- Degree Apprenticeships are well-placed to support public-sector recruitment, raise skill levels in economically critical areas including digital industries, engineering and management, and widen access to professional careers.
- There is evidence of potential to improve social mobility, but more needs to be done to promote degree apprenticeships, reach underrepresented groups, and improve progression from further education and lower-level apprenticeships.
- There are concerns that apprenticeship standards need to be broadened, degrees need to be easier to incorporate where there is a demand for them, and greater flexibility is needed to allow learners to step on and off programmes.
- Ongoing problems have been encountered with standards approval, and there is also a need for greater expertise in higher education and professions among those involved in approving the standards.
- There are overlaps and gaps in quality assurance for higher-level apprenticeships, as well as a separate regime for monitoring end-point assessments.
- The current funding model is under pressure, with some Degree Apprenticeships facing issues of sustainability, problems of access for non-levy-payers, and the issue of using the levy to pay for 16-18-year-olds who would previously have been funded from the education budget.

As a flagship programme that responds equally to matters of productivity and social mobility, and has widespread support from employers and higher education, the degree apprenticeship model carries high expectations. The Office for Students for instance comments:

“Degree apprenticeships carry the weight of expectations of multiple stakeholders. They are expected, for instance, to meet economic needs and those of employers; to increase social mobility and diversity in higher education; to bridge the gap between different levels of qualifications; to create a new gateway to the professions; and to imbue a vocational route to education with the prestige accorded to more conventional routes.” (OfS 2019, p1).

It is too early to draw firm, generalisable conclusions from the introduction of Degree Apprenticeships, but after three years of operation (slightly longer for some degree-bearing 'framework' apprenticeships), some clear successes and benefits are apparent, as well as issues with policy, funding and implementation. Numbers of Degree Apprenticeship starts are currently tiny (in 2017-18 they totalled 6360, comprising 1.7% of apprenticeship starts and 0.7% of learners entering level 6+ higher education), but numbers are expected to grow rapidly and over 100 English universities (i.e. nearly all, including most of the research-intensive institutions) are now registered as apprenticeship providers (OfS 2019, UUK 2019). Impact on the economy is too early to assess, but there is some evidence of at least the capacity to improve productivity and social mobility, while Degree Apprenticeships are already becoming a significant factor in addressing skills gaps and staff shortages in the public sector (WECD 2019) and improving management performance (UUK 2019). In fields that lack formal professions such as digital industries (UUK 2019) and business-to-business sales (Edge 2017) there is evidence that the respective Degree Apprenticeships are beginning to lead to greater professionalisation and professional identity.

Employers involved in Degree Apprenticeships generally value them as an overall package for employee and new entrant development, with the degree being seen as particularly valuable for attracting high-calibre entrants and raising the esteem in which the apprenticeship is held (UUK 2019). Benefits reported by employers include bringing higher-level skills into the company, upskilling staff and enabling recruitment from the existing workforce, aiding recruitment and filling skills gaps, and motivating and retaining existing

staff (IFF Research 2020a). A recent study for the Office for Students found that learners on Degree Apprenticeships – from a sample including levels 6 and 7, new entrants and existing workers, young and mature students – valued both the ability to work towards a degree while employed, along with the combination of theoretical and practical learning (Engeli & Turner 2019). These apprentices saw Degree Apprenticeships as being highly portable within their sectors rather than simply ‘training for a job’, and as being more beneficial to their careers than a full-time degree would have been. There is some evidence that Degree Apprenticeships can produce huge learning gains, for instance from lacking higher education entry qualifications to first-class honours (UVAC/SDN 2017).

For higher education institutions, wider benefits are noted including enriching the overall curriculum, providing material for research, creating a strategic platform to develop innovative programmes (UVAC/SDN 2019), and in the ‘creative disruption’ caused by challenging current understandings of the relationship

between higher education and work (Bravenboer 2019). The need for collaboration between institutions and employers is leading to wider networks and improved partnerships (WECD 2019), while large employers are seeing the benefits of working with institutions that they may not have prioritised for conventional graduate recruitment (NCUB 2018). Crawford-Lee & Moorwood (2019) comment that Degree Apprenticeships are genuinely transformational in overcoming the ‘academic-vocational divide’ that bedevils British education and training.

Nevertheless, while there is a lot of optimism surrounding Degree Apprenticeships, there are also various issues and obstacles that need to be addressed. The Higher Education Commission recently commented that while Degree Apprenticeships have valuable economic potential and are a “fantastic opportunity for young people”, they also need “urgent changes to the model of implementation” (Policy Connect/HEC 2019, p2). The remainder of this section examines the current situation in six areas: skills and productivity, social mobility and diversity, promotion and progression, apprenticeship standards and design, national organisation and management, and funding.

Degree Apprenticeships as a strategy for skills and productivity

The need for higher-level education that is more geared towards skills and productivity is widely recognised, as reflected in the Dearing and Leitch reviews along with more recent analyses (e.g. Edge 2017, Augar 2019). Universities UK accepts that there is a need for developments that support the Industrial Strategy, responding among other things to a massive growth in demand for digital skills, a shortage of engineers, and a need for better leadership and management skills, while also helping overcoming staff shortages in the public sector (UUK 2018, 2019). Several reports call for expansion in Degree Apprenticeships both at a general level to support the knowledge economy and meet the demands of the ‘fourth industrial revolution’ (e.g. Edge 2017, HoCEC 2018, APPGA 2019), and in specific sectors, for instance to address the shortage of engineers (EPC 2018) and nurses (APPGA 2019). In nursing a large shortfall in the workforce coupled with the removal of bursaries for nursing degrees means that Degree Apprenticeships are likely to become essential for recruitment as well as for progression to specialist roles (HoCEC 2019).

Early indications are that Degree Apprenticeships are ideally placed to create new routes into higher-level and productive jobs, to act as a vehicle for upskilling the existing workforce

and improving retention, and to overcome employers’ concerns about graduates being poorly equipped for work (Edge 2017, UUK 2019). Nevertheless, a tension has emerged between the obvious potential of Degree Apprenticeships to contribute to the economy and to vital skills shortages, and the traditional role of publicly-funded work-based training (from the Youth Opportunities Programme onwards) in addressing youth unemployment (Anderson 2019). There have been recent calls from the further education and private training sectors to reduce support for Degree Apprenticeships in favour of lower-level apprenticeships (e.g. Dawe 2019, Gravatt 2019). The Augar review is sceptical of the use of Degree Apprenticeships for developing existing staff, including for management development, in spite of a lack of leadership and management skills being identified as a key barrier to productivity in the Industrial Strategy (HM Government 2017); the review has also suggested that Degree Apprenticeships should only be funded for those who do not already have a degree (Augar 2019).

Political backing for Degree Apprenticeships has become more muted following recent changes within the DfE, and there is also concern among some employers that the IfATE is favouring non-degree Higher Apprenticeships over Degree Apprenticeships (UUK 2019). On the other hand, a Social Market Foundation study (Gicheva et al 2019) has found low economic and wage returns to many Level 2 and 3 apprenticeships, and the Foundation has called on the Government to steer the market towards apprenticeships that will deliver good returns and are resilient to technological and economic change (ibid.). To put this into perspective, in an international comparison Kuczera & Field (2018) comment that the UK is unusual in having a high proportion of low-level, short-duration apprenticeships, and a smaller proportion than many comparator countries in more economically critical areas. The House of Commons Education Committee has recently called for the growth of Degree Apprenticeships to be a strategic priority (HoCEC 2018).

Social mobility and diversity

Support for the social mobility aims of Degree Apprenticeships, essentially opening up professional and other higher-level careers to a broader range of people, is widely supported by employers, institutions and professional bodies, but as yet the evidence of impact is limited (PARN 2015, NCUB 2018, UUK 2019). So far, the majority of Degree Apprenticeship starts have been from existing workers to support upskilling and progression to new roles (NCUB 2018), and there is also substantial recruitment from the same pool as traditional higher education, i.e. school leavers with good A-levels (Policy Connect/HEC 2019).

However, there is also evidence that Degree Apprenticeships are attracting more mature learners (UUK 2019, WECD 2019), a greater proportion of entrants from further education (Engeli & Turner 2019), as well as people who would otherwise not have gone into higher education or embarked on a continuing development programme of any kind (ibid, EPC 2018). The UUK notes that internal recruitment on to Degree Apprenticeships can be an important factor contributing to social mobility when staff would otherwise have stayed in lower-level roles (UUK 2019).

Geographically, the two largest regions for Degree Apprenticeship recruitment, the north-east and north-west of England, also have the lowest levels of entry into full-time higher education, while London, with the highest percentage of progression to higher education, has proportionally a lower uptake of Degree Apprenticeships (OfS 2019). A higher proportion of entrants than for full-time higher education (a third of the total up to 2018) have been recruited from disadvantaged areas, although there is less information on whether the learners themselves are disadvantaged (Engeli & Turner 2019). On the other hand, access to Degree Apprenticeships is currently limited in some less advantaged areas due to a lack of locally-accessible provision (Policy Connect/HEC 2019 cite Norfolk as an example), and for reasons that will be discussed later, for SMEs, a factor that is also having disproportionate regional effects (Cobham 2019).

To date, Degree Apprenticeships appear to have had some success in attracting disadvantaged learners, as well as women in engineering and digital fields (APPGA 2017); in total there are more men than women on Degree Apprenticeships, but the percentage of women is higher than on full-time degrees in the same fields (Engeli & Turner 2019, UVAC/SDN 2019). The ethnic make-up of degree apprentices is currently less diverse than the workforce as a whole, although it is notable that the policing Degree Apprenticeship has more than doubled applications from women and minority ethnic groups in at least one force area (York 2020), and the apprenticeship cohort nationally is more balanced from a gender and ethnic perspective than is the existing police workforce (UUK 2019).

The next section discusses some of the barriers to social mobility aims, in the tendency of some employers and institutions to focus on the same catchments as for recruiting full-time students; a lack of awareness of Degree Apprenticeships among young people; and unclear progression opportunities from further education and lower-level apprenticeships.



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Promotion and progression

At present Degree Apprenticeships appear to be poorly understood outside of those involved in their development and implementation, and few current recruits found out about them through the official information, advice and guidance channels (Engeli & Turner 2019, UUK 2019, WECD 2019); more common routes have been via employers and word-of-mouth. Improved information and promotion is widely called for (e.g. UUK 2019, OfS 2019, Policy Connect/HEC 2019). There is also concern that the 'apprenticeship' brand is perceived as a low-level or second-class option, and even with the incorporation of a degree, inferior to full-time higher education and not something that would be promoted actively by schools (Saraswat 2016, EPC 2018). This is leading to calls for more active promotion and showcasing of Degree Apprenticeships as a high-quality option, a 'degree-plus' gold standard with good employment prospects (EPC 2018, APPGA 2019, UVAC/SDN 2019). Research by the Chartered Management Institute (CMI 2018) does however give a more positive picture, with a third of parents in their study being aware of degree apprenticeships and a small majority regarding apprenticeships as providing a better chance of getting a good job than going to university full-time. Some universities and employer facing organisations actively promoted degree apprenticeships as 'the best of both worlds', i.e. providing opportunities to access both higher education and a professional career (See for example NCUB, 2015).

There is also recognition that promotion and recruitment strategies need to involve more active outreach in order to increase the diversity of intake, both in terms of factors such as ethnicity, disability and social deprivation, and reaching beyond the traditional A-level intake (Burke 2018, NCUB 2018). The second phase of DADF projects are beginning to encourage this through actions such as partnerships between universities, schools and colleges (UUK 2019). A related factor, and one likely to be affecting social mobility, is a lack of easy progression routes from technical and vocational qualifications, including lower-level apprenticeships (Fuller & Unwin 2017, OfS 2019,

Policy Connect/HEC 2019). This is partly a symptom of the historical disconnect between further and higher education, not helped by the decline in level 4 and 5 provision over the last decade, along with a tendency for apprenticeship standards to be viewed in isolation rather than as part of a sequence of progression (HoCEC 2018, UUK 2019). This system has been described as disjointed (NCUB 2018), leading to difficulty for learners in finding information about progression routes and barriers to employers offering multi-level apprenticeships.

Apprenticeship standards and design

The basic design principles of Degree Apprenticeships are fairly widely supported by institutions, employers and professional bodies. However, there are some concerns about matters of detail, the narrowness of some apprenticeship standards, and what is seen as antipathy towards Degree Apprenticeships and professional body requirements within IfATE, perhaps reflecting a change of emphasis within the DfE.

While a lack of relevant standards has been a factor holding up the implementation of Degree Apprenticeships, in some fields there is concern that there are too many standards in development, and they are becoming narrow, short-term in orientation, and focused on job roles rather than careers in professions or wider occupational fields (e.g. Policy Connect/HEC 2019 generally, and EPC 2018 in engineering). The lack of a balancing union input, as in for instance the Austrian and German social partnership models, has been seen as removing a counterbalance to employer pressure to orient standards to specific roles (Kuczera & Field 2018, Nowak 2019), making apprentices vulnerable to changes in the labour market (Belfield et al 2018). Professions tend to conceptualise their fields more broadly than as a set of defined roles (Lester 2017), and for Degree Apprenticeships to have labour market relevance in formalised professional fields they need to align with the relevant professional standards (EPC 2017, 2018). Similar matters have been raised in relation to the 'fourth industrial revolution' (Schwab 2017) and the predicted disruption of current employment patterns by the growth and convergence of emerging technologies (Gleason 2018, Gicheva et al 2019).

Two related concerns are that the need for collaboration between employers, higher education institutions and professional bodies in order to develop integrated degree apprenticeships is not being promoted or supported sufficiently (cf. BIS 2015c, p13); and that it is becoming more difficult to incorporate degrees into apprenticeships due to IfATE applying rigid criteria for including qualifications. Essentially, the latter require either that

the relevant regulatory or professional body stipulates a degree as part of the requirement for recognition, or that there is clear market demand expressed through job advertisements. UUK (2019) argue that the power to specify a degree apprenticeship should rest with Trailblazer groups, while the research by Engeli & Turner (2019) strongly suggests that level 6 or 7 apprenticeships without a degree will be less attractive to learners. This is backed by the evaluation of the DADF (WECD 2019), where there are concerns that HAS that do not include a qualification will have limited appeal, currency or transferability (and see Saraswat 2016). An exception is where the apprenticeship leads to a widely-recognised professionally qualified status, as with the accountancy and taxation Higher Apprenticeships; however, a recent evaluation for the Department for Education found that of all apprentices those on non-degree level 6/7 programmes were the most likely to be dissatisfied with their apprenticeships (23%), while Degree Apprentices were least likely to be dissatisfied (3%) (IFF Research 2020b, p90). A further consideration is the ability of Degree Apprenticeships to contribute to professionalisation and professional recognition in evolving fields and those that lack authoritative professional bodies, as has been noted for business-to-business sales and digital industries (UVAC/SDN 2019); initially at least these are unlikely to demonstrate features that meet the IfATE criteria.

Structurally, there is concern that Degree Apprenticeships need stepping-off points where learners can leave with a level 4 or 5 qualification, with the opportunity of re-joining the apprenticeship later or using it to move to an adjacent field (Bishop & Hordern 2017). While it is currently too early to assess Degree Apprenticeship completion rates, the high drop-out rate in apprenticeships as a whole suggests that this is an appropriate measure in many fields (EPC 2017, Policy Connect/HEC 2019). This model is also likely to be relevant in areas where early-career employment tends to be unstable and it is common for apprentices to move employer before completing.

Finally, the role of the apprenticeship end-point assessment (EPA) in non-integrated Degree Apprenticeships has been questioned in both engineering (EPC 2017) and nursing (APPGA 2019, Baker 2019). In both fields the degree is required for, or contributes to, professional registration, and there is no real additional value in completing the EPA; it becomes an additional hurdle or 'toll booth' (Mulkeen et al 2019). However, where learners pass the degree and meet the professional requirements but fail (or fail to enter for) the EPA, the final tranche of funding (which may be more than the cost of the EPA) is withheld from the provider.

National organisation and management

Key responsibilities for apprenticeships rest with DfE (policy), ESFA (management and funding), and IfATE (approvals, promotion and oversight of the end-point assessment); the DfE (2018) sets out the key responsibilities of these and associated bodies. Responsibilities for quality assurance are split and are still being worked out in practice (HoCEC 2018, Policy Connect/HEC 2019). Ofsted have a statutory responsibility for apprenticeships up to level 5, while OfS has a similar responsibility for all provision delivered by providers on its register; this has led to overlaps at levels 4 and 5, where higher education institutions are subject to Ofsted inspection in addition to OfS/QAA provisions (and sometimes also to professional body or regulator monitoring), as well as a gap where non-OfS-registered providers are subject to neither regime. OfS is currently working with the DfE to develop quality assurance arrangements for these latter providers for levels 6 and 7, although it has been argued that a more logical split would be for OfS to oversee the providers that are registered with it, and Ofsted the remainder. End-point assessments (EPAs) are subject to a different regime, managed by IfATE; EPA assessment organisations are registered with ESFA, and EPA quality assurance is provided by organisations (including Ofqual and some professional bodies) that are chosen by the Trailblazer group and approved by IfATE (IfATE 2019).



