

Creating conditions for sustainable Degree Apprenticeships in England

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Abstract

Purpose This paper reports on a study funded by the Edge Foundation, an independent educational charity, to investigate what is needed in order for English higher education to operate Degree Apprenticeships on a sustainable basis.

Design/methodology/approach The study, conducted in 2019-20, took the form of a literature review, semi-structured interviews, and an online survey.

Findings The study illustrates a high level of support for Degree Apprenticeships among those who are involved in them, whether as educators, employers or apprentices. Degree Apprenticeships aid public-sector recruitment, support progression routes and social mobility within the existing workforce, and contribute to recruitment and productivity in public services and economically critical industries. Practices in the organisation and delivery of apprenticeships are variable, but a clear need is illustrated for strong institution-employer partnerships, integration between on- and off-the-job learning, expansive workplace learning environments, and co-ordination of assessment and quality assurance. There is also a need for external bodies to provide a consistent policy and funding environment.

Practical implications The findings illustrate the need for strong partnerships, for programmes that are designed from the ground up as apprenticeships, and for effective integration of apprentices into the organisation's working environment.

Originality/value The study updates and adds to the literature on Degree Apprenticeships and work-integrated higher education. It emphasises three aspects that have hitherto been given little attention: the value of Degree Apprenticeships for public-sector recruitment and for creating social mobility within the existing workforce, and the importance of ensuring apprenticeships are aligned with organisational objectives.

Key words Degree Apprenticeships; apprenticeships; work-integrated learning; vocational education and training; public sector; nursing; policing; engineering; digital industries.

Introduction

Degree Apprenticeships (DAs) form an extension to higher education level of the partly publicly-funded British apprenticeship system, and involve a period (typically between two and five years) of employment and workplace training alongside a part-time bachelor's or master's degree. They have been a small but growing feature of the higher and professional education landscape in England over the last five years, and can be considered as a genuinely innovative type of programme that adopts a 'post-technocratic' (Bines 1992) or work-integrated approach to development. When properly implemented this contrasts with both the parallel (typically day-release) pattern familiar from further education, and the sequential (full-time education followed by workplace training) model that has dominated professional entry over the last four decades or more. Several professions, mainly in the health field, have followed a partly work-integrated training route for many years, and others such as engineering have retained an apprenticeship-type approach as a minority entry-route; nevertheless DAs represent perhaps the best effort in recent years to close the 'academic-vocational divide' in higher-level British education and training and give equal status to the academic and the practical. They have resulted in considerable international interest, including for example from the Bundesinstitut für Berufsbildung (BIBB), the German federal agency responsible for the much-lauded 'dual' apprenticeship system.

DAs have however been contested on the basis that they are expensive and divert funding from lower-level apprenticeships, they provide 'free' access to degrees, they can be abused by employers who redesignate existing staff as apprentices (e.g. Dawe 2019, Gravatt 2019 and Augar 2019), and in one report that they are not proper apprenticeships at all (Richmond 2020); there is some indication that these criticisms, particularly the funding and affordability issue, have begun to influence policy. On the other hand (as was apparent from this study) some initial practices in providing DAs have done little more than replicate the parallel training model, with the institution providing a part-time degree on a day- or block-release basis and the employer being responsible for a not necessarily very well-planned work-based element. For DAs to become an established and sustainable part of education and training they need not only continuing policy support at this time, but also improvements to the way that they are specified, delivered and managed. This paper reports on a recent study for the Edge Foundation (Lester and Bravenboer 2020) that was designed to investigate what is needed for them to reach a point of sustainability.

Degree Apprenticeships

Degree Apprenticeships were introduced in England in 2015 as a Government flagship programme designed to contribute to social mobility and improve productivity in line with the Industrial Strategy (BIS 2015). Official apprenticeship programmes had been extended to English levels 4 and 5 (level 5 in the European Qualifications Framework [EQF]) in 2008 in response to the Leitch review of skills (Leitch 2006), and following a reform to the apprenticeship specification in England (the SASE), to English/EQF levels 6 and 7 in 2013 (BIS 2013, and see Bravenboer and Lester 2016). Some of these Higher Apprenticeships (HAs) had already started to incorporate higher education qualifications in the form of foundation degrees (a short cycle programme at English/EQF level 5) and (after the 2013 SASE reforms) bachelor's degrees. The Richard review (Richard 2012) introduced further changes to the apprenticeship system, including a 'standard' or specification for each apprenticeship, the formation of employer-led working groups ('trailblazers') to agree the standards, the removal of the

requirement for apprenticeships to lead to qualifications, and the introduction of an end-point assessment and apprenticeship certificate.

The basic requirements for a Degree Apprenticeship is that it is specified by a trailblazer group and agreed by the Institute for Apprenticeships and Technical Education (IfATE), a non-departmental public body; the degree is either a requirement of a professional institution or registration body, or is customarily required in the industry as evidenced by employers' recruitment practices; and the programme includes at least 20% off-job training (i.e. attendance at an institution or the equivalent in the form of e-learning, independent study or similar). Where relevant the apprenticeship should also lead or contribute to professional registration. Some DAs have been developed that integrate the apprenticeship end-point assessment into the degree ('integrated DAs'), while in others they remain separate; this can be further complicated by assessments for professional registration, which may be integrated with either or both the degree and the end-point assessment, or kept separate. In addition, there are level 6 and 7 HAs (for example in accountancy and taxation) that do not include a degree, though they normally lead to professional recognition. There are also programmes, generally pre-dating DAs, that are not officially apprenticeships but have on- and off-the-job components and lead to both a degree and professional recognition; the Association of Chartered Certified Accountants and Chartered Institute of Legal Executives both have routes of this type.

The Richard review also led to the introduction of an apprenticeship levy system, where employers with a payroll of over £3 million pay 0.5% into the levy fund. This payment can be spent directly on approved apprenticeship training (not including apprentices' wages); partly transferred to a non-levy-paying employer to spend in the same way; or left unspent in which case it becomes available to support non-levy-paying employers, who currently need to contribute 5% of the training and end-point assessment costs from their own budgets. In addition to non-levy-payers encountering difficulties in gaining access to apprenticeship funds, debates have arisen in several areas. These include the proportion of the levy being absorbed by higher-level apprenticeships; the spending of apprenticeship funds on existing workers; and whether the apprenticeship programme should be geared primarily to helping young people into jobs requiring lower- and intermediate-level skills, or to focusing on economically critical areas (see for instance Dawe 2019 and Anderson 2019 for contrasting views).

In 2018-19, there were 22,320 starts on DAs and other level 6 and 7 HAs in England (DfE/National Statistics 2019), double the number in the previous year. This still however amounted to only 6.2% of all apprenticeship starts, and 1.3% of enrolments on equivalent-level higher education programmes. Nevertheless, almost all English higher education institutions have registered as apprenticeship providers, and some view DAs as an important part of their mission to engage with industry, support economic priorities and widen access. Politically, there is both continuing enthusiasm for DAs, with for example the House of Commons Education Committee calling for them to be made a strategic priority (HoCEC 2018), and a certain amount of ambivalence, reflected for instance in contradictory statements in the recent Augar review of post-18 education and funding (Augar 2019).

The study

The Edge Foundation, an independent educational charity (www.edge.co.uk), funded a project in 2019-20 to research principles, good practice and current issues in the provision of DAs, and to create a network of HE institutions to promote the development of sustainable DAs. Titled *Creating institutional conditions for sustainable Degree Apprenticeships*, the project was undertaken by a consortium led by Middlesex University alongside Sheffield Hallam and Staffordshire Universities and the University Vocational Awards Council (UVAC). The research part was conducted during the latter half of 2019 and into January 2020, and consisted of three overlapping phases: a literature review, a series of semi-structured interviews, and an open online survey. The detailed methodology, interview guides and survey questions are provided in Lester & Bravenboer (2020).