Supporting sustainable implementation

The transition between 'framework' and 'standards' apprenticeships has been subject to delays, with HoCEC (2018) commenting that it had been mismanaged by the DfE before handing over to IfA(TE). Experience of developing apprenticeship standards has been reported as frustrating for Trailblazer groups due to changing requirements, lack of clarity and rigid interpretation of assessment requirements (PARN 2017). IfATE has also been criticised for the slow pace of approval of standards (e.g. Policy Connect/HEC 2019, APPGA 2019, Augur 2019), and despite an initiative to improve speed there appear to be ongoing problems. The DADF appears to have increased the rate of development and implementation, but its evaluation indicates that approvals and adoption could still be faster, both within IfATE and by institutions (WECD 2019). The Education Select Committee has identified issues with a lack of understanding of higher education within ESFA and IfATE (HoCEC 2018), and Bishop & Hordern (2017) and PARN (2017) note a similar lack of appreciation of the role and importance of professional bodies and regulators.

Funding

While funding rates for Degree Apprenticeships are generally high compared with lower-level apprenticeships, they represent a lower level of income than full-time degrees, and recent reports have criticised them as being inconsistent, too low for sustainability, and needing to be informed by a more accurate and transparent costing model (UUK 2019, Policy Connect/HEC 2019). A conference on public-sector apprenticeships held at Middlesex University¹ heard evidence from employers that Trailblazers are coming under pressure from IfATE to accept funding rates lower than those that they consider necessary to maintain quality, without any calculations being offered to support the revised figures. A specific issue has also been raised in relation to nursing, where the funding assumes a 'standard' Degree Apprenticeship model and doesn't take account of the 50% theory /practice hours (off-the-job) requirement stipulated by the Nursing and Midwifery Council, or the requirement in the NHS that nurse apprentices are supernumary and cannot contribute to staffing levels (HoCEC 2019).

An additional issue relates to non-levy-paying employers, generally small and medium enterprises (SMEs). In principle these can have apprentices funded (subject to what is now a 5% contribution) by surplus levy, but in practice the funds are often not readily available and many providers are unable to service SMEs. This is leading to a mismatch between skills needs and what can be provided, with some evidence of regional impact (NCUB 2018, UUK 2019). The assumption that underspend by levy-paying employers will fund non-payers appears not to be sustainable (Lemin 2019, Evans & Dromey 2019), and there are calls to find alternative means of funding SMEs (Gratton 2019). A range of options to redistribute the levy is proposed by Evans & Dromey (2019), although their analysis misses the importance of apprenticeship funding for among other things recruitment and retention of nurses and other public-sector workers.

The Augar review of post-18 education and funding (Augar 2019) picks up on earlier themes of needing to strengthen technical education at sub-degree level (4 and 5), encourage part-time and later-life learning, and break down barriers between further and higher education. In relation to apprenticeships, the report recommends switching emphasis from level 2 and 3 business and retail programmes to more economically critical areas at levels 4 and 5, and removing the 'equivalent or lower qualification' (ELQ) rule at levels 4-6, which disallows learners to be funded for taking a qualification at an equivalent or lower level than one that they already hold. As previously noted, Augar is more sceptical of the value of Degree Apprenticeships and recommends only funding them for learners who do not already have a degree. This appears at variance with several of the report's key themes and contradicts the recommendation to remove the ELQ rule for qualifications at level 6.

The debate mentioned under the 'skills and productivity' section above extends into the arena of funding, with comments that Higher and particularly Degree Apprenticeships have increased the average costs of apprenticeships, potentially to the detriment of traditional level 2 and 3 provision (e.g. Gravatt 2019). Suggested solutions include higher employer contributions for Degree Apprenticeships and questioning their use for mid-career management programmes (ibid), although Lemin (2019) writing in the same collection notes an emerging consensus that level 2 and 3 apprenticeships for 16-18-year-old starters should be funded from the general education budget rather than the levy.

Summary

- Successful and sustainable implementation requires strong institutional leadership and alignment with strategic objectives and values; a central unit with the resources and authority to co-ordinate, support and promote apprenticeship provision; and staff who have industry credibility and are able to work flexibly and effectively with businesses.
- Degree apprenticeships need to be developed from the ground up, with pedagogical and curricular models that are geared to negotiated, work-integrated learning, where necessary supporting learners without traditional academic backgrounds.
- Degree apprenticeships require collaborative working with employers and professional bodies, including effective engagement strategies; creative means of engaging with SMEs, where applicable; strong support from senior staff in both organisations; understanding business needs, objectives and contexts; and close working between academic staff and workplace mentors.
- Recruitment and progression needs to be well-managed and co-ordinated, with close working relationships between institutions and employers so that business, institutional and where relevant professional requirements can be met seamlessly.
- Degree apprenticeships rely on an effective learning culture in the workplace, with the workplace being a major source of learning rather than only a site of application; this requires attention to integrating learning, working closely at a day-to-day level with the employer, and moving beyond distinctions between 'on job' and 'off job' learning.
- Assessment needs to support a work-integrated pedagogical approach, treat the learner as an active agent, involve the employer, and use methods that integrate theory and practice.
- Quality assurance needs to apply the same standards as for full-time higher education, while also accommodating multiple stakeholders, assessing risks, and minimising bureaucracy; this is likely to require careful co-ordination to produce processes that are effective, appropriate to context, and that avoid overburdening participants.

There is now an extensive literature discussing effective practices in organising for, designing and delivering work-integrated degrees from an institutional and to a lesser extent employer viewpoint. Before 2015/16 most relevant papers and reports were based on work-based or work-integrated higher education other than Degree Apprenticeships, including foundation degrees, professional programmes, part-time employer-sponsored degrees, integrated placements and projects, and employer- and individually-negotiated work-based programmes. Much of this is summarised in a 2016 review for the QAA (Lester *et al* 2016), commissioned to inform the implementation of Degree Apprenticeships. From 2016 onwards additional literature has emerged that draws directly on experiences of Degree Apprenticeship provision. This section summarises and updates the earlier report across seven areas: leadership, organisation and staffing; philosophies and pedagogies; engagement with employers; recruitment; workplace learning; assessment; and quality assurance.

Leadership, organisation and staffing

At an institutional level, two themes that are widely seen as important to the sustainable provision of Degree Apprenticeships are strategic alignment and strong senior leadership (UUK 2016, UVAC/SDA 2017). This includes ensuring that Degree Apprenticeships align with the strategy, values and ambitions of the institution, there is support from the senior management team, and Degree Apprenticeships are championed at institutional level as well as by those more directly responsible for their development and delivery (Lester *et al* 2016, UVAC/SDN 2017). This doesn't preclude involvement being initiated by departments or peripheral units, provided that it gains rapid support from the centre.

Reflecting earlier findings in respect of workforce development (Kewin *et al* 2011), the consensus at present is that a visible central unit needs to be responsible for supporting and developing Degree Apprenticeships, for instance taking the form of a centralised apprenticeship function with a project board or strategic group that includes central management representation (Rowe 2018). A unit of this type can develop an institution-wide philosophy on workplace learning, avoid being constrained by conventional academic and professional boundaries, and take flexible and creative approaches to programme design and pedagogy in conjunction with employers (UVAC/SDA 2017). It can co-ordinate apprenticeship activity across the institution (UUK 2016), provide central guidance on curriculum design,

1. 'Building on Best Practice for Public Sector Degree Apprenticeships', Middlesex University, 11th September 2018: see <https://www.researchgate.net/project/Access-to-public-sector-professions-in-London-through-degree-apprenticeships>

co-ordinate systems for management information and quality assurance (Lillis 2018), provide staff development (UVAC/SDA 2017), share good practice (UUK 2016, Rowe 2018), and attract staff who are suited to and enthusiastic about apprenticeships and work-based learning (Rowe 2018). Experience with other initiatives that create tensions with existing academic norms and structures suggests that this kind of central leadership is necessary at least until the underlying philosophy and practices are fully embedded into the relevant faculties and departments. At this point a supporting role may become more appropriate, but decentralising too quickly risks losing the initiative entirely, or at best localising it to enthusiasts.

Experience from Degree Apprenticeships and work-integrated learning more generally indicates a need in addition for departmental staff who can work effectively with employers and apprentices – ‘enterprising, employer-facing practitioners’ (Rowe 2018, p65) – which requires a different set of skills from being subject experts on full-time courses. The value of academic staff who understand and have credibility in the relevant sector and are prepared to engage with employers to understand their objectives and contexts, is widely stressed (Lester *et al* 2016). The need for staff development in this area is acknowledged (UVAC/SDN 2017), with Major *et al* (2011) finding that on average it can take academics two years to become effective work-based learning tutors. Complementary to this is the development of employer-based staff as mentors and practice teachers, ideally with strong links to the institution (Lillis 2018). Minton & Lowe (2019) discuss the importance of the institution providing support for mentors, but also comment that this needs to be appropriate to the work environment, so for instance informal meetings, a handbook and digital resources can be more effective than a mentoring course away from the workplace.

Philosophies and pedagogies

There is growing recognition that Degree Apprenticeships need to be designed from the ground up as complete packages (Edge 2017), rather than by adopting a parallel day- or block-release model using a conventional part-time degree (Kuczera & Field 2018). This integrated approach is advocated by the QAA (2019) and is equally applicable to the ‘integrated’ and ‘non-integrated’ Degree Apprenticeships discussed earlier; it brings together and interrelates theoretical and practical learning (Lillis 2018, Bravenboer 2019). Doing this effectively means adopting methods that are different from those of either classroom teaching or vocational training, and which are generally more informal, independent, practice- or project-oriented, and collaborative (Lester *et al* 2016, Billett 2016, Lillis 2018).

Work-based learning at higher education level has been theorised as being a field in its own right, with its own epistemologies, practices and pedagogies (Costley & Armsby 2007, Bravenboer & Workman 2016, Nottingham 2017 among others). A distinctive work-based or work-integrated ‘signature pedagogy’ has been proposed (Dalrymple *et al* 2014) that reflects the learner as an active agent and creator of meaning and the workplace as a legitimate site of learning and knowledge production; this typically involves a three-way negotiation of learning objectives, processes and outputs between learner, employer and institution, the use of appropriate levels of facilitation (Minton & Lowe 2019), and flexibility as to ‘pace, place and mode’ of learning (Gordon 2014). In principle this stems from a pragmatist position that accepts that knowledge is created from practice and becomes reconceptualised when moving from both theoretical models and know-how to actual practice (Lester *et al* 2016). An issue with this perspective is that it is relatively silent about technical or discipline-based learning and tends to have evolved in the context of more experienced learners who are already in the workplace, or younger learners working on particular aspects of their programme such as placements and work-based projects. In fields with a strong ‘vertical’ knowledge-structure (Bernstein 1999) – where practice requires a thorough knowledge of underlying science or theory – there may therefore be a need to integrate it with the more specific pedagogies of the field or profession in which the apprenticeship is located. Lucas (2016) suggests that this is not particularly problematic in engineering, while Dornan (2005) discusses how medicine operates with different knowledge-structures and pedagogies, one relating to biomedical science and the other to patient care.



In practice, different Degree Apprenticeships (and different stages within the same programme) are likely to require different balances within an overall work-integrated learning pedagogy. Brown *et al* (2007) made a distinction between an ‘affirmative’ or curriculum-led model, designed to support initial development as a competent practitioner, and a ‘transformative’ one appropriate to experienced workers developing their practice and creating change in the workplace. The latter will emphasise aspects such as reflection, analysis, critique, synthesis, and thinking and working ‘outside the box’ (Rowe 2018) and may include the use of approaches such as action learning and practice-as-research (Lester *et al* 2016). Recent practice indicates that programmes geared to new entrants are able to move closer to this model than Brown *et al*’s distinction suggests. Lillis (2018) for instance provides several examples of a work-integrated learning approach in public-sector Degree Apprenticeships, using among other things collaborative working between academic staff and work-based mentors, and effective use of e-learning and digital tools. Finally, Hughes & Saieva (2019) comment that not all degree apprentices (of whatever age) have a traditional academic background and providing support to develop skills such as academic writing, reframing, and evaluating evidence can be important to enabling them to work effectively at higher education level.

Engagement with employers

Employers’ reasons for engaging with degree and other higher-level apprenticeships vary, and include:

- attracting and retaining high-quality recruits, including in sectors such as retail that have traditionally not been perceived as offering good careers
- bringing higher-level skills into the company, and overcoming skills gaps and shortages
- boosting recruitment and creating talent pipelines in shortage sectors and expanding industries (including nursing, policing, engineering, and digital industries)
- providing an alternative to graduate recruitment, with some evidence of better retention rates and a more diverse pool of entrants
- responding to (or promoting) new routes to professional registration, including from ‘assistant’ or ‘technician’ roles
- professionalising sectors that lack a recognised training route or professional qualification
- upskilling existing staff to meet business needs and support succession planning, including for managers
- enabling staff to gain higher education qualifications, including to enhance motivation, meet professional requirements, and enhance the reputation or credibility of the employer
- responding to specific business needs, although this is more often cited as reason for engaging with shorter programmes.

(Mieschenbuhler 2015, Hill 2016, McKnight & Birks 2016, Lester *et al* 2016, UVAC/SDN 2017, IFF Research 2020a).

Factors aiding engagement and collaboration in relation to work-integrated degrees more generally are discussed by Lester *et al* (2016), drawing on a wide range of instances and examples. These include engaging senior staff members in both organisations as ‘champions’ and sponsors; the presence of academic staff who have credibility in the industry and are able to overcome or guide employers through institutional procedures and jargon; taking time to understand the needs, objectives and operational context of the business, and developing solutions that fit with them; and working collaboratively on design and delivery, rather than viewing employers simply as customers. In the recent DfE evaluation (IFF Research 2020a) the aspects of Degree Apprenticeships that employers were least satisfied with included support and communication from the provider, flexibility

of provision, and most prominently the ability to influence structure, content and delivery. Specific means of engagement are discussed in relation to SMEs, typically a hard-to-reach sector outside of professional services firms where engagement is often via a training contract with a professional body; these include engaging with sector, trade and umbrella organisations, working with larger organisations that can influence (or actively bring in) smaller companies in their supply chain, and paying particular attention to fitting the programme around work demands.

More recent literature in relation to Degree Apprenticeships agrees with these factors, with additional emphasis on collaboration and partnership, both in the development of apprenticeship standards and for the design and delivery of individual programmes (UUK 2016). Early engagement is seen as essential, along with being able to understand the operating context, staffing and skills needs of different types of employer within the sector (ibid, UVAC/SDN 2017). Hughes & Saieva (2019) stress working with individual employers to understand their specific needs, overcome any concerns, and agree how they will contribute to the programme.

Recruitment

At present there does not appear to be a consensus on recruitment strategies and practices for Degree Apprenticeships, beyond the basic requirements for admissions being fair, reliable and inclusive (QAA 2018, 2018). Different approaches are likely to be appropriate for, for instance, recruiting from school and college leavers, progression from assistant-type roles or lower-level apprenticeships, and employee development. In principle decisions need to be made by the employer, the institution, and where relevant the professional body or regulator, but operating these separately can lead to inefficiency, and may also favour conservative recruitment strategies based on traditional academic criteria (Lester *et al* 2016). Bravenboer (2011) describes recruitment where the strategy and practices are part of the agreement between employer and institution, with decisions based on a shared understanding but largely delegated to the employer, while Lillis (2018) describes a shared model with a joint steering group to determine parameters and processes, and decisions made jointly by academic staff and workplace mentors.

A tendency to recruit young Degree Apprenticeship entrants from traditional university entry pools has been noted, and there is some evidence that this has led to academic entry requirements that may exceed those for full-time degrees (Lester *et al* 2016). However, there is also evidence of movement towards 'recognitional' (Bravenboer 2012) or 'strengths-based' (Saville *et al* 2019) criteria, which explore relevant achievements, abilities and aptitudes and look for "assets and behaviours which are indicative of an individual's potential to thrive and flourish" (ibid, p2). These have the potential to remove some of the barriers to non-traditional entrants; Saville *et al* also provide evidence that a strengths-based approach is a better predictor of success (lower failure rate and a higher proportion of first-class degrees) than either A-levels or level 3 vocational qualifications, although there may be other factors influencing their data.

There is currently little discussion of recruitment or direct progression from lower-level apprenticeships, other than as previously discussed that this accounts for a small minority of Degree Apprenticeship entrants and faces various barriers (UUK 2019). Humphries-Smith *et al* (2019) describe a route in engineering which spans levels 2 to 7, leading to chartered engineer status. They comment that as well as having a well-mapped-out pathway, this is supported by effective streaming at lower levels into what they describe as 'technical' routes, i.e. better aligned with higher-level programmes, rather than 'craft' ones that are more designed more purely as training for specific jobs.