The literature review, carried out by two researchers including the author of this paper, started by tracing the background to apprenticeships in England, followed by an overview of publicly-funded training programmes and apprenticeships, trends in professional entry routes and requirements, and developments in work-oriented higher education. The main focus of the review was on literature arising from the implementation of DAs, and where relevant comparable work-based or work-integrated professional and higher education programmes. Sources were assembled from project partners' knowledge of the literature, plus systematic searches using Google Scholar, Access to Research and Core. A total of 121 articles, papers and reports were referenced in the review, of which 63% were dated 2016 or later.

Semi-structured interview guides were developed collaboratively by the project partners. Each of the three universities identified potential participants from among its staff, apprentices and associated employers, focussing on three areas: nursing, digital industries, and engineering. Interviews were carried out by a researcher from one of the partners. Twenty-nine individual interviews and one group discussion took place, as indicated in Table 1.

Table 1: Interview participants

	Total	Appren- tices	Employer staff	Education staff
Digital industries	4	1	2	1
Engineering	18	5	2	11
Nursing	11	2	3	6
Total	33	8	7	18

The survey was designed collaboratively by the partners following an initial analysis of the interviews. A few Likert-type questions were included to gauge the importance that participants attached to DAs and their key aims, but the majority of questions asked for free-text responses. A particular focus of the survey was to gain views on factors that supported or hindered the social mobility and productivity goals of DAs, along with their sustainability. The survey was tested within the partner institutions, then administered via Survey Monkey (www.surveymonkey.co.uk) with email invitations sent out via the four partner bodies and three sector organisations. There were 165 responses to the survey, with 89 identifying as educators, 69 as employers, and 46 as apprentices; most of the overlap was due to staff in dual roles with providers and employers, although a few apprentices also identified as employers due to being responsible for lower-level

apprentices (e.g. nursing DAs responsible for healthcare assistant apprentices, or engineering DAs with technician apprentices). Respondents came from a wider range of fields than for the interviews, with management, business-to-business sales, policing, and other healthcare professions also featuring, among others; 40% of the apprentices were from nursing. The survey principally produced short qualitative comments; these were collated and analysed by the author of this paper. The survey findings were broadly consistent with the findings from the interviews, with some additional points being raised principally due to the wider coverage.

The current position

The Office for Students comments that Degree Apprenticeships:

“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).

In the four to five years that DAs have been in operation there is some evidence that these aims are starting to be achieved, albeit with a need for evolution in the way that DAs are specified, designed and operated. There is evidence of clear benefits to apprentices in terms of the combination of theoretical and practical learning, enhanced employment and career benefits, and the ability to gain a degree while working and without debt (Engeli & Turner 2019). The DA model is challenging current understandings of the relationship between higher education and work (Bravenboer 2019), driving enhanced collaboration between universities and employers (WECD 2019), creating new routes into higher-level work, and acting as a vehicle for upskilling the existing workforce (Edge 2017, UUK 2019). As a programme that is work-based, practically oriented and academically credible, it appears to overcome the traditional ‘academic-vocational divide’ of British education and training (Crawford-Lee and Moorwood 2019). Effects on productivity are not yet widely reported, but there is more evidence of DAs’ ability to address skill shortages in areas such as engineering (EPC 2018) and nursing (APPGA 2019), as well as supporting recruitment, upskilling and professionalisation in fields as diverse as policing (York 2020), digital industries (UUK 2019) and business-to-business sales (Edge 2017). The impact on social mobility is reported as mixed, with DAs typically recruiting either from the existing workforce or from the same pool as other higher education applicants (Policy Connect/HEC 2019); however, there is evidence that DAs are attracting a higher proportion of mature learners, further education students, and workers who would not otherwise have considered higher education or other continuing development programmes (UUK 2019, WECD 2019, Engeli & Turner 2019). Universities UK notes that DAs provide a ladder to higher-level roles that would otherwise be difficult for many existing workers to attain (UUK 2019).

Experiences with DA implementation, backed by earlier evidence from work-based and work-integrated higher education (see Lester *et al* 2016 for a summary), is starting to point towards factors that make for effective, sustainable programmes.

Several studies and reports emphasise the need for effective central leadership and support for DAs within educational institutions. This includes DAs having a clear place in the institution’s strategy, explicit support from the senior management team, and the presence of a visible central unit that leads and supports DA activity (UUK 2016, UVAC/SDN 2017, Rowe 2018). The central unit typically

works in conjunction with faculties and departments to support employer engagement, ensure that appropriate curricular models are used, co-ordinate quality assurance, provide staff development, and maintain a core of staff who are the institution's work-based learning and DA experts (Lillis 2018). Major *et al* (2011) comment that academics typically take two years to become effective work-based learning tutors, and a central unit can attract personnel (who may not be conventional academics) with this kind of expertise, develop it in existing staff, and also provide support for employers who are taking on a work-based mentor role (Rowe 2018, Minton and Lowe 2019).

The pedagogical (or andragogical) and curricular model underpinning DAs needs careful consideration. There is increasing recognition that simply repackaging existing degrees into a day- or block-release format (a 'parallel' learning model) is insufficient (e.g. Kuczera and Field 2018), and DAs need to be designed from the bottom up in a way that integrates on- and off-the-job learning (Edge 2017, QAA 2019a, Bravenboer 2019). There is a considerable body of literature that theorises work-based learning as a field in its own right (e.g. Costley and Armsby 2007, Bravenboer and Workman 2016) with its own 'signature pedagogy' (Dalrymple *et al* 2014); this embodies a pragmatist position that sees learners as active agents and creators of meaning, and the workplace as a site of learning and knowledge-production as well as knowledge-application. Associated processes include three-way learning agreements, individual learning programmes, an emphasis on facilitation rather than teaching, work-based activities and projects that contribute to academic credit, reflective narratives or discussions, and means of assessment that are practice-based or – oriented and contextually appropriate. Although this approach has been developed largely in the context of learners who are already experienced workers, it is increasingly being applied in apprenticeship and similar programmes to create learning that is fully integrated between workplace and institution (Bravenboer 2019, Lester *et al* 2016). There is evidence to indicate that it can be successfully integrated with discipline-oriented pedagogies, even in fields that have strongly 'vertical' (Bernstein 1999) knowledge-structures such as medicine (Dornan 2005) and engineering (Lucas 2016).

Alongside this is a need for what Fuller and Unwin (2008) have called 'expansive' workplace learning environments, which support development beyond basic competence or training for a narrow job role (UVAC/SDN 2017, QAA 2019a). The literature discusses many factors that work against 'expansiveness', including expectations on workers who are progressing from an existing role to continue their current duties (Lester *et al* 2016), strongly task-focused environments (Baker 2019), an emphasis on early economic contribution (Kuczera & Field 2018), and training roles that are heavily circumscribed (Ching & Henderson 2016). Countering this, examples are provided where institution and employer work together to create a learning culture in the workplace, for instance through linking business or service and learning goals; shared construction of the curriculum; awareness of how workplace dynamics may affect learning; ensuring that apprentices become part of a community of practice; shared use of digital platforms; and the use of a mentor, generally a member of the employer's staff other than the apprentice's direct manager, to support workplace learning and link between employer and institution (Lester *et al* 2016, EPC 2018, Lillis 2018, Minton and Lowe 2019, Roberts *et al* 2019).

The need for effective and active partnership and collaboration between institutions and employers, and where relevant professional bodies, was promoted in the government prospectus for DAs (BIS 2015). This principle is becoming widely recognised as necessary for delivering effective and

sustainable programmes (Mulkeen *et al* 2017). The best practice in this area involves both strategic partnership, engaging staff members in both organisations as ‘champions’, and operational collaboration to design individual programmes, share delivery and assessment, and allow crossover between academic and employer staff (Lester *et al* 2016, McKnight & Birks 2016, UVAC/SDN 2017, Hughes and Saieva 2019). One of the largest areas of dissatisfaction with DAs for employers is not having enough involvement and communication with the provider (IFF Research 2020). Particular issues are also noted in relation to engaging with smaller enterprises, and institutions may need to work closely with professional, trade or sector bodies and with larger organisations who are prepared to support their suppliers or customers (Lester *et al* 2016).