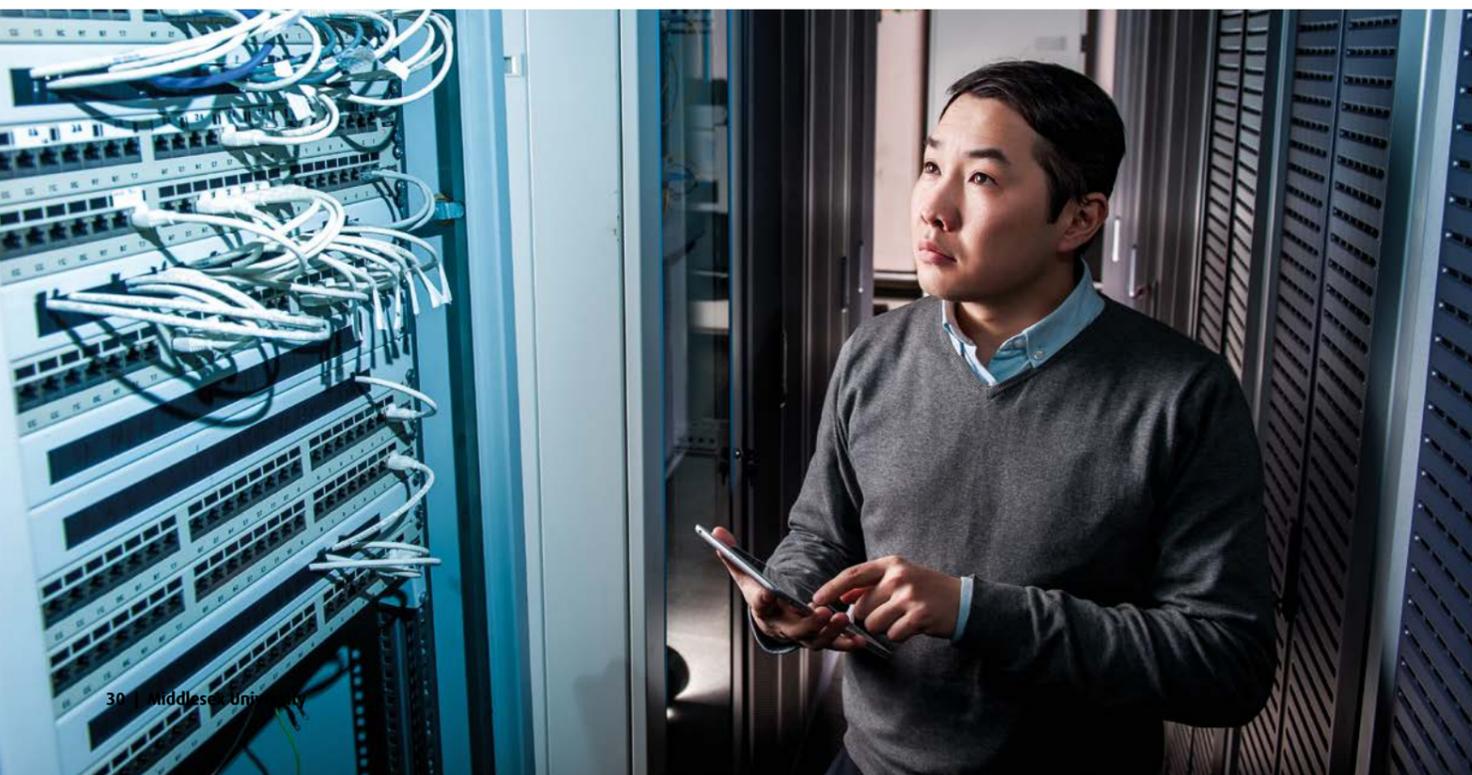
Workplace learning

Kuczera & Field (2018), in comparing English apprenticeships with the best international examples, comment that it has been rare outside of some professional training contracts to specify the training that should take place in the workplace. This has left the work-based element largely to the discretion of the employer, with some workplaces providing 'restrictive' learning environments (training for a narrow job role, development to minimum standards, and an emphasis on early economic contribution), while others are 'expansive' and support broader development, progression beyond basic competence, and career development (Fuller & Unwin 2008). The more integrative approach that is required for Degree Apprenticeships (QAA 2019) points to a need for expansive learning environments and more deliberate attention to the workplace as a site for learning rather than just application and experience (UVAC/SDN 2017, Lillis 2018), along with extension of quality assurance into the workplace (ibid).

Lester *et al* (2016) describe examples where professional workplaces can be more limiting than might be envisaged. One occurs when early-career employment is unstable, and learners tend to move between jobs during their apprenticeship or training period; where this is commonplace, it may lead to programme design that is deliberately less integrated in order to minimise the impact of job moves, although solutions such as work-based projects and assignments can be used to improve integration and continuity. The second is where workers such as healthcare and teaching assistants are progressing to full professional roles but are still treated by colleagues as employees with a full workload. Other issues are encountered in rich but otherwise task-focused environments such as the NHS (Baker 2019), or where an existing employee transferring to a professional training contract initially has less responsibility and a more circumscribed role (Ching & Henderson 2016).

A key strategy for ensuring effective, integrated learning is to work with the employer from the outset to create an effective learning culture in the workplace (EPC 2018, Minton & Lowe 2019). This can include negotiating alignment between work and learning goals; three-way construction of the curriculum; a shared awareness of workplace dynamics and how they may affect learning; ensuring that learners become active participants in an occupational community of practice; and shared use of digital platforms (Lester *et al* 2016, UVAC/SDN 2017, Lillis 2018). At a day-to-day level, the central role of a mentor is widely recognised, both for new entrants and for mature learners who have not been involved in structured learning for some time; the mentor is generally a member of the employer's staff, usually not the apprentice's direct manager, who supports workplace learning and effectively acts as a bridge between the workplace and the institution (Lester *et al* 2016, EPC 2018, Roberts *et al* 2019). Lillis (2018) observes that learning becomes better integrated when mentors and academic staff work jointly, share content, and cross between academic and practice settings; where appropriate this may extend to joint employment, as with practice educators or practitioner-academics in the health and social care sectors.

Overall, in line with QAA guidance (QAA 2019) there is an emerging consensus that theory and practice need to be closely integrated in Degree Apprenticeships (Bravenboer 2019), with direct links being made between classroom (or online) and workplace learning (Mulkeen *et al* 2017). Bravenboer (UVAC/SDN 2017) and Minton & Lowe (2019) comment that the requirement for 20% off-the-job training is anachronistic and unhelpful when applied to integrated programmes, reflecting the older parallel day- or block-release model.



Assessment

The need for alignment between assessment methods and pedagogy is recognised in work-based learning, with the ability for inappropriate methods to undermine or constrain learning and fail to capture relevant outcomes (Lester & Costley 2010). Yorke (2011) discusses 'realist' and 'relativist' approaches to assessment; the former are based on 'measurable' and context-independent criteria such as detailed learning outcomes or competence standards, while the latter use broader criteria that are designed to be interpreted in context and provide a holistic picture of learning and performance. The relativist approach corresponds most closely with the work-based learning 'signature' pedagogy discussed earlier; Yorke comments that while some aspects of realist assessment may be necessary for instance for sign-off as competent to practise, as an overall approach it lacks adequacy for higher-level work-based learning. Separate or poorly designed end-point assessments can overemphasise realist criteria and have been described as inadequate for overall assessment of higher-level apprenticeships (Sarawat 2016) and a concern for learners (Hughes & Saieva 2019).

Several principles and practices for work-integrated assessment have emerged both from work-based learning generally, and specifically from Degree Apprenticeships. Principles include recognising learners as active participants, placing the emphasis on assessment for learning (Lillis 2018); using authentic, practice-oriented methods both in the workplace and in a university setting (ibid., Ball and Manwaring 2010); and capturing verifiable, relevant learning that takes place through work (Arnold et al 2011). A variety of methods are discussed by Lester et al (2016) drawing on various sources, including work-based projects, reviews of workplace learning, reflective narratives and portfolios, the use of work products or 'professional artefacts', and discussion around critical incidents.

Lester et al noted that employer involvement in formal assessment was increasing even before the introduction of Degree Apprenticeships, although it was not always fully accepted by the academic community and sometimes confined to very limited aspects of the programme, or the assessed activities are required to be developed further for academic assessment. In integrated programmes separated or dual-level assessment creates duplication and may detract from learning, leading to a more central role for employer involvement, for instance through joint assessment processes or drawing on academically-recognised mentors or practice tutors (Lillis 2018).

Quality assurance and standards

The QAA stresses that quality assurance must ensure the same academic standards as higher education generally, while also ensuring compliance with the more specific requirements of Degree Apprenticeships (QAA 2018, 2018, and see also Felce 2019). The need to maintain standards of rigour and criticality in a work-based setting, avoiding 'colonisation' by more pragmatic workplace concerns, has been a common theme in discussions of quality in work-based learning (e.g. Lester & Costley 2010, Minton & Whitmore 2011, Fuller & Unwin 2017). In practice there have been tensions between good practice in work-based learning and the requirements of subject-based quality assurance (Lester et al 2016), although more recent QA requirements better reflect the integrated and to some extent transdisciplinary nature of the former. In particular, the QAA (2018) recognises that common standards can be achieved through processes that are tailored to workplace-oriented and negotiated learning.

Degree Apprenticeships incorporate a potentially complex set of quality requirements including those of higher education, the ESFA and IfATE, in many cases professional bodies, and any workplace standards required by the employer; potentially these can lead to substantial bureaucracy and duplication (Willis Commission 2012, CFE Research 2016). Experience with other integrated programmes points to the value of bringing together quality requirements and systems in a single set of processes which is tailored to the context, proportionate to the likely risks, and forms part of the partnership agreement between institution and employer (e.g. McKnight & Birks 2016). Lillis (2018) does however comment that recognition is needed that the kind of individualised learning within Degree Apprenticeships creates more demands on quality assurance than for more conventional higher education programmes.

Section 3

The findings from the study

The interviews

Degree Apprenticeships are highly valued and have great potential, but further work is needed to maximise their benefits.

This chapter reports the findings from the research. After the interview and survey sections, a summary and discussion is provided that also links the findings back to points discussed in the literature review.

The interviews

The interviews included focused on digital, engineering and nursing Higher and Degree Apprenticeships in the partner universities, and included apprentices, employers and university staff.

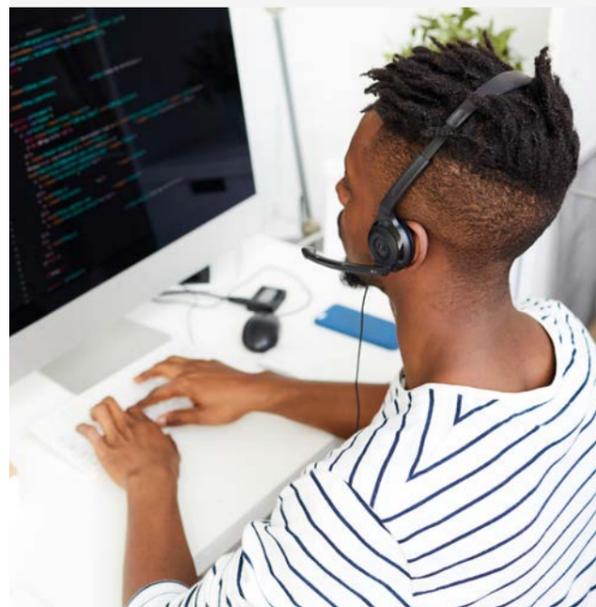
The sectors

The sectors selected were intended to provide an in-depth qualitative perspective, drawing on the specific expertise and experience of each university partner, while at the same time providing sufficient representative differences to enable the findings to be generalisable.



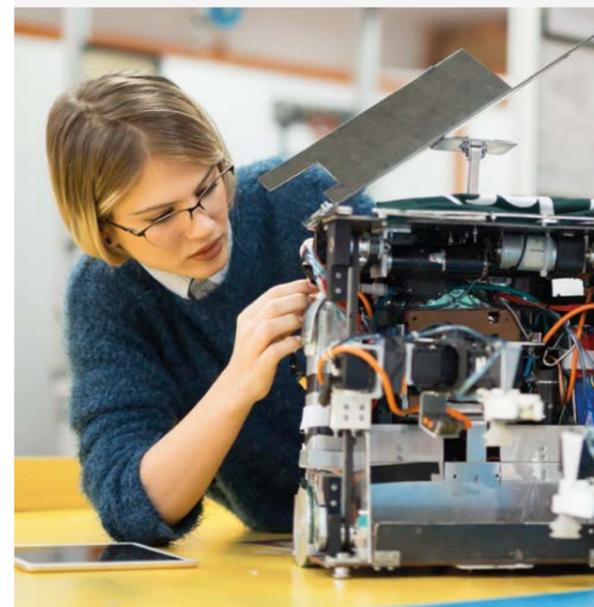
Digital Industries

The digital sector lacks a widely-recognised qualified status or authoritative professional body, with a relevant degree sometimes serving as a *de facto* professional qualification. The Digital and Technology Solutions Degree Apprenticeship has been taken up enthusiastically, accounting for over 20% of level 6 Degree Apprenticeship starts to date. It provides much-needed skills in this rapidly expanding sector, as well as giving entrants a measure of professional credibility. A level 7 Digital Apprenticeship was introduced in 2018.



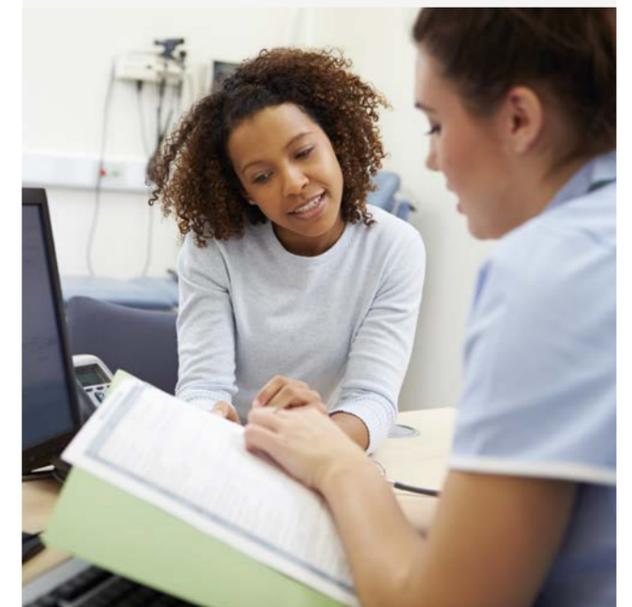
Engineering

The various Degree Apprenticeships in engineering are aligned with the Engineering Council's standards for Incorporated and Chartered Engineer, enabling straightforward progression to professionally qualified status. CEng has traditionally been entered after taking an MEng degree, but it is open to bachelor's graduates following further, not necessarily accredited, study. As well as new entrants, the Degree Apprenticeship is attracting staff on technician grades, or who have entered through lower-level apprenticeships, to progress to becoming qualified engineers.



Nursing

The nursing Degree Apprenticeships, introduced in 2017, are part of a set of linked apprenticeships that provide a route from the lowest to the highest nursing grades, both in the NHS and the private sector. In principle, progression is possible from level 2 (healthcare support worker) to level 7 (advanced nurse practitioner). An increasingly well-used pathway is from healthcare assistant (HCA, level 3) via the recently-established Nursing Associate grade (a level 5 Higher Apprenticeship, including a Nursing and Midwifery Council accredited foundation degree) to Registered Nurse (a level 6 Degree Apprenticeship). NHS and university staff see this route as being vital to address staff shortages and retention particularly now that bursaries for student nurses have been withdrawn. The two-year Nursing Associate HA is an essential stepping-stone for many HCAs who might not want to commit immediately to the four-year Registered Nurse Degree Apprenticeship; it can be followed by a shortened Degree Apprenticeship to achieve a degree and registration as a nurse.



Perceived benefits of Degree Apprenticeships

Participants were universally positive about Degree Apprenticeships in principle, any reservations being concerned with matters of detail, implementation and funding.

Apprentices saw Degree Apprenticeships as having three advantages: an opportunity to gain a qualification while being paid; a means of advancing their careers that for some would not otherwise have been available to them; and a way of academic and practical learning. For instance:

“It’s a great thing to get involved in. You’re getting your qualifications; you’re getting paid; and you’re getting skills in the workplace ... an amazing opportunity.”
Digital Degree Apprentice.

Employers viewed Degree Apprenticeships as providing benefits relating principally to recruitment, progression and skills gaps. In nursing, Degree Apprenticeships and the associated Higher Apprenticeships were seen as part of a vital pipeline for reducing staff shortages, skills gaps and retention problems, as well as providing progression opportunities for healthcare assistants and other existing staff. Similar factors were present in engineering, where Degree Apprenticeships were seen as a vehicle for overcoming skills gaps, recruiting high-quality staff, and providing progression pathways for technicians. Digital employers emphasised skills gaps, workforce expansion, and the capacity of the programme to provide high-quality graduates. For instance:

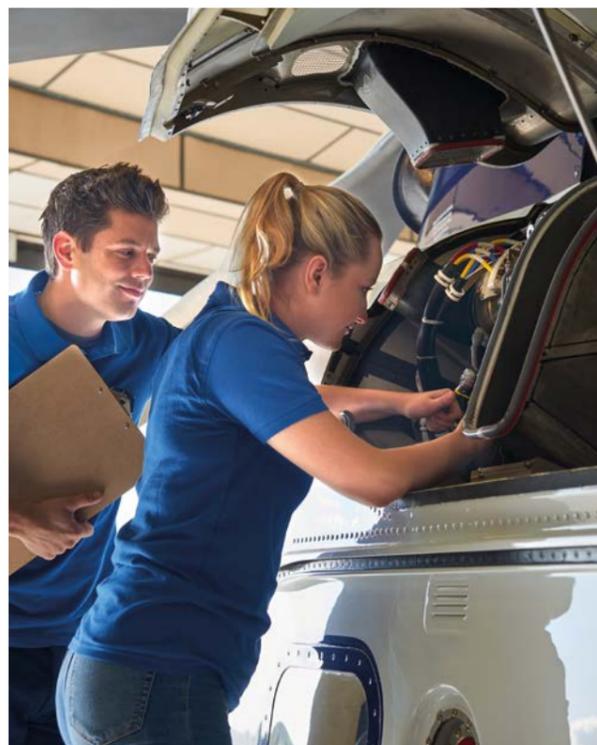
“The quality of the people coming out is exceptional... having an impact on the digital skills gap.”
Digital Apprentice Employer

University staff saw Degree Apprenticeships as a powerful device for progression, talent development and meeting industry needs. In nursing and engineering, Degree Apprenticeships were viewed as providing opportunities and up-skilling at any point in a person’s career, and particularly valuable for more mature learners. While various challenges were reported in relation to Degree Apprenticeships, the overall value of the programme was undisputed:

“Really positive, aspirational programme” leading to “impressive learner journeys.”
University delivering engineering Degree Apprenticeships.