There is less consensus on promotion and recruitment strategies for DAs, partly because of the wide range of purposes that the programmes are tasked with fulfilling, and partly because of large variations in existing practices across employers. A need for promotion and outreach that looks beyond the traditional A-level cohort is becoming recognised. This might for instance target learners from further education and lower-level apprenticeships, communities where below-average proportions of young people enter higher education, and workers who face barriers to career progression (Burke 2018, NCUB 2018, Engeli & Turner 2019, Policy Connect/HEC 2019). At the same time, a need is recognised to avoid suggesting that DAs are in any way an alternative, easy or second-rate option, particularly given that parents, advisers and others may see them as inferior to full-time higher education (Saraswat 2016); the Engineering Professors Council for instance advocates promoting them as a gold standard with value added beyond that of a standard degree (EPC 2018).

For recruitment, two practices have emerged that appear to be well-matched to the purpose of DAs. One is the use of ‘recognitional’ (Bravenboer 2012) or ‘strengths-based’ (Saville *et al* 2019) recruitment, where the emphasis is on potential to succeed rather than qualifications; there is currently a limited amount of evidence that this is a better predictor of success than certificates gained from school or college (*ibid.*). The other is including recruitment decision-making within the institution-employer agreement, so that a single decision is made that satisfies the needs of the employer, institution and where relevant professional body (Bravenboer 2011, Lillis 2018). Finally, progression-routes between different levels of apprenticeship are noted as often clunky and inefficient, and benefits have been identified where they have been streamlined (UUK 2019, Humphries-Smith *et al* 2019).

Finally, there has now been a significant amount of work done on matters of quality assurance and monitoring that recognises that DAs and other work-integrated higher education needs to be approached differently from both full-time degrees and from further education programmes. A need is recognised to maintain both academic and professional standards while not falling into the trap of separating these into separate entities, and to respect the work-based ‘signature pedagogy’ discussed earlier (QAA 2019b, Felce 2019). A particular issue with DAs is that they need to meet requirements set by multiple bodies, including the Office for Students, the higher education institution, the Education and Skills Funding Agency, IfATE, in many cases professional bodies, and sometimes formal requirements of employers. Although finding a straightforward way of meeting multiple demands is a work in progress, some attempts have been made to combine them in a single set of processes that forms part of the employer-institution agreement (McKnight & Birks 2016, Lillis 2018).

Interview and survey findings

Because the findings from the interviews and the survey were generally consistent, they are reported together, with any major differences highlighted.

Perceptions and benefits of Degree Apprenticeships

The survey indicated that DAs were extremely or very important to nearly 90% of respondents. Across the study, perceptions of DAs were almost universally positive, with reservations relating to matters of detail or difficulties in implementation. For apprentices, features that attracted the most positive comments were the qualification (degree, professionally qualified status, or both), the ability to earn and learn at the same time, and the career opportunities created directly by the apprenticeship. The latter applied both to entrants to the labour market, many of whom commented favourably on the opportunities offered compared with a full-time degree, and existing workers who were aiming to progress to a more senior or formally qualified level. This is consistent with the study by Engeli and Turner (2019). Some apprentices also commented on the programme going beyond training for a specific job, for instance through involvement in job rotation, secondments, special projects, and the opportunity to take on additional responsibilities.

For employers, the main benefits divide into recruitment; creating progression pathways inside the organisation; and contributing to the organisation or business directly. DAs were reported as boosting recruitment in fields as diverse as engineering and digital industries, where they had for instance contributed to revitalising talent in smaller firms and attracting younger applicants, and policing, where they were starting to bring in a more diverse field of applicants. Progression pathways or 'talent pipelines' were a particularly strong theme in nursing, a field subject to chronic staff shortages; with the demise of the nursing bursary HAs and DAs were seen as having a vital role both in maintaining Registered Nurse (RN) recruitment, and enabling healthcare assistants to progress to RN often via the newly-created Nursing Associate HA. Some engineering employers also noted the value of DAs in enabling staff in technician-type roles, typically with qualifications at level 3 (EQF 4), to progress towards chartered engineer status.