“Fit for purpose engineers.”
University delivering engineering Degree Apprenticeships.

“Going better than we thought.”
University delivering nursing Higher and Degree Apprenticeships.



Reasons for becoming involved with Degree Apprenticeships

For **apprentices**, there were two principal drivers for enrolling on a Degree Apprenticeship. For school and college leavers, the ability to work (and earn) and learn at the same time was central, for instance:

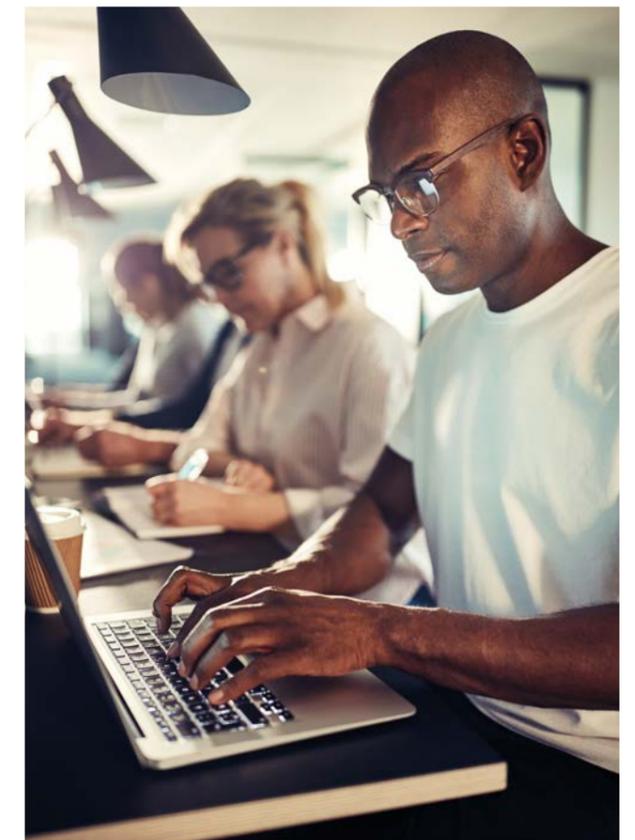
“I wasn’t keen on the standard degree... a lot to do with the debt and the lifestyle around that... I wanted to go into the workplace.”
Digital Degree Apprentice.

“[The Degree Apprenticeship] sounded better [than a full-time degree], I get the experience as well as a degree... not sure I would have liked having to get a job in a bar.”
Engineering Degree Apprentice.

“Originally I wanted to go down the university route... but I was tired of being skint [had done an HNC full-time]... saw the apprenticeship as a win, get experience, get paid and get educated... a lot of apprentices are guaranteed a job [at the end].”
Engineering Degree Apprentice.

For those already in work, the Degree Apprenticeship was an opportunity to progress their careers, for instance from technician to engineer or healthcare assistant to registered nurse. Some of these apprentices had commitments that would have made it difficult to return to full-time study, so a Degree Apprenticeship or similar programme was the only viable route to a higher qualification.

Employers’ reasons for involvement centred on addressing skills gaps and staff shortages and creating internal talent pipelines. Degree Apprentices were seen as having several advantages over graduate recruitment, particularly in creating progression opportunities for existing (often mature) staff, allowing the employer to ‘mould’ entrants into their working practices and contexts, and improving retention both by allowing staff on lower grades to progress (a particular factor in nursing), and creating greater loyalty to the company. One



employer in the digital sector had previously recruited through lower-level apprenticeships but had switched to degree apprentices due to their greater maturity and commitment.

Universities were recognising that Degree Apprenticeship represented a growing market and an opportunity to develop or strengthen links with local and sector employers. Some staff also mentioned specific matters that Degree Apprenticeships were being used to address – for instance transforming traditionally low-skill local businesses by increasing their technological capability (digital) and creating alternative entry- and progression routes (nursing). In all three institutions, a logic was put forward for becoming involved in Degree Apprenticeship that was based on market assessment and on extending the institution’s expertise in the sector and in work-based or work-oriented courses.

Degree Apprenticeships and social mobility

The main contribution to social mobility reported by interviewees was allowing people to progress their careers towards professional status and more senior job roles when they would otherwise not have done so, or would have found it difficult – for instance healthcare assistants to registered nurses and ‘shop floor’ technicians to engineers. These individuals were sometimes characterised as not having done well at school, having limited paper qualifications, and in some cases as being the first in their family to enrol for a degree. Degree Apprenticeships were also reported as attracting parents and people facing personal or health problems. In nursing, university staff commented that the programme had brought in 150 people who otherwise would not have entered higher education, including an estimated 50% who would have qualified for free school meals and many for whom English was their second language. It was also seen as successful in attracting older staff who would not have attempted to qualify as a nursing associate or registered nurse via the conventional route and enabling overseas-qualified staff whose qualifications were not recognised in the UK to progress from assistant-level roles. Several interviewees commented on highly positive learning journeys of apprentices who entered through ‘non-standard’ routes, such as an engineer who:

“Left school at 16, did three apprenticeships... got the qualifications to take him to the next level, absolutely flourished, has had research published.”
University delivering engineering Degree Apprenticeships.

and a nursing associate who:

“Worked [as a Health Care Assistant in a hospice] for 26 years... [and] through the programme finally found her voice and was able to advocate for her patients and make a real difference to patient care.”
University delivering nursing Higher Apprenticeships.

While the eight apprentices who were interviewed can hardly be considered representative, it is notable that none had entered after leaving school or college with A-levels. In engineering and digital, four had taken BTEC level 3

qualifications, one progressing first to a foundation degree Higher Apprenticeship; one had taken an HNC full-time; and one had entered via level 3 and 5 apprenticeships with the same company. The nurse apprentices, both working as healthcare assistants, had previous HE-level qualifications: one an overseas degree and the other at level 5 in counselling.

Degree apprentices were depicted by university staff as on the one hand typically mature, committed, dedicated and professional:

“Among the best students in the university.”
University delivering engineering Degree Apprenticeships.

“Able to challenge and question and drive innovation.”
University delivering digital Degree Apprenticeships.

On the other they were seen as ‘non-standard’ students, often with relevant experience, but not always the most confident academically, at least at the outset. Several university staff noted a need for additional support; in engineering, this was usually maths for students without maths A-level or a technically-oriented HNC, while more extensive support could be required for nursing Higher Apprentices who were progressing from health care assistant or similar roles. As well as maths and English this could include higher education thinking and writing skills as well as taking responsibility for balancing their workload.

Outreach activity was reported by university staff and one engineering employer. Interviewees variously saw it as important to promote “doing an apprenticeship and going to university” rather than one or the other [university delivering digital Degree Apprenticeships], encouraging potential entrants without traditional entry qualifications not to be scared by “anything with the word degree in it” (university delivering engineering Degree Apprenticeships), and getting the message out to underrepresented groups that working at a high-profile firm is a possibility for them (university delivering engineering Degree Apprenticeships). For apprentices, the main ways of hearing about Degree Apprenticeship opportunities were at college, at work (on an existing apprenticeship or in a targeted role such as health care assistant), or through parents who worked in the same industry.



higher education expectations, but for apprentices it could be as much about understanding what was needed for assignments and evidencing, and managing their time effectively:

“... Quite a lot of things to understand... need to upload that, and that ... evidence of that ... I need to find a system and do my time management better.”
Nursing Higher/Degree Apprentice.

An issue reported as common among apprentice nurses was the role conflict created by moving from an ‘employee’ role to a supernumerary training one while staying on the same site, resulting in expectations from colleagues (and sometimes from apprentices themselves) to carry on in their original role:

“I had to put in my mind that I’m a student nurse now, not a nursing associate, because I want to help even though sometimes I should be supernumerary and act as a student nurse... Because I’m known to people, they kind of expect me to do it, which I’m happy to do because it keeps me busy.”
Nursing Degree Apprentice.

Challenges for Apprentices

The apprentices themselves identified three areas where they faced challenges. The most common was doing a full-time job and studying at the same time, particularly if they had an employer who interpreted ‘off-the-job’ training as only timetabled hours, or the course wasn’t managed particularly well:

“... You’re leaving the workplace for one day a week, which is hard especially the older you get, the more experienced you get, then more you’re needed at work.”
Engineering Degree Apprentice.

“I went to pieces on my clinical skills assessment - I worked the weekend (before); I shouldn’t have worked the Sunday... I just went blank and it was the most stupidest thing ... not being prepared properly.”
Nursing Higher/Degree Apprentice.

For some, another issue was coping with the demands of higher education when they had been out of formal education for some time, or had not done particularly well at school. University staff generally reported this as an unfamiliarity with

Models that work well

Various factors were discussed by interviewees as working effectively and aiding Degree Apprenticeship to be operated sustainably. In the university, the main factors related to central co-ordination or support, delivery methods, one-to-one support, relevant course content, and additional learning support where needed. Two senior managers with cross-faculty responsibility commented on the value of a central unit to drive and support apprenticeships, principally in terms of aiming for a consistent approach across the institution and acting as a resource to encourage innovative pedagogy. One however noted a continuing mismatch between the work-integrated approach promoted by the central unit and the preference of some faculty staff to run a conventional lecture-based course.

With regard to pedagogy and delivery methods, central teams and some faculty staff were committed to a work-integrated, adult-oriented and learner-centred paradigm that they saw as essential to effective apprenticeship delivery. Central to this is the idea of bringing apprentices to the point where they are:

“Willing to engage with the idea that they can take ownership of their own learning and can change their effectiveness as a learner ... once they step into that kind of identity, and realise that everything that happens everyday in the workplace is an opportunity, and everything we offer them here is simply a framework for that... the degree apprenticeship becomes an extremely powerful learning device.”

University delivering engineering Degree Apprenticeships.

Flexible, bespoke online learning was viewed as important and the importance of regular one-to-one contact and approachable, supportive university staff was mentioned by both staff and apprentices. Formal additional support for maths, English and academic writing was seen as essential for apprentices who lacked the relevant qualifications on entry. The need for course content to be up-to-date, relevant and future oriented was stressed particularly in engineering, where one university interviewee also commented that they should be introducing technology that apprentices will not have seen at work. Finally, in the two apprenticeships (nursing and engineering) that had a separate end-point assessment, university staff commented that the assessments worked best where they could be linked or closely aligned with the professional body's registration process.

In the workplace, common factors included flexibility around learning demands (such as preparing for exams and assessments), providing time for independent study, library use and online learning, and frequent meetings with a supportive mentor. In one large employer, a monthly forum had been set up for apprentices to discuss their learning. Particularly in engineering, employers had developed strategies for maximising apprentices' learning such as bringing them into major projects early in their programmes, giving them small projects that they are responsible for, and allowing them to do things on their own initiative. At the same time, one employer identified a need to manage apprentices' expectations, keeping them interested with new tasks but also not letting them get unrealistic ideas about how quickly they could progress. In nursing, the main strategies included job rotation and short placements in areas outside of the apprentice's main area of work. One digital employer also noted the value of picking up on relevant things that apprentices were doing in their own time, such as developing software.

Good links between the university and workplace were widely regarded as vital, both to co-ordinate course content with workplace activity or projects, and to keep abreast of apprentices' progress and any barriers or difficulties. Most interviewees saw this as needing effort from both the institution and the employer. Specific actions included frequent, effective communication, including tripartite meetings; documenting what each party needed to do, and when; employer staff becoming involved in the academic programme, at least through work-based projects; and university staff having a strong practice orientation, e.g.:

“Staff who are strong on practice, not necessarily strong academics or researchers.”
Sector Body, Nursing.

Finally, visible support from organisations such as the NMC and Royal College of Nursing and the professional bodies in engineering was mentioned as invaluable to the credibility of the apprenticeship.

Delivery practice that requires improvement

In the workplace, reported problems included simple pressures of work (both for apprentices and workplace mentors), apprentices being expected to carry on with their previous roles, and employers being reluctant to release apprentices for off-the-job learning. This last issue was reported particularly in relation to non-timetabled learning such as independent study, but it was also reported as a problem for nursing apprentices in smaller units such as GP surgeries. Sometimes an employer could start off enthusiastically and seem to understand what is needed, but then:

“Has a change of heart or maybe never really understood or goes into financial difficulty, and then changes the parameters.”
University delivering engineering Degree Apprenticeships

This was something that university staff accepted they needed to manage or work around.

In relation to integration between university and workplace, a common issue reported in engineering and the digital sector was a need for a closer working relationship to bring the two strands of learning closer together. Digital employers in particular were keen to become more involved in the programme, for instance through having more university projects based on workplace activity.

Challenging 'day-release'

The engineering degree apprenticeship examined in the study is designed as a conventional day-release programme, with apprentices attending for one day per week of lectures and workshops. The rationale is that apprentices cover the same ground as other full- and part-time students, it provides broad-based engineering content, and meets the requirements of the engineering professional bodies.

However, employers have criticised this model as limiting the scope for customisation and being difficult to integrate with workplace learning; apprentices find that there is not enough one-to-one time; and some university staff are concerned that the day is too intensive. An alternative approach is being discussed in the university that will make more use of blended learning and online resources, enable more one-to-one and three-way interaction, allow more choice with better integration of workplace learning, and focus on overall competence and professionalism. Greater use of technology is seen as the key to making this more work-integrated design cost-effective.

There was criticism that the separate end-point assessment for engineering apprenticeships was artificial and did not contribute anything to professional recognition beyond the accredited degree, which has longstanding recognition by the relevant engineering bodies. A university interviewee commented that work was needed on the end-point assessment to ensure that it was assessing professional competence at appropriate depth, and that they had been “pushing EPA organisations about how it should be delivered” (university delivering engineering Degree Apprenticeships).

Challenges for Universities

A major challenge apparent from the interviews is that of designing a workable, cost-effective integrated programme that covers higher education and professional requirements while also being highly relevant for employers. This was reported as particularly problematic when dealing with cohorts from disparate, smaller employers. Solutions generally took the form of designing programmes anew from a negotiated, workplace-oriented perspective, close collaboration between provider and employer, and effective use of digital learning. This could however run into resistance both from some university staff wanting to teach in a fairly traditional way and from partner colleges and external agencies who have preconceptions about:

“Vocational technical training” and “An artificial, lazy divide between knowledge and competence.”
University delivering engineering Degree Apprenticeships.

The main challenges reported directly by university staff were staffing and resourcing; administration; and quality assurance. Resourcing was reported first as a matter of planning in the face of uncertain numbers and potential policy or funding changes, and secondly as a need to secure the right staff, generally people with practice experience and a practical orientation, while being careful not to create a divide between them and existing staff. Timetabling and termly or more frequent starts was also mentioned as an issue, with for instance blocks and inductions creating peak staffing and room demands that cut across existing programmes. Issues with end-point assessments were also reported, and one interviewee mentioned difficulties dealing with employers who are not strongly committed to supporting learners.

Degree apprenticeships were reported as requiring substantial additional administration, partly in relation to multiple employer agreements and associated arrangements, but also to monitoring requirements from varied stakeholders, which were sometimes described as impossible to align. Requirements from the funding body (ESFA) were noted as partly inputs-driven and duplicating employer responsibilities (e.g. reporting attendance).

Where Degree Apprenticeships were linked with Higher Apprenticeships an additional complication was introduced in the form of Ofsted inspections; these were generally seen as time-consuming, “hugely challenging” and involving an organisation “that's not used to working within this

The Survey

area" (i.e. higher education) [university delivering Nursing Higher and Degree Apprenticeships], imposing what was essentially seen as a school-oriented methodology. In nursing in particular there was a feeling of "spending so much time demonstrating that we're doing things that it takes away from actually doing them" [university delivering Nursing Higher and Degree Apprenticeships]. One interviewee commented that apprentices were being subjected to mixed messages from an 'adult' work-integrated learning culture, a more traditional subject-oriented academic culture, and an audit culture that effectively treats them as children, making it difficult for them to "establish what their identity is" [university delivering Engineering Degree Apprenticeships].

External threats to the sustainability of Degree Apprenticeships

Three major potential threats to sustainability were identified by interviewees.

A lack of clarity about **Government long-term commitment** was noted by one university manager as a concern, not only within the university, which was in the process of committing to the infrastructure to roll out Degree Apprenticeships as a major plank of its provision, but for employers who were operating a wait-and-see policy.

A major threat reported by the universities was the **level of funding**; this was generally seen as barely adequate, with any reductions threatening the viability of programmes. In nursing, the funding band was seen as not reflecting either the NMC's stipulation that 50% of training is theory-based and off-the-job, or the NHS requirement for student nurses to be supernumeraries. A general issue, raised by engineering and nursing staff (where there are separate end-point assessments), is the attachment of a significant proportion of funding to completing the EPA. In both fields the apprenticeship certificate was reported as having little real value to apprentices compared with the degree and professional recognition, although no indications were given of how many apprentices either fail the EPA or leave before taking it.

A third matter that was raised by employer and university interviewees in the digital sector related to the IfATE's **policy of only allowing a qualification to be included in an apprenticeship standard where it is a professional requirement or widely used by employers as a recruitment criterion**. The lack of an authoritative professional body along

with varied recruitment policies by employers made this requirement impossible to meet, placing the degree under threat when the standard came up for review. An employer commented that for the Degree Apprenticeship to be

“Under threat... considering how successful it is, just seems to be unbelievably ludicrous.”
Digital Degree Apprenticeship Employer

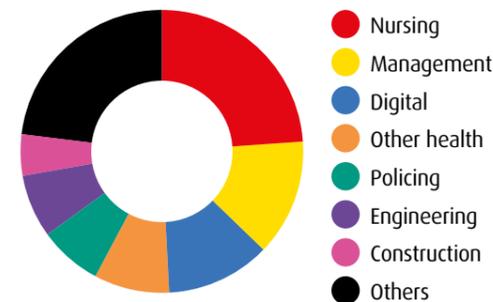
At the time of writing the standard had been reappraised as a Degree Apprenticeship until 2021, although there has been no overall change to IfATE policy and there is still a danger of the degree being dropped as a funded component of the apprenticeship).



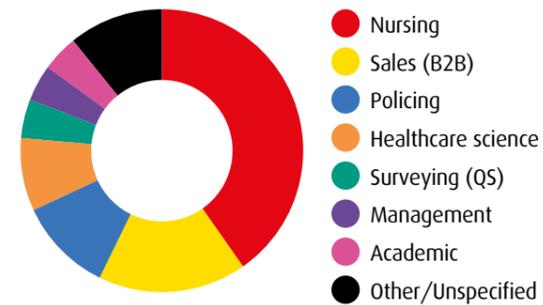
As indicated below, the survey covered a wider range of apprenticeship areas than the interviews. Respondents were principally apprentices, employers and universities.

Apprenticeships covered

Provider and employer respondents (n=60) indicated the following apprenticeship sectors as being most important; these include multiple answers.



Apprentices (n=46) were enrolled on the following areas:



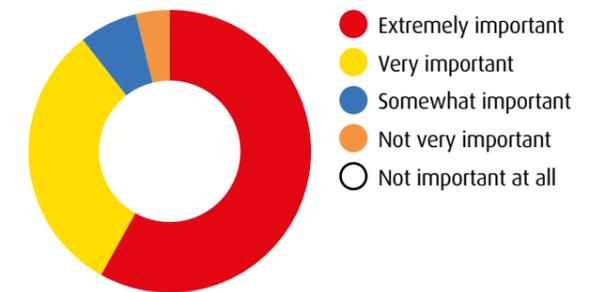
Most nursing apprentices who identified their specific programme were Nursing Associate higher apprentices, rather than Registered Nurse Degree Apprentices. 'Others' were one respondent each from teaching, optical, and environmental health, plus two unspecified apprenticeships.

The importance of Degree Apprenticeships

Summary

- Degree Apprenticeships are 'extremely important' or 'very important' for nearly 90% of respondents.
- For apprentices, the main factors are career impact and providing an educational route, often with career implications such as qualifying in a profession.
- Employers see Degree Apprenticeships as providing progression-routes for the existing workforce, aiding recruitment, establishing or maintaining alternative entry-routes, and providing a means of learning and upskilling while working.
- Providers emphasise the linkage of Degree Apprenticeships with their mission, the business opportunities that they provide, their role in creating alternative entry-routes and widening access, and their fit with industry needs.

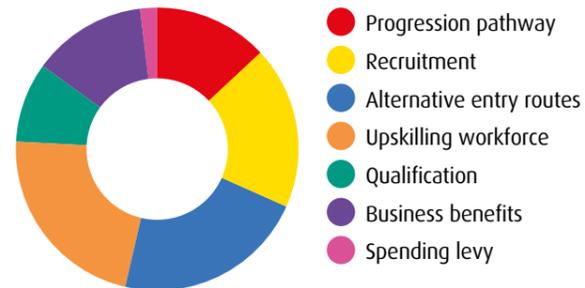
Degree Apprenticeships were 'extremely important' or 'very important' for 89.6% of respondents (n = 134).



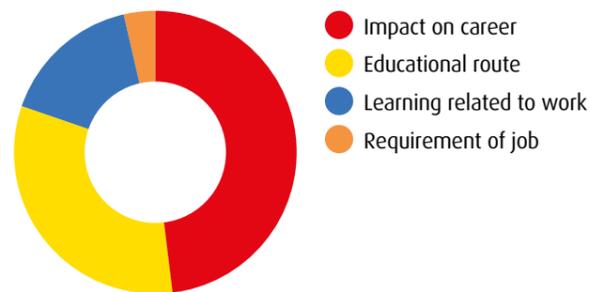
For apprentices (n = 21) the most important factor related to impact on career, either for getting a job or progressing in the field (57.1%). Apprentices also noted the value of the apprenticeship as an educational route (38.1%), in most cases



of dominant full-time higher education) (23.1%), and as a means of learning, upskilling and talent development while working (23.1%); 9.6% specifically mentioned the value of the qualification. Specifically, business-oriented benefits – improving performance or competitiveness, quality, or contributing to growth – were mentioned by 7 (13.5%), while only one (1.9%) referred to spending the levy.

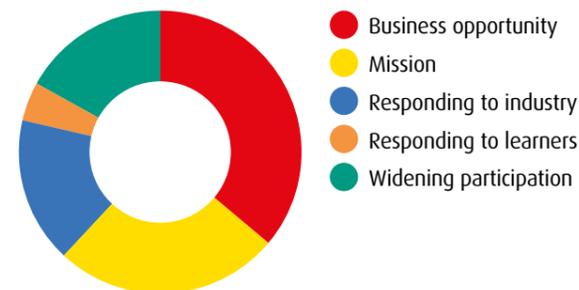


also with career implications such as becoming a registered nurse; and as a means of learning related to work (19%). One indicated that it was a requirement of the job role (4%).



Employers (n = 52) gave a range of reasons for the importance of Degree Apprenticeships. The most common was as a pathway for existing staff to progress (30.8%), particularly where these would not have otherwise been able to access degrees or professional qualifications. Use for recruitment was also important (19.2%), with some commenting that Degree Apprenticeships were becoming a major source for new recruits, filling hard-to-fill vacancies, and refreshing an ageing workforce. Two further major factors were the use of Degree Apprenticeships for widening access and creating alternative entry-routes (or maintaining them in the face

For providers (n = 54) the dominant reasons were either the business opportunity provided by Degree Apprenticeships (44.4%) or factors relating to the institution's mission (31.5%); together, these accounted for 70.4% of respondents. Responding to demand from industry (20.4%) and potential learners (5.6%) were also mentioned. Some respondents emphasised the values of the institution in relation to widening access, or the ability of Degree Apprenticeships to create alternative entry routes and provide access to higher education and qualifications while working (20.4%). Finally, four respondents (7.4%) gave reasons for rating Degree Apprenticeships as not very important, principally relating to them not featuring highly on the university's mission or a lack of confidence in their long-term sustainability.

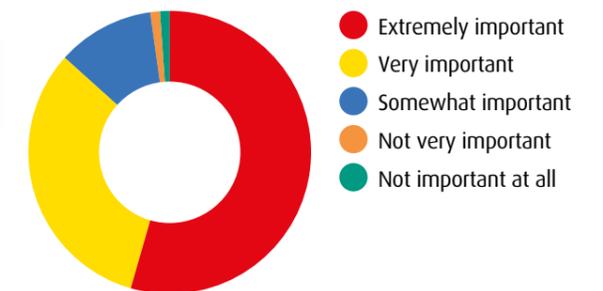


Social mobility - widening access to professional careers for under-represented groups

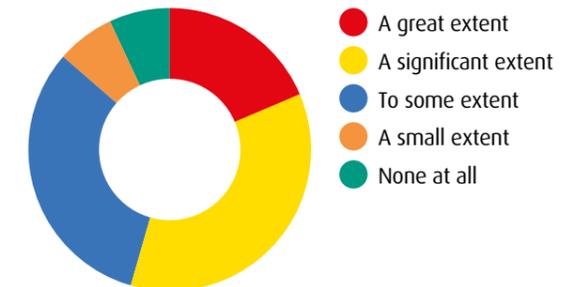
The importance respondents attach to social mobility as an aim of Degree Apprenticeships (n = 90, very/extremely important 86.7%).

Summary

- Over 85% of respondents see social mobility as an extremely or very important aim of Degree Apprenticeships, but only 55% think they have contributed greatly or significantly to social mobility.
- Examples of social mobility facilitated by Degree Apprenticeships centre on providing opportunities for people who would not otherwise have entered higher education and enabling progression from relatively lowly-qualified roles to professional and management positions.
- Factors enabling Degree Apprenticeships to contribute to social mobility include effective promotion and outreach; accessible entry-routes; programme design that caters for 'non-standard' entrants; effective learner support; and the ability to earn while learning and avoid running up debt.
- Major barriers include a lack of awareness and misconceptions about Degree Apprenticeships among potential apprentices, parents, schools and colleges; lack of availability of suitable programmes; inflexible entry requirements; and concerns about salaries, debt or the ability to succeed in higher education.
- Factors needing attention include improved promotion to raise awareness and perceptions of Degree Apprenticeships; better availability of programmes; more flexible entry-requirements; better learner support, for instance for functional skills; clearer progression routes between apprenticeships at different levels; and ensuring apprentices are paid a fair wage.

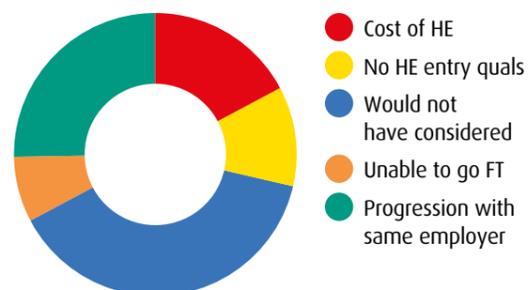


The extent to which Degree Apprenticeships have contributed to social mobility (n = 90, great/significant extent 54.5%, not at all 6.7%)



Throughout, there was some – limited – confusion about what was meant by 'social mobility', and while most interpreted it as widening participation particularly among underrepresented and disadvantaged groups (from both new entrants and the existing workforce), there were also interpretations relating to the quality of outcome for the apprentice and the opportunity to move in different social circles.

Examples (Q9)



Respondents were asked to give examples where Degree Apprenticeships had contributed to social mobility. 46 (51% of those responding to this section) did so, and one provided a counter-example.

Two major, linked themes were present. One is where apprentices had started higher education programmes where it was judged that they would not have done otherwise. This applied to 67.4% of the examples. These included people who saw the cost of higher education as a barrier (19.6%); those from backgrounds without a history of higher education, or who would otherwise not have considered going to university (43.5%); young and mature people without 'university entry' qualifications, typically entering at level 2 (13%); and mature entrants who were not in a position to re-enter full-time education (8.7%). One counter-example was provided where an otherwise promising candidate had been refused a place on an apprenticeship due to not having A-levels, with no other assessment being made of potential to succeed.

The second major theme (28.3%) was enabling progression with the same employer, typically from a relatively lowly-qualified position to one at professional or management level (most commonly, healthcare assistant to registered nurse, though examples were also given in management and digital industries). Two examples included progression through apprenticeships at different levels, starting at level 2.

Further themes included increasing the diversity of the workforce (e.g. one respondent noted that apprentices were more ethnically diverse, and included a higher proportion of women, than the current workforce), targeting disadvantaged young people for recruitment, enabling people with overseas qualifications not recognised in the UK to enter and progress in the workforce, increasing recruitment from the local area, and providing good networking opportunities for apprentices.



Contributing factors (Q10)

75 respondents provided usable answers. Respondents could state up to three factors each; 198 were given. Factors can be grouped into those relating to promotion and focus of attention, access and entry, the programme itself, and employment and career factors.

Promotion-related factors (raised by 65.3% of respondents) included where to focus attention, and how to promote apprenticeships effectively in those communities. There was no consensus on where to focus other than on disadvantaged groups and those underrepresented in higher education, with some indication that there may be differences by occupational area, for instance women for STEM subjects and mature applicants from the existing workforce for nursing. While some respondents mentioned young people specifically, there was also mention of older learners (6.7%) including those who had taken level 2 or 3 apprenticeships, or who had left full-time education without going beyond these levels. Access for local people and promotion among local communities was also mentioned by several respondents (9.3%).

Promotion (mentioned by 20%) was seen as requiring active efforts and outreach with schools, careers advisers, parents, local communities and employers, including clear indications of the value of Degree Apprenticeships and the opportunities they provide. This links to the perceived status of the apprenticeship; the degree itself, links to professional qualifications, and the apprenticeship's overall standing were seen as relevant factors (17.3%).

Factors relating to accessibility of entry were mentioned by 36% of respondents. These included flexible entry requirements, recognition of previous learning, and recognition of experience, including providing access routes for applicants without traditional education or level 3 qualifications. Greater transparency of recruitment by employers and more attention to equal opportunities and inclusivity were also mentioned. Four respondents (5.3%) included pre-entry preparation, either by the provider or by schools or colleges to develop essential skills required to start on the apprenticeship.

Programme-related factors were mentioned by 86.7%. These can be divided into three main areas: costs, the design of the programme, and learner support. Cost factors, raised by 24%, principally emphasised the importance of a loan-free route through higher education. Programme design (40%) was seen as important in catering for 'non-standard' students, for instance by providing progression pathways from lower- to higher-level apprenticeships, flexibility of study options, and strong links between workplace and academic learning. The presence of appropriate support also featured strongly (22.7%), including support for English, mathematics and relevant academic skills (rather than making these entry-criteria), employability skills, and more general progress tracking and links with the workplace.

Factors related to employment were mentioned by 58.7%. The main themes were the ability to earn while learning, including to earn a fair wage; and progression opportunities both within the apprenticeship and afterwards. Two respondents mentioned the attraction of working for a large employer.

Barriers (Q11)

83 respondents provided usable answers. Each could state up to three factors; 190 were given.

Lack of knowledge and awareness, along with negative perceptions of Degree Apprenticeships or apprenticeships generally, were the most widely cited barriers (53%). This included lack of knowledge by schools and colleges, limited careers advice, lack of knowledge or misperceptions among

parents, and lack of awareness, negative perceptions and uncertainty among potential applicants. Problems included negative perceptions of 'apprenticeship' in general, uncertainty that Degree Apprenticeships lead to 'real' degrees or are comparable with full-time higher education, uncertainty about funding, and ambiguity undermining the confidence of potential applicants. The undermining of Degree Apprenticeships by the mandatory qualifications policy was also noted as adding to potential apprentices' uncertainty.

Other factors likely to put learners off Degree Apprenticeships were mentioned by 12% of respondents, including self-doubt and fear of higher education, the difficulty of fitting in time for work, study and social or family life, and concerns about moving into an apprentice role from a full-time job. Financial matters were also widely mentioned (34.9%), in particular concerns about the salary being insufficient or a (possibly misplaced) concern about debt. Some cost factors were more related to employers, for instance a lack of funding for SMEs or having to pay for cover for 'backfill' staff when nursing apprentices were away from the job.



A lack of availability of suitable Degree Apprenticeships was also fairly widely reported (19.3%), both in terms of what was offered by providers and the actual places available with employers. Opportunities were seen by some as restricted further by competitive access to Degree Apprenticeships, favouring middle-class applicants who would probably have applied to full-time degrees anyway. Geographic issues were also reported, such as opportunities not being available in poorer areas.

Matters relating to entry-requirements were noted by 22.9% of respondents. These included requirements which mirrored those for full-time degrees, were too rigid, and had only limited flexibility for 'non-standard' applicants. One respondent noted the lack of properly structured pathways through the different level of apprenticeships. Concerns about traditional or poor-quality approaches extended to the programmes themselves (22.9%), with factors including lack of workplace integration or good-quality support. Although these may be more criticisms of some Degree Apprenticeships as a whole, one respondent commented that they are likely to lead to increased drop-out.

Finally, some respondents (18.1%) noted issues relating to employers and the workplace, including administrative burdens, the level of workplace demands, and not being particularly well engaged with the apprenticeship.



Changes and improvements (Q12)



83 respondents provided usable answers, including three stating that no improvements are necessary. Respondents were limited to one answer, though a few provided multiple suggestions.

The most widely-mentioned factor was improved promotion (30.1%), essentially to raise awareness of Degree Apprenticeships as a high-quality programme. None of the respondents mentioned targeting specific groups, but more effort was seen as needed both locally and nationally to improve awareness and perceptions of Degree Apprenticeships. Wider availability of Degree Apprenticeships and increased choice was also mentioned (13.3%).

Improved accessibility, in the form of more flexible entry-requirements, was raised by several respondents (12%). One theme here was to open up Degree Apprenticeships to all who could benefit, via a foundation programme or other additional support where necessary. A few respondents (4.8%) also mentioned specific factors relating to recruitment, including employers targeting underrepresented groups, some form of means testing, and checks to avoid misuse by employers.

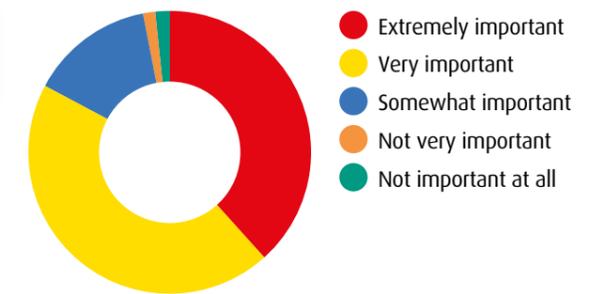
Design factors were also seen as aiding accessibility (19.3%), including a more vocational or work-oriented focus, more support for functional skills, and perhaps most significantly clearer routes through apprenticeships to allow progression from for instance level 2 to 7. Finally, financial matters were also raised (14.5%), partly relating to improved funding or paying for 'backfill', but also in relation to ensuring that apprentices were paid a fair wage, i.e. above the minimum requirement.