The third major area commented on by employers was direct benefit to the business or service. The purpose of DAs in improving productivity was regarded as very or extremely important by 83% of survey respondents, although over 50% didn't think that they had contributed greatly to this aim and many found it difficult to provide relevant examples. Being able to fill skills gaps was mentioned by several employers, both in relation to existing operations and being able to develop the business into new areas. While on the whole employers found direct business benefits difficult to quantify, some could point to increases in productivity or service quality, with some citing apprentice projects that contributed directly to improvements. Particularly in smaller firms apprentices were sometimes credited with bringing in new ideas and innovations.

University staff frequently mentioned the value of DAs in supporting strategic aims such as widening access to higher education and professional careers, meeting industry needs, and seeking additional sources of students. Another widely-reported benefit was creating and expanding partnerships with employers, which could sometimes extend into other work-based or –related provision, research, or consultancy (cf. WECD 2019). Less mention was made of some of the other structural benefits

reported in the literature, such as providing a platform for further innovation (UVAC/SDN 2019) and challenging established perceptions of the relationship between higher education and work (Bravenboer 2019).

Social mobility

Social mobility, widening participation and increasing diversity were all widely supported aims, and several institutions and employers emphasised the importance of DAs in creating alternative routes to higher education and professional careers. While nearly 87% of survey respondents thought that the social mobility aims of DAs were important, over 45% thought that they had not contributed to social mobility to a significant extent. The main aspects of social mobility that were reported were enabling access to higher education for people who would otherwise not have considered it; supporting progression from less-skilled jobs to professional and managerial roles; and increasing the diversity of the workforce. Progression within the workforce featured most strongly, as discussed previously in relation to nursing and engineering; the opportunities provided by DAs were seen as vital to existing workers being able to progress through professional or academic qualification barriers, particularly where the main alternative would be full-time higher education. This was seen by several respondents and interviewees as a central aspect of social mobility, which though recognised by UUK (2019) has received little policy attention. The overall picture is that while there are encouraging examples of social mobility, there is also room for improvement particularly in attracting people from underrepresented groups and localities, along with creating through-routes from lower level apprenticeships. However, the qualitative position at least appeared more positive than that reported in the literature to date.

Respondents indicated that the main factors supporting social mobility are effective promotion and outreach, messages that are geared to people who are less likely to consider higher education (and that promote DAs as high-quality options), and entry requirements that take into account a wider range of achievements than A-levels; further education students, less qualified workers, and existing apprentices were all mentioned as target groups. Some respondents also commented on the importance of gearing programme design and learner support to entrants with diverse backgrounds and skills profiles (cf. Hughes and Saieva 2019) in order to maximise retention and achievement. Several significant barriers to widening access were also raised, including a lack of awareness of, and misconceptions about, DAs across potential target groups. Other barriers that were mentioned included a lack of attention to progression routes between different levels of apprenticeship, regional variations in availability, barriers created by some institutions adopting conventional higher education entry requirements, rates of pay that were unattractive to potential apprentices (particularly where they needed to support themselves), and the association of higher education of any kind with building up substantial debt.

Factors contributing to the success and sustainability of Degree Apprenticeships

Participants in the study discussed several factors that they considered important to the effectiveness and ongoing success of DAs. These generally reflected the points made in the literature, while providing some additional insights. They can be summarised under three areas: collaboration and partnership, programme design, and the workplace learning environment.

Collaboration and partnership, principally between institutions and employers but also extending where relevant to professional bodies and regulators, was widely regarded as fundamental to effective delivery of DAs. This was discussed as applying both to strategic collaboration and to the delivery of the programme. Strategic collaboration included designing programmes to address skills shortages and meet economic needs, as well as agreeing strategies to widen access and create progression pathways within organisations, industries and professions. At a practical level, the emphasis was on institutional and employer staff working together to ensure the relevance and consistency of the overall programme, ensure effective learner support, and integrate assessment between the workplace and institutional environment. Practitioner-academic roles were seen as central to this, with examples given of institutional staff being embedded in the workplace as well as employers' staff becoming associate faculty members.