Productivity - enhancing service / product efficiency and quality

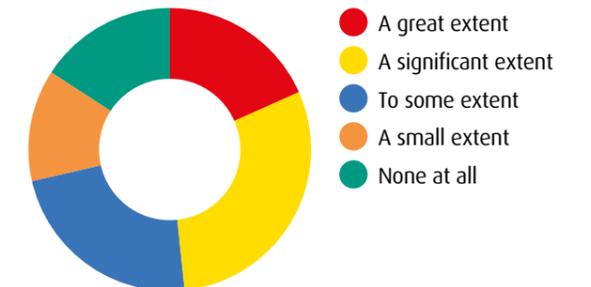
Summary

- Over 80% of respondents see productivity as an extremely or very important aim of Degree Apprenticeships, but less than 50% think they have contributed greatly or significantly to productivity.
- Examples given under 'productivity' include business or service benefits such as performance improvement, improved quality, innovation, and direct gains from apprentices' projects. Many respondents also mentioned bringing in new knowledge, skills development, and personal development and progression.
- Factors enabling Degree Apprenticeships to contribute to productivity include workplaces that support learning and link it to strategic goals; good-quality, relevant, work-integrated programmes; effective partnership working at a practical level; effective evaluation strategies; and well-designed apprenticeship standards.
- Barriers include workplaces where there is insufficient support, excessive pressure of work, or an environment not conducive to learning; poor integration between on- and off-the-job training; poor quality partnerships; and a lack of availability of relevant programmes or apprenticeship standards.
- Factors needing attention include better engagement, organisation and support in some workplaces; improved partnership working; and more practical, flexible programmes to improve industry relevance.

The importance respondents attach to productivity as an aim of Degree Apprenticeships (n = 70, very/extremely important 82.9%).



The extent to which Degree Apprenticeships have contributed to productivity (n = 70, great/significant extent 48.6%, not at all 15.7%).



The term 'productivity' may not have been fully understood by all or sufficiently broad to capture all the business or service benefits of degree apprenticeships, and only a minority of responses referred to impacts on the business or service. Overall, this section was used by some respondents to comment on general factors relating to the quality of Degree Apprenticeships.

Examples

70 respondents answered, but many simply stated that they were unable to provide an answer; 40 provided examples.

A third of examples (32.5%) referred to things that had made a direct difference in the workplace. These included straightforward performance improvements, such as faster working and making savings; quality improvement, for instance

providing better care services; innovation, typically bringing in new ideas that had an impact on the business or service; and direct gains from apprentices' projects, for instance leading to new business development or process improvement.

Slightly more examples (37.5%) focused on factors relating to learning and development, without direct reference to business or service improvements. These included bringing in new knowledge; increased confidence at work; taking on greater responsibility or progressing to new roles; and, most widely, the development of relevant skills, enabling greater contribution or the ability to free qualified workers to do other tasks. A few other benefits were mentioned, including the contribution of Degree Apprenticeships to recruitment, and benefits to providers from running Degree Apprenticeships.

Contributing factors for increasing productivity (Q16)

60 participants provided usable answers. Each could state up to three factors; 155 were given. As previously noted, this section was used to comment on factors relating to the quality of Degree Apprenticeships in general as well as those specific to productivity and workplace performance.

Most respondents made comments relating to the workplace, concerning the employer or work organisation and its resourcing (53.3%) or workplace learning (41.7%). Employer and organisational factors divided into those concerned with providing an environment conducive to learning and to making use of the learning, and those concerned with having the time and resources to support apprentices effectively. Organisational factors ranged from the administrative such as having clear job descriptions and agreeing apprentice salaries, through operational factors such as managing workload effectively, to more strategic ones such as commitment to professionalising the workforce, improving business performance and sustainability, and connecting the apprenticeship to the employer's strategic targets. The workplace learning comments recognised the need for effective learning to take place at work, principally around skills development, workplace training and to a lesser extent support and mentoring.

Provider-oriented themes also featured strongly. The contribution of the degree programme, including academic knowledge and digital technology, featured in some comments (13.3%) while others focused on the need for the programme to be relevant to the workplace (6.7%). The largest number of comments (from 33.3% of respondents) related to various aspects of the programme including the quality of teaching, design of the programme, flexibility of delivery and availability of relevant support.



Links between workplace and provider provided a strong theme, dividing into integration between workplace and off-the-job learning (23.3%) and engagement between employer and provider (18.3%). Integration of theory and practice featured here, but there were also several comments about the value of integrating assessments or including work-based assessment. Partnership working, including shared responsibility for programme design, and providers having involvement in employers' business, also featured here.

Other factors mentioned included effective evaluation strategies, both at a programme level and by giving apprentices tools to evaluate their practice; consistent policies, including a focus on apprenticeships designed to address skills gaps; and well-designed apprenticeship standards.

Programme-related factors were mentioned by 45.2% of respondents, with the largest perceived issue being poor integration with or relevance to the workplace. Some employers also criticised the need for 20% of apprentices' time to be off-the-job, along with insufficient support or sometimes commitment from university staff. Poor engagement and collaboration with the opposite party was also commented on by some providers and employers (11.4%).

Further issues that were commented on include a lack of availability of relevant apprenticeships (16.1%); apprentices' lack of skills, confidence or time management (14.5%); policy factors (9.7%), including funding complexities, policy uncertainties, and undermining of Degree Apprenticeships by IfATE interpretation of policy; and various factors relating to the apprenticeship standards (9.7%), including insufficient linkage to commercial priorities, lack of appropriate standards, and slow updating. A lack of evaluation of Degree Apprenticeships and their impact, principally from providers, was also mentioned (6.5%), while funding issues – either funding deemed insufficient to provide quality programmes, or the threat of decreased funding – being mentioned by 11.9%.

Changes and improvements (Q18)

57 respondents provided usable answers, limited to one each.

A wide range of factors were suggested, with programme-related and organisational matters dominating. Organisational and workplace learning factors (19.3%) focused on better employer understanding and commitment, more workplace support and training, and better practice-based learning opportunities. Improved engagement and partnership were also mentioned (7%), with for instance "close partnerships and philosophical understanding of the learning... between the partners". Programme-related factors (24.6%) included enabling programmes to be more flexible and meet the needs of individual learners, a greater practical focus, recognising the high off-job learning time required in nursing, and requiring work-based projects that are evaluated for their contribution to the employer.

Other factors covered included increasing the availability of relevant programmes and improving their accessibility (8.8%); ensuring standards are fit for purpose and relevant to employers, apprentices and to regional economies; and better promotion of Degree Apprenticeships.

Barriers (Q17)

62 respondents provided usable answers. Each could state up to three factors; 148 were given.

Again, the largest number of factors related to the workplace, with 53.2% of respondents commenting on factors relating to the employer, 24.2% to resources (related mainly to the employing organisation), and 6.5% specifically to workplace learning. Organisational factors principally concerned the employer not providing the best-quality opportunities or support for various reasons, including pressures of work, giving apprentices full-time workloads, not providing adequate mentoring or management, or not being fully committed to the programme. Insufficient time and resources were mentioned by several employers.

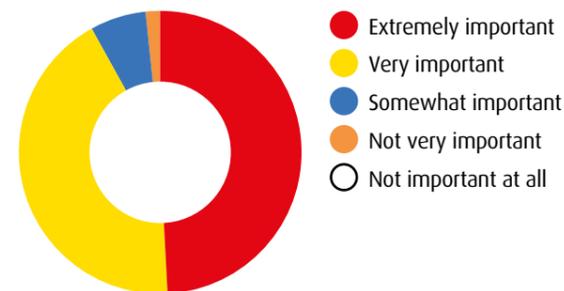
Sustainability -

providing degree apprenticeships in a way that delivers lasting benefits

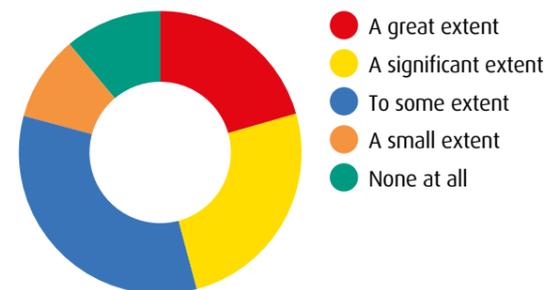
Summary

- Over 90% of respondents see having sustainable benefits as an extremely or very important aim of Degree Apprenticeships, but only 46% think that these benefits have been realised to a great or significant extent.
- Examples of sustainable benefits include, for employers, business benefits such as process improvement and bringing in new ideas; workforce renewal and succession; and increased skills and capacity. For apprentices, benefits include taking on responsibility and contributing to careers, while for providers they include expanding employer engagement, improving internal systems and increasing diversity.
- Factors supporting sustainable benefits include focusing on areas such as skill shortage occupations and social mobility; ensuring programmes align with workplace needs; effective collaboration; employers linking apprenticeships to business priorities; and adequate resourcing.
- Barriers include poor management of programmes by providers; lack of focus, support and operational management among employers; operational and resource pressures; and policy and funding instability.
- Factors needing attention include improved collaboration between providers and employers, both operationally and to address skills shortages; improved programme design, delivery and flexibility; and more stability and flexibility from policy organisations.

The importance respondents attach to sustainable benefits as an aim of Degree Apprenticeships (n = 63, very/extremely important 92.1%)



The extent to which Degree Apprenticeships have contributed to sustainable benefits (n = 63, great/significant extent 46%, not at all 11.1%)



As with the earlier sections, some respondents used this section to comment on general issues relating to Degree Apprenticeships, and at least one interpreted it as referring to environmental sustainability.

Examples (Q21)

32 respondents provided examples or instances of where they considered that Degree Apprenticeships had produced sustainable benefits. The majority of these (62.5%) related to benefits to the business, split roughly equally between direct benefits such as process and product improvements, bringing in new ideas, improved patient care, and having an impact on value and income; workforce renewal and succession, or 'creating a talent pipeline'; and increased skills and capability, sometimes taking the pressure off other members of staff. The

extent to which these benefits were genuinely sustainable or long-term was not widely explored, although some comments illustrated this well for instance by bringing in ideas that embedded new ways of working, attracting additional streams of talented applicants once apprentices became visible in the company, or injecting new blood into the industry "even if the apprentice does not stay with the company".

For apprentices, examples related to acquiring skills that enabled the apprentice to take on more responsibility (6.3%), and career and job prospects (9.4%). For the provider (18.8%), sustainable benefits included improving systems and processes, learning to work with work-based learners, and engaging with employers, including a 'massive increase in employer relationships' that was spilling over into non-apprenticeship activity. Ongoing benefits were also being realised in the area of widening participation and increasing diversity (9.4%), including opening up pathways to existing staff and encouraging employers to embrace diversity.



Contributing factors for increasing sustainability (Q22)

51 respondents provided usable answers. Each could state up to three factors; 109 were given.

Responses can be divided into four main themes: those relating to the programme and provision (almost all respondents and nearly half of all comments), those relating to the employer and workplace (45.1% of respondents), funding and resources (25.5%), and stability of funding and policy (21.6%).

Programme factors ranged from the strategic to the operational. Matters relating to the focus and relevance of the programme (41.2%) included the need to focus on areas where apprenticeships could make a difference (skill shortage occupations and social mobility), apprenticeship standards being relevant to employment needs, and individual programme content, design and delivery being relevant to the workplace. This latter incorporated a range of points including having realistic long-term goals, providing recognition of workplace learning, alignment with job roles, skills needs and employers' strategic objectives, and integration between academic and workplace learning. Effective collaboration between provider and employer and co-design of programmes was also seen as necessary (17.6%), as was high-quality provision (9.8%) and good apprentice support, guidance and review (15.7%).

Employer-based factors again ranged from the more strategic to operational matters. These included having an overall commitment to apprenticeships at a strategic level (7.8%); integrating them with wider workforce planning and business objectives (9.8%); using them to create progression routes for staff within the organisation (7.8%); focusing on the skills and capabilities needing to be developed (5.9%); ongoing commitment post-apprenticeship (7.8%), such as mentoring and providing progression opportunities (7.8%); and providing adequate off-job study opportunities (5.9%).

Resourcing was mentioned by 13.7% of respondents, and sufficient funding by 11.8%. The resourcing points were principally about having enough staff, resources and relevant leadership, while mentions of funding appeared both positive (the attraction of being paid while learning, the funding stream encouraging employers to get involved) and as a constraint. Finally, comments about policy and funding stability were mostly requests for improved stability (see under barriers below), with one exception where apprenticeship funding had increased the flow of students into an area that was previously under threat.

Barriers (Q23)

49 respondents provided usable answers. Each could state up to three factors; 104 were given.

As with positive factors, responses divided into four areas: programme and provision (59.2% of respondents), the employer and workplace (49%), funding and resources (32.7%), and (in)stability of funding and policy (18.4%).

Provider factors (36.7%) included problems where Degree Apprenticeships were not given sufficient priority (e.g. a research focus and 'academic snobbery'), competing priorities, not providing sufficient support for employers or apprentices, not exercising oversight of the on-the-job element of the apprenticeship, and not evaluating the impact of Degree Apprenticeships. Poor mutual engagement and collaboration between employers and providers was also noted as a barrier (14.3%). Further factors included a lack of relevant, accessible provision, and barriers caused by inappropriate quality regimes and end-point assessments.

Employer factors broadly break down into four areas. Limited uptake (6.1%) can involve employers simply being unsupportive, but challenges for engaging with Degree Apprenticeships are also noted, particularly for smaller employers. Secondly, a lack of strategic planning and investment is commented on (14.3%), including a lack of investment in training, poor leadership and management support, and tactical use of levy funds. Operational barriers (20.4%) are most widely cited, including operational pressures impacting on training, poor management of apprentices, lack of recognition and workplaces that are not conducive to learning. Finally, issues with retention and continuity are noted (8.2%), including lack of support for apprentices after their programmes have finished.

Insufficient funding was mentioned by 8.2% of respondents with no further explanation. Time and resource issues (24.5%) included simple operational pressures; the cost of 'backfill', i.e. replacing apprentices who are on their off-the-job component; and not having enough mentors. Issues of policy and funding stability basically related to uncertainty about future funding bands, changes to funding and administrative rules, and what was perceived as Degree Apprenticeships being undermined by policy rhetoric and a lack of understanding within IfATE.

Changes and improvements (Q24)

43 respondents provided usable answers, limited to one each.

The single most widely-mentioned factor (18.6%) was improved collaboration between providers, employers and where relevant professional bodies, both in relation to programme design and delivery and to address more strategic matters such as skills shortages. This was followed by programme factors (18.6%), including improved design and flexibility, better integration between academic and on-job components, a focus on professional benefits, more clarity about assessment requirements, and good quality staff both in the provider institution and in the workplace. Policy matters also featured strongly (14%), with calls for ongoing stability, clarity about future funding, and increased flexibility. Better evaluation of Degree Apprenticeships (9.3%) and processes to aid consistency (4.7%) were also mentioned. Other comments included wider availability of Degree Apprenticeships, better promotion, and less bureaucracy.

**Opportunities, challenges and best practice**

otherwise be able to access higher education. Opportunities to learn were also mentioned (20%), along with specifically funded learning (6%) and the value of the qualification (6%).

For employers, the most widely-quoted benefits related to the development of skills and capability (50%), raising skill levels and aiding workforce development in the organisation and locally or regionally, meeting specific shortages or addressing particular issues, and increasing flexibility. Opportunities for creating progression routes and workforce planning were widely mentioned (22%), in particular creating pathways from level 2 or 3 apprenticeships and in the health sector from healthcare assistant to qualified nurse. Other opportunities and benefits included professionalising the sector (6%, from sales and the police), supporting local economies (6%), and creating opportunities for the business through improving productivity, differentiating from competitors or getting support from academic institutions (6%).

For providers, the most widely cited opportunity was to engage and develop partnerships with employers (16%), with some implying that these relationships would extend beyond apprenticeship provision, e.g. 'developing university-business collaboration' or 'creating lasting partnerships'. Other provider opportunities related to improving teaching and related practices (8%) and new streams of recruits and income (6%).

Challenges for Degree Apprenticeships

48 respondents provided usable answers. Each could state up to three factors; 108 were given. Factors related to resources; awareness and knowledge; employers; programmes and providers; and external factors.

Resource and cost factors were raised widely. Costs and funding were only raised by 12.5% of respondents, but other resourcing issues were more widely reported. General resourcing issues (20.8%) included pressures of work, tight timelines, and difficulty of releasing staff for the off-the-job component. Lack of time, or difficulties managing time between work and study, were mentioned by 16.7%, and administrative work by 6.3%, including meeting ESFA rules. A specific issue for some (18.8%) was resourcing 'backfill', i.e. cover for apprentices while they were away from the workplace.

Lack of awareness and understanding of Degree Apprenticeships was a relatively minor theme (12.5%), but it included a lack of awareness among potential applicants and their parents, among employers, and a need for better information, advice and guidance.

Summary

- The main opportunities that Degree Apprenticeships provide for individuals relate to employability and careers, accessing higher education, and progressing within the same organisation.
- For employers, major opportunities include the development of skills and capability within the organisation, aiding workforce development and planning, and creating progression pathways.
- For providers, Degree Apprenticeships provide a major opportunity to develop partnerships with employers.
- Challenges include resource and time constraints, including cover for apprentices who are away from the workplace; workplaces that are not as conducive to learning as they could be; availability of suitable programmes; lack of knowledge about Degree Apprenticeships; a need for providers to be more agile; and the instability of the funding and policy environment.
- Examples of best practice include effective collaboration and partnership between employers and providers; effective management of workplace learning by both provider and employer; and enabling apprentices to put their skills to use and take on responsibility.

Opportunities provided by Degree Apprenticeships

50 respondents provided usable answers. Each could state up to three factors; 117 were given. These can be considered in relation to individuals, employers/occupations, and providers, although there are overlaps, for instance learning (seen as an individual benefit) may develop capability or flexibility valued in the workplace.

For individuals, the most commonly reported opportunities (42% of respondents) related to employability and careers, both for starting out in the occupation and progressing to new roles. Accessibility and widening participation also featured strongly (26%), particularly for people in the workforce who would not

Summary and discussion



Employer-related factors (37.5%) included workplace and cultural issues such as existing staff not accepting apprentices, and poor morale in the workplace; limited understanding of Degree Apprenticeships among employers; operational pressures, including when there are a large number of apprentices and other staff in training; the retention of apprentices in some environments; and operational and administrative factors that need improvement.

Programme factors included the availability of suitable providers and programmes overall, locally or regionally, or accessible to SMEs (16.7%); and the relevance of programmes or apprenticeship standards to workplace needs (8.3%). Provider-related factors (14.6%) included a need for providers to be more agile in developing and designing programmes, as well as specific issues such as difficulties in engaging relevant staff and providing library access.

Finally, over a quarter of respondents (27.1%) commented on external factors, mainly instabilities in the operating environment for apprenticeships. Over half of these comments referred to policy uncertainties, in particular unclear or ambivalent messages about Degree Apprenticeships and concerns about possible policy reversals. There were also concerns about uncertain or unstable regulatory and quality assurance arrangements, the application of the 'mandatory qualifications' policy to Degree Apprenticeships, and potential reductions in funding.

Best practice

This produced a mixture of responses with some simply naming their organisation or providing a link to a particular apprenticeship or scheme. 32 respondents provided descriptions, but these were mostly short, without providing specific examples. Three main themes emerged:

- Collaborative and partnership working, including employers working together for mutual benefit and ensuring that smaller organisations were able to access apprenticeship places; a university working closely with the Trailblazer group to develop an approach that responded to employer needs; and joint agreements across public, private and voluntary sector organisations.
- Effective management of workplace learning, including well-planned workplace projects oriented to business goals and well-supported by the employer; regular three-way meetings to review progress and identify further development goals; and planning apprenticeships so that they address skills needs in the organisation.
- Enabling apprentices to put their skills to use and take on responsibility, such as undertaking clinical work normally performed by qualified practitioners and leading a 5-week site visit to a major customer.

The following summary draws out key points from both the interviews and the survey and relates them to published findings from the literature review. The findings from both parts of the study showed strong agreement and they were also generally supported by previous studies.

Perceptions and benefits

The apprentices, employers, and universities in the study have an almost universally positive perception of Degree Apprenticeships, with relatively minor reservations relating to matters of detail or local implementation.

For apprentices, the main value comes from the degree or professional qualification, the ability to work, earn and learn at the same time, and the career opportunities provided whether connected to entering the labour market or progressing to a more senior or professional level. This is consistent with earlier findings (e.g. Engeli & Turner 2019). Within the apprenticeship, there is also mention of opportunities for learning in the workplace that went beyond the main job (e.g. projects and work on rotation), along with the scope to take on additional responsibility.

For employers, the principal benefits divide into recruitment into the organisation; creating internal progression pathways or 'talent pipelines'; and contributing to the organisation directly through things such as filling skills gaps, bringing in new ideas and innovation, and improving productivity or service quality. In sectors with professional qualifications or established entry-routes, Degree Apprenticeships are also seen as an important contributor to creating or maintaining alternative pathways to qualified level. This latter factor is increasingly important in areas such as nursing and engineering.

For universities, Degree Apprenticeships are often mentioned as fitting with the institution's mission, widening access to higher education and professional careers, and meeting industry needs. There are also direct benefits to the university beyond the additional recruitment, in particular through expanding engagement and partnerships with employers, a factor also reported by WECD (2019). Some of the other structural benefits reported in the literature, such as providing a strategic platform for further innovation (UVAC/SDN 2019) and challenging perceptions of the relationship between higher education and work (Bravenboer 2019), were less prominent in the study.

Social mobility

Social mobility, widening participation and increasing diversity are themes that are widely supported in relation to Degree Apprenticeships, although they may not be the most prominent reasons for involvement other than at the level of institutions' overall mission and values. The study suggests that while there are encouraging examples of social mobility, there is also room for improvement; however, at least the qualitative position appears slightly better than that reported elsewhere (e.g. NCUB 2018, UUK 2019).

The main aspects of social mobility discussed in the study are creating opportunities to enter higher education for people who would otherwise not have done so; enabling progression from relatively lowly-qualified jobs to professional and management roles; and diversifying the workforce. Examples are provided of successes in each of these areas, with perhaps the largest contribution being opening up professional careers to workers such as technicians and healthcare assistants who would otherwise have had limited opportunities to progress further. This aspect of social mobility is recognised by the UUK (2019) but otherwise does not feature strongly in the literature and could be given more emphasis as an objective of Degree Apprenticeships. However, in general the indications are that more work needs to be done to recruit new entrants from underrepresented groups and localities.

The study indicates that the principal factors contributing to social mobility aims are effective and carefully-targeted promotion and outreach, messages geared to people who would otherwise not consider higher education, and accessible entry requirements (for instance geared to further education students, less well qualified workers and progression from lower-level apprenticeships). Having recruited 'non-traditional' entrants, programme design and learner support then need to be geared to learners with diverse education and skills profiles (cf. Hughes & Saieva 2019). The ability to earn while learning and avoid running up debt is also a significant factor in attracting more diverse entrants, including those already in the workforce.

One of the largest barriers to widening access is lack of awareness and misconceptions about Degree Apprenticeships, indicating a need for better promotion and clearer messages; this is a point also made widely in the literature. Other barriers include limited attention to progression between different levels of apprenticeship, regional variation in the availability of programmes, in some instances, barriers created by conventional entry requirements, and concerns about low pay and potential debt.

Factors contributing to the success and sustainability of Degree Apprenticeships

A major factor contributing to successful Degree Apprenticeships is the presence of effective collaboration and partnerships between universities and employers, extending where relevant to effective relationships with professional bodies or regulators. This is noted as applying to strategic collaboration, for instance to design programmes to address skills shortages, meet economic needs and widen access, as well as working closely at a practical level to ensure alignment with workplace needs, integrate workplace and off-the-job learning and provide effective learner support. Particularly the more practical aspects of this have been discussed widely in the literature (e.g. Lester *et al* 2016, EPC 2018, Lillis 2018 and Minton & Lowe 2019).

For universities, the study indicates that one of the main factors contributing to the success and sustainability of Degree Apprenticeships is developing work-integrated, learner-centred programmes with effective learner support, up-to-date content and resources, and effective use of online learning. A further contributing factor can be integration of the assessment requirements for the degree, the apprenticeship, and where relevant professional recognition. There is recognition that both of these factors require programmes to be designed from the bottom up, rather than creating part-time versions of existing degrees. The presence of a central unit to co-ordinate and provide support for apprenticeships and similar programmes is reported as an important aid to this. These factors are fairly widely recognised in the literature (they are discussed for instance by Lester *et al* 2016, Bravenboer & Lester 2016, Mulkeen *et al* 2017, Rowe 2018, and Lillis 2018 among others as well as featuring in guidance from the QAA). However, the study indicates that they can still be a challenge to implement in the face of existing academic structures, assumptions about higher education, and restrictive perceptions of apprenticeships and vocational learning.

In the workplace, two factors predominate. The first is aligning apprenticeships with strategic objectives, business priorities and workforce planning, so that there is a strong rationale connecting the apprenticeship with productivity, business development or service provision. This is not particularly widely discussed in the literature, but as well as the economic or service benefits it also has an impact on apprentices' learning and development. The second factor is supporting apprentices' learning through things such as effective monitoring and support, managing pressures of work, exposing apprentices to varied learning opportunities and allowing them to put their skills to use and take on responsibility. Both of these factors reflect the idea of an 'expansive' learning environment (Fuller & Unwin 2008) and the need to focus on the workplace as a site for learning (UVAC/SDA 2017).

Areas for improvement

The study indicates that current practice is variable when compared with the success factors in the previous section, with several areas needing improvement. In particular, provider-employer collaboration is not always as effective as it could be, leading to a certain amount of misalignment between programmes and business needs, and to the on- and off-job aspects of the apprenticeship being poorly integrated at both a structural and a practical level. The challenges of doing this when the apprentices in a single cohort are split across many employers is noted. Universities may also need to provide better recognition, through appropriate systems and support, for apprentices without A-levels and similar qualifications or who have not been in a formal learning environment for some time.

Additional challenges for universities include staffing and resourcing in the face of uncertainty, balancing different stakeholders' administrative and monitoring demands, and (where they provide level 4 and 5 Higher Apprenticeships) working with two quality assurance regimes. This suggests partly a need to adapt to different systems and operating environments, and partly a need for external bodies to review their systems and requirements to ensure that they are proportional and appropriate.

In the workplace, apprenticeships are not always linked to the needs of the organisation or business, reducing potential benefits and sometimes also leading to restrictive working environments for apprentices. Day-to-day pressures may overshadow the learning aspect of the apprenticeship, leading to poor on-the-job learning, a lack of support for off-the-job learning, and conflict between 'worker' and 'learner' roles. The latter is a particular concern for people who move from an existing role to training for one at a higher level in the same organisation.

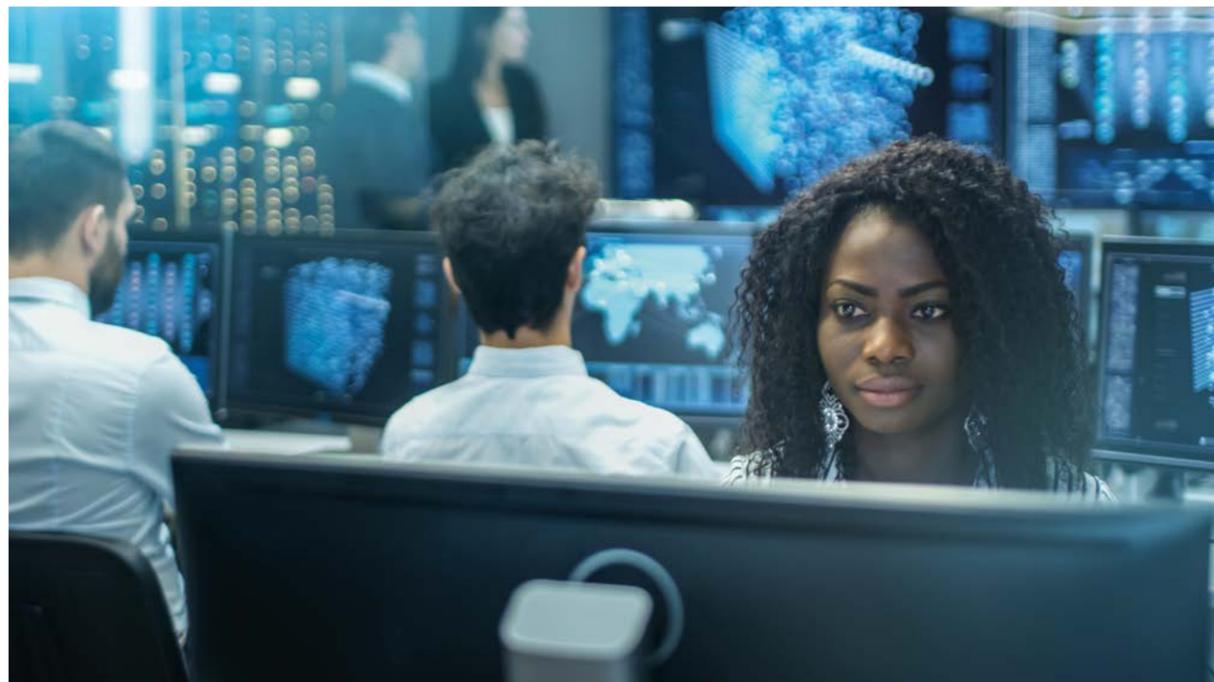
At a more general level, problems are noted with the variable regional availability of apprenticeships and access that non-levy-paying employers have to them (cf. Policy Connect/HEC 2019). Many participants in apprenticeships recognise the need for a more stable policy environment, with explicit support for Degree Apprenticeships and a commitment to sustainable funding levels. Reflecting concerns in the literature (e.g. WECD 2019 and UVAC/SDN 2019), it is felt that IfATE is applying qualification criteria that threaten the development of Degree Apprenticeships. This threat is particularly acute where incorporating the degree has a forward-looking aim to establish a professional role rather than responding to easily documented current demands.

Section 4

Recommendations

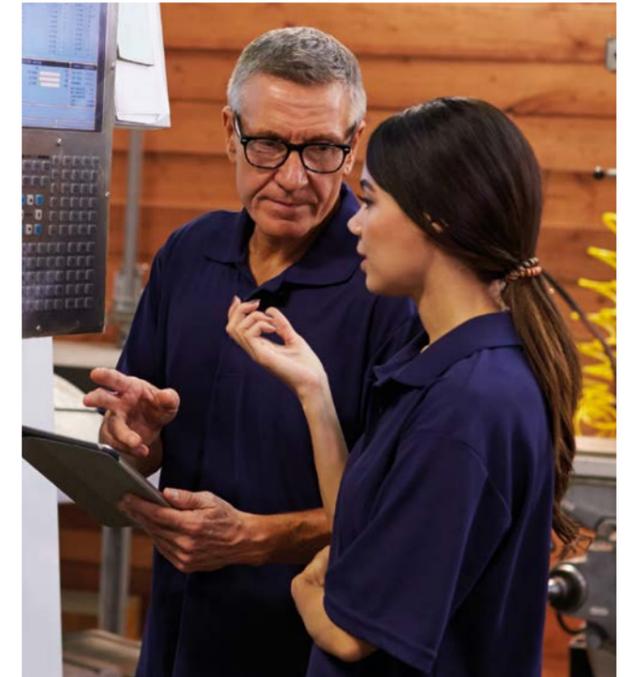
Recommendations

The recommendations listed below have emerged from the research undertaken and combined they are constituted as the required conditions for sustainable degree apprenticeship provision. There are of course many other aspects of providing degree apprenticeships that are not explicitly covered by these recommendations, but the list provided represents those that are key to achieving sustainability of the degree apprenticeship policy initiative. The recommendations are categorised into six areas for the purposes of clarity, but many of the aspects of degree apprenticeship provision covered are inter-related. Lastly, it should be recognised that the conditions for sustainable provision of degree apprenticeships will change over time as new issues emerge, practices develop, and new policy areas implemented. As a consequence, the recommendations provided are designed to inform but not constrain the ongoing discourse regarding the provision of degree apprenticeships within the higher education sector and beyond. The recommendations are as follows:



1. Promotion and outreach

- Promote Degree Apprenticeships as a distinctive, high-quality 'brand' (not an 'alternative' to higher education)
- Focus on areas where Degree Apprenticeships are likely to create the most impact: key skill shortage areas, eg public sector; industrial strategy priorities, eg leadership and management, and digital.
- Raise awareness of opportunities to achieve professional status for: under-represented groups; existing workforce; lower-level apprentices.



2. Resourcing and partnerships

- Providers should resource a central hub to support the consistent co-ordination of the development and delivery of Degree Apprenticeships
- Ensure that sufficient staff involved in delivering Degree Apprenticeships have current expertise in industrial/professional practice and work-integrated learning
- Develop effective and active provider-employer partnerships involving: overall programme design; integration of learning goals with business or service needs; and monitoring and supporting apprentices.



3. Programme design and delivery

- Specifically design programmes 'from the ground up' as degree apprenticeships, that integrate on and off-the-job learning and adopt a 'digital first' approach, to build in the flexibility that employers and apprentices need.
- Design specific and flexible support mechanisms for workplace learning and non-traditional entrants including support for functional and higher education study skills.
- Specifically design on-programme assessments that develop knowledge, skills and behaviours, are work-integrated and prepare apprentices for End-point Assessment and professional recognition requirements.



4. The workplace and organisational environment

- Work closely with employers to support a strategic approach to workforce development that recognises the value of learning, aligned with clear organisational goals and return on investment, from Degree Apprenticeships.
- Maximise workplace learning potential through strategies such as work-integrated projects, placements and role rotation.
- Ensure that all employer staff involved in supporting apprentices understand the learning requirements of the role, to effectively manage expectations including potentially conflicting work priorities and pressures.