Reflecting the consensus emerging from the literature, the study indicated the need to design DAs from the ground up as work-integrated programmes, rather than simply adapting existing full-time degrees into a day- or block-release mode. One of the examples that featured in the interviews, an engineering DA, had been based on a full-time bachelor's programme; the conventional wisdom when it was first developed was to leave the content largely unchanged, both to ensure a broad coverage of the field and to maintain alignment with Engineering Council requirements. The drawbacks of this approach were however being realised, including difficulty integrating between institutional and workplace learning, lack of resources for individual support, and employer criticisms of a lack of relevant content or at least the academic work not being timed to link to workplace activity. Alternative designs making greater use of online resources, individual learning plans and learning support, and work-based projects were being discussed at the time of the interviews. More generally, factors that were highlighted in the study included the need for close integration between on- and off-the-job components (sometimes described as moving beyond the distinction between 'on' and 'off' job); effective use of work-based projects and online learning; up-to-date content and resources; individualised three-way learning agreements; and effective learner support. A further factor that was reported was integrating the assessment requirements for the degree, the apprenticeship, and where relevant professional recognition.

Again consistent with the literature, the presence of a central unit to co-ordinate and provide support for apprenticeships and similar programmes was reported as an important factor for bringing in current thinking on work-integrated programmes and being able to design and support the implementation of appropriate and effective DAs. However, both the interviews and the survey also pointed to factors that act to constrain effective programme design. The two principal ones that were reported were existing academic structures and assumptions about higher education from within the institution, and restrictive perceptions of apprenticeships and vocational learning from external bodies that were more familiar with lower-level vocational education and occupational training programmes.

In relation to the workplace, two factors were emphasised. The first was the need for the employer to align apprenticeships with strategic objectives, business priorities and workforce planning, making for a clear rationale between the apprenticeship and productivity, business development or service provision. Some respondents contrasted this with simply creating training opportunities in order to ensure that levy contributions were spent in-house. This does not feature more than in passing in the literature, but as well as the economic or service benefits it was reported as a highly positive

factor for apprentices' learning and development. The second factor concerned effective management of apprentices' learning within the organisation. This includes things such as ongoing 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 factors reflect the idea of an 'expansive' learning environment (Fuller and Unwin 2008) and the need to focus on the workplace as a site for learning (UVAC/SDN 2017).

Challenges and areas for improvement

The study indicated that current practice is variable in relation to the factors discussed above, with several areas needing improvement. While recognition of the need for specifically-designed work-integrated programmes appeared to be growing, they were far from universal and there is a need for significant investment of effort and expertise in some institutions or departments in order to move beyond the 'parallel' training model. In some instances it was also apparent that programmes, and the associated systems and support, need to give better recognition of apprentices who lack A-levels or similar qualifications, who have not been in a formal learning environment for some time, or who need to improve their English language or mathematical skills. Another major theme for institutions was that provider-employer collaboration was not always as effective as it could be, with problems arising in the alignment between programmes and business needs and the extent of integration between the on- and off-the-job components at both a structural and a practical level. This was thought to be easier to overcome when an apprentice cohort came predominantly from a single employer, or from a group of employers (as in the health sector) with similar business models and operating procedures; greater challenges were posed by cohorts split across many small employers.

Additional challenges for institutions include staffing and resourcing in the face of policy and funding uncertainty, balancing different stakeholders' administrative and monitoring demands, and (where they provide level 4 and 5 Higher Apprenticeships) working with Ofsted quality requirements in addition to those for higher education (Ofsted, the Office for Standards in Education, Children's Services and Skills, is the public body responsible for inspecting schools and vocational education). This suggests partly a need to adapt to different systems and operating environments, and partly a need for the multiple bodies involved in the management of Degree and Higher Apprenticeships to review their systems and requirements to ensure that they are proportional and appropriate.

In relation to the workplace, the discussions and comments indicated that practices vary from producing almost ideal expansive learning environments, through to those that are more restrictive and limiting