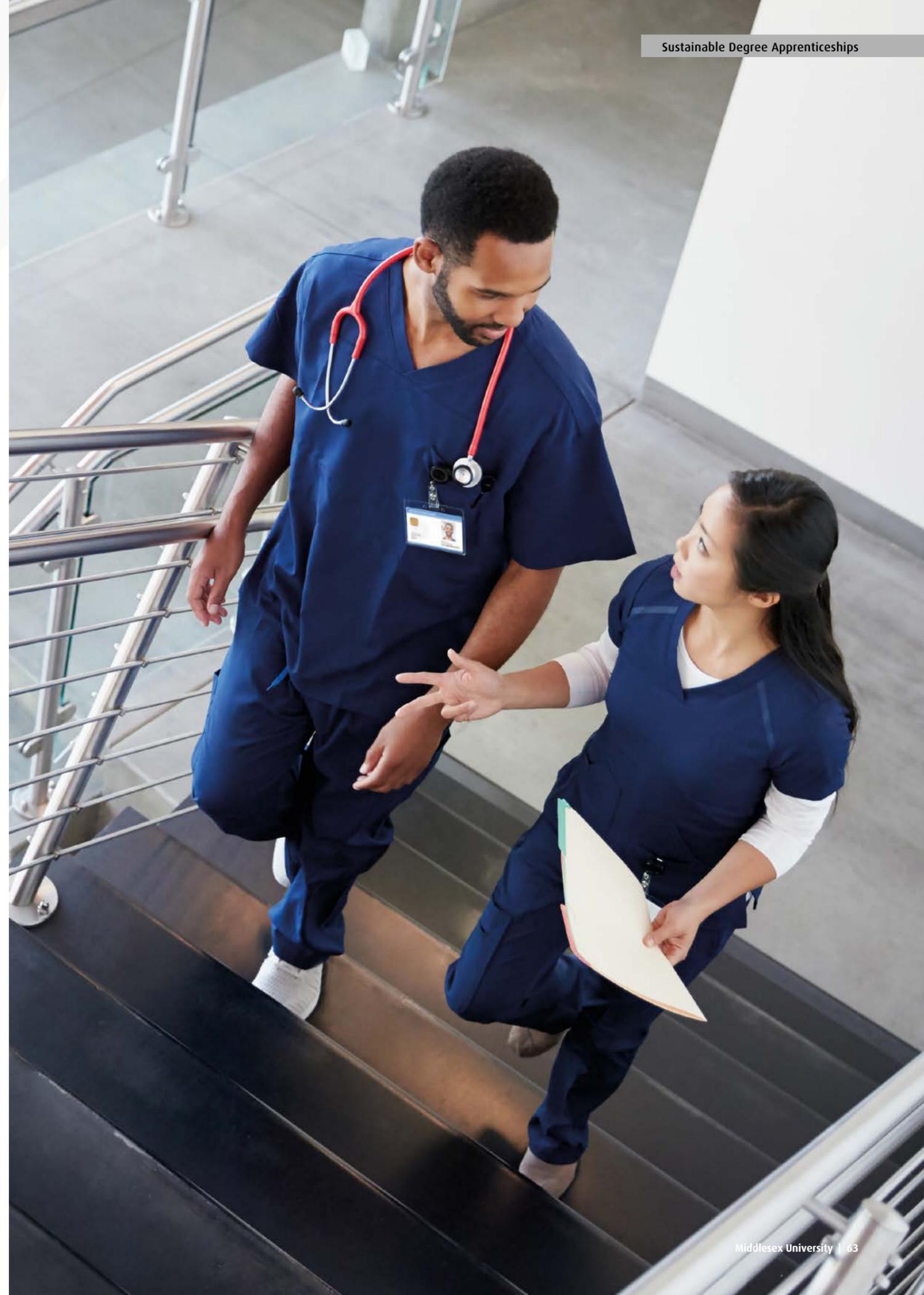
5. Apprenticeship policy

- Reconfirm the twin purposes of Degree Apprenticeships as: increasing productivity, clearly aligned with the industrial strategy; and enhancing social mobility recognised as access to professional status for under-represented groups, including people already in the workforce.
- Provide policy stability for Degree Apprenticeships to enable their purpose to be fully realised, and to celebrate their success and the value of the degree for employers and apprentices.
- Revise the mandatory qualification rule to allow Trailblazer Groups to specify the inclusion of a degree where there is evidence that it will increase productivity and/or enhance social mobility.
- Simplify the quality assurance responsibilities for apprenticeships so that OfS/QAA have responsibility for all level 4-8 apprenticeships provided by OfS registered organisations and Ofsted have responsibility for all other apprenticeships.



6. Access to Degree Apprenticeships

- Promote apprenticeship progression 'through routes' and build in 'step-on' and 'step-off' points through all levels, aligned with industry need and professional recognition, through high-quality provider and employer partnerships.
- Ensure that the Degree Apprenticeships that employers (including SMEs) need are available across all English regions.



Initials and acronyms

APPGA	All-Party Parliamentary Group on Apprenticeships	NCIHE	National Committee of Enquiry on Higher Education
BIS	Department for Business, Innovation and Skills	NCUB	National Council for Universities and Business
CMI	Chartered Management Institute	NHS	National Health Service
DA	Degree Apprenticeship	NMC	Nursing and Midwifery Council
DADF	Degree Apprenticeship Development Fund	NVQ	National Vocational Qualification
DfE	Department for Education	OfS	Office for Students
DIUS	Department for Industry, Universities and Skills	Ofqual	Office of Qualifications and Examinations Regulation
ELQ	Equivalent and lower qualifications	Ofsted	Office for Standards in Education
EPA	End-point assessment	PARN	Professional Associations Research Network
EPC	Engineering Professors' Council	QAA	Quality Assurance Agency for Higher Education
ESFA	Education and Skills Funding Agency	SASE	Specification of Apprenticeship Standards in England
FD	Foundation Degree	SDN	Strategic Development Network
HA	Higher Apprenticeship	SME	Small or medium enterprise
HCA	Healthcare Assistant	SMF	Social Market Foundation
HEC	Higher Education Commission	UUK	Universities UK
HEFCE	Higher Education Funding Council for England	UVAC	University Vocational Awards Council
HNC	Higher National Certificate	WECD	Warwick Economics and Development
HND	Higher National Diploma	YOP	Youth Opportunities Programme
HoCEC	House of Commons Education Committee	YT	Youth Training
IfATE	Institute for Apprenticeships and Technical Education	YTS	Youth Training Scheme
ITB	Industry Training Board		

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Appendix A – Semi-structured Interview Guide

UUK. (2016). Working in Partnership: Enabling Social Mobility in Higher Education. The final report of the Social Mobility Advisory Group, Universities UK

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Interviewer notes

Briefly outline the project and the purpose of the interview; and that participants have been selected as key stakeholders who can provide critical insights into the apprenticeships. Emphasis is on understanding the apprenticeships from their perspective, so keen to gather professional and personal perceptions and experiences of the apprenticeships they are involved with. Interviews are focussed particularly on: social mobility, productivity and sustainability. Ask for permission to record; with a reminder that all participants and responses are anonymised.

I: HEI Participants

1. Introduction

- Please introduce yourself and your job role within the HEI.
- Please describe your role and involvement in the provision of the apprenticeship.
- What objectives and goals do you think the apprenticeship will achieve for HEI, employers and apprentices?
- How does the apprenticeship operate within the HEI? Align with mission and values?
- What is your view of the apprenticeship learning experiences? On/Off job; HEI/work?
- How does the apprenticeship align with your expectations?

2. Social Mobility: widening access to professional careers for under-represented groups; inclusiveness, engagement and participation

- How do you think the apprenticeship can enhance social mobility? How well?
- What are the challenges and successes around enhancing social mobility? How are these managed?
- What have been the outcomes and impacts on social mobility?
- What changes and improvements would you make to better enhance social mobility?

3 Productivity: Enhancing service / product efficiency and quality

- How do you think the apprenticeship can enhance productivity? How well?
- What are the challenges and successes around enhancing productivity? How are these managed?
- What have been the outcomes and impacts on productivity?
- What changes and improvements would you make to better enhance productivity?

4. Sustainability: appropriateness of the HEI to deliver (with partners as appropriate) and the developments in the HEI to deliver a sustainable change

- How do you think the apprenticeship can be delivered sustainably? How well?
- What are the challenges and successes around sustainability? How are these managed?
- What have been the outcomes and impacts around sustainability?
- What changes and improvements would you make to better enhance sustainability?

5. Sector-Specific

Nursing sector questions

- How have you sought to help employers address the apprenticeship challenges including: the supernumerary status of apprentices; off the job learning; and backfill.
- What are the specific challenges regarding delivering the four-year Registered Nurse degree apprenticeship?
- To what extent do you think that an integrated Registered Nurse degree apprenticeship would address implementation challenges you may face?
- What challenges and successes has progression from the Nursing Associate to Registered Nurse degree apprenticeship brought?

Digital sector questions

- Have there been any specific challenges or successes relating to the delivery of apprenticeships in the digital sector
- Has the new funding band for Digital Technology Solutions Professional affected your ability to deliver?

- Will/has the review of the degree element Digital Technology Solutions Professional apprenticeship affected your engagement employers and/or recruitment?

6. Other Comments

- Do you have any other comments?
- Is there anything else you would like to add?
- Is there anything we have not discussed that you feel is important?

II: Apprentice Participants

1. Introduction

- Please introduce yourself and the degree apprenticeship (DA) you are undertaking.
- Please describe your educational and work experience prior to the DA and your current role.
- How did you find out about DAs and the DA you are undertaking?
- Why, when and how did you choose to undertake the DA?
- What were your expectations, objectives and goals concerning the DA? Does it match up?
- What are your experiences of the DA at university (HEI) and in the workplace (including on/off the job learning)?

2. Social Mobility: widening access to professional careers for under-represented groups; inclusiveness, engagement and participation

- What are the main challenges about the DA? How are these tackled?
- What works less well (inhibitors/barriers)? Why? What could be better?
- What are the main successes about the DA? How are these handled?
- What works well (facilitators / enablers)? Why?
- What is the value of the DA?

3. Productivity: Enhancing service / product efficiency and quality

- What are the main challenges about the DA? How are these tackled?
- What works less well (inhibitors/barriers)? Why? What could be better?
- What are the main successes about the DA? How are these handled?
- What works well (facilitators / enablers)? Why?
- What is the value of the DA?

4. Changes and Improvements

- Would you like to see any changes to the DA? If so, what would these be and why?
- What could be done differently and why? By you? By others?
- Do you have any suggestions for how to improve the DA?

5. Other Comments

- Do you have any other comments?
- Is there anything else you would like to add?
- Is there anything we have not discussed that you feel is important?

III: Employer Participants

1. Introduction

- Please introduce yourself and your job role within the organisation.
- Please describe your role and involvement in the provision of the apprenticeship.
- When, how and why did you get involved?
- What objectives and goals do you think the apprenticeship will achieve for the organisation, the HEI and apprentices?
- What is your view of the apprenticeship learning experiences? On/Off job; HEI/work?
- How does the apprenticeship align with expectations? Align with mission and values?

2. Social Mobility: widening access to professional careers for under-represented groups; inclusiveness, engagement and participation

- What is your approach to social mobility?
- How do you think the apprenticeship can enhance social mobility? How well?
- What are the challenges and successes around enhancing social mobility? How are these managed?
- What have been the outcomes and impacts on social mobility?
- What changes and improvements would you make to better enhance social mobility?

3. Productivity: Enhancing service / product efficiency and quality

- How do you think the apprenticeship can enhance productivity? How well?
- What are the challenges and successes around enhancing productivity? How are these managed?
- What have been the outcomes and impacts on productivity?
- What changes and improvements would you make to better enhance productivity?

4. Sustainability: attraction and retention of apprentices; capacity; coping with change and complexity (HEI focussed)

- How do you think the apprenticeship can be delivered sustainably? How well?
- What are the challenges and successes around sustainability? How are these managed?
- What have been the outcomes and impacts around sustainability?
- What changes and improvements would you make to better enhance sustainability?

5. Sector-Specific

Nursing Sector

- What factors have affected your decision to either: a) recruit to the two-year Nursing Associate apprenticeship with progression to the two-year version of the Registered Nurse degree apprenticeship; or b) to recruit directly to the four-year Registered Nurse degree apprenticeship?

- To what extent do you think that an integrated Registered Nurse degree apprenticeship would address implementation challenges you may face?

Digital Sector

- Will/has the review of the degree element Digital Technology Solutions Professional apprenticeship affected your decisions on whether to continue to recruit to the standard?
- What is most important to you, quality or price or both?

6. Other Comments

- Do you have any other comments?
- Is there anything else you would like to add?
- Is there anything we have not discussed that you feel is important?

Additional Questions and Prompts (to be used as required)

Challenges & Successes

- What are the main challenges about the apprenticeship? How tackled?
- What works less well (inhibitors/barriers)? Why? What could be better?
- What are the main successes about the apprenticeship? How handled?
- What works well (facilitators / enablers)? Why?
- What is the value of the apprenticeship?

Outcomes & Impacts

- What have been the outcomes and impacts of the apprenticeship?
- How has undertaking the apprenticeship impacted you? Your organisation (team; department; division)?
- Development: Personal? Academic? Professional?
- Thinking? Behaviour? Opportunities? Ambitions? Future plans / intentions?
- Expected and/or unexpected outcomes and impacts?

Changes & Improvements

- What changes to the apprenticeship would you suggest? Why?
- What could be done differently and why? By you? By others?
- Do you have any suggestions for how to improve the apprenticeship?

Appendix B – Questionnaire Survey



Introduction

Middlesex University, the University of Staffordshire, Sheffield Hallam University and the University Vocational Awards Council are conducting research that will help higher education providers and employers to be able to develop and deliver degree apprenticeships that enhance productivity and social mobility. We are looking closely at nursing, engineering and digital sectors but are also interested in your views about higher or degree apprenticeships in any other sector. The data gathered will not identify any respondents but be used to inform best practice to enable universities to provide high-quality degree apprenticeships for employers and apprentices. We estimate that the survey will take 10 minutes to complete.

What is your role and involvement in apprenticeships?

1. If you are an employer, do you:

- Manage apprentices
- Mentor apprentices
- Organise or support learning and development for apprentices

2. If you are a higher education provider, do you

- Lead or manage apprenticeship programmes
- Deliver, tutor or teach on apprenticeship programmes
- Support apprentices

3. If you are an apprentice, which apprenticeship are you completing, please specify?

4. Other role, please specify



How important are degree apprenticeships for you and/or your organisation?

* 5. Please select one of the following options

- Extremely important
- Very important
- Somewhat important
- Not very important
- Not important at all

* 6. Please briefly explain the reason for your selection

Social Mobility: meaning, widening access to professional careers for under-represented group

* 7. How important is it that degree apprenticeships are designed to enhance social mobility?

- Extremely important
- Very important
- Somewhat important
- Not very important
- Not important at all

* 8. To what extent do you think degree apprenticeships have contributed to enhancing social mobility for you and/or your organisation?

- A great extent
- A significant extent
- To some extent
- A small extent
- None at all



* 9. Can you briefly describe a specific example where degree apprenticeships have contributed to enhancing social mobility for you and/or your organisation?

[Text input area]

* 10. What are the most important factors for enhancing social mobility through degree apprenticeships?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

* 11. What are the most significant barriers to enhancing social mobility through degree apprenticeships?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

* 12. What changes and improvements would you make to degree apprenticeships to better enhance social mobility?

[Text input area]

Productivity: meaning, enhancing service / product efficiency and quality

* 13. How important is it that degree apprenticeships are designed to increase productivity?

- Extremely important
- Very important
- Somewhat important
- Not very important
- Not important at all



* 14. To what extent do you think degree apprenticeships have contributed to increased productivity for you and/or your organisation?

- A great extent
- A significant extent
- To some extent
- A small extent
- None at all

* 15. Can you briefly describe a specific example where degree apprenticeships have contributed to increased productivity for you and/or your organisation?

[Text input area]

* 16. What are the most important factors for increasing productivity through degree apprenticeships?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

* 17. What are the most significant barriers to increasing productivity through degree apprenticeships?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

* 18. What changes and improvements would you make to degree apprenticeships to better increase productivity?

[Text input area]



Sustainability: meaning, providing degree apprenticeships in a way that delivers lasting benefits

* 19. How important is it that degree apprenticeships are designed to deliver sustainable benefits?

- Extremely important
- Very important
- Somewhat important
- Not very important
- Not important at all

* 20. To what extent do you think degree apprenticeships have contributed to the delivery of sustainable benefits for you and/or your organisation?

- A great extent
- A significant extent
- To some extent
- A small extent
- Not at all

* 21. Can you briefly describe a specific example where degree apprenticeships have contributed to the delivery of sustainable benefits for you and/or your organisation?

[Text input area]

* 22. What are the most important factors for delivering sustainable benefits through degree apprenticeships?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

* 23. What are the most significant barriers to delivering sustainable benefits through degree apprenticeships?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]



* 24. What changes and improvements would you make to degree apprenticeships to better deliver sustainable benefits?

[Text input area]

Sector-Specific opportunities, challenges and best practice

* 25. Please indicate which sector is relevant to you and/or your organisation

- Nursing sector
- Engineering sector
- Digital sector
- Other

26. If other, please specify

[Text input area]

* 27. What are the most important opportunities provided by degree apprenticeships in your sector?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

* 28. What are the most significant challenges for degree apprenticeships in your sector?

1 [Text input area]
 2 [Text input area]
 3 [Text input area]

Appendix C – Research project team and acknowledgements

 * 29. Can you provide an example of best practice regarding degree apprenticeships in your sector?



Thank you for completing this survey!
We greatly value your feedback and are very grateful for your time. If you would like to share any further thoughts with us, please use the comment box below.

30. Further comments?

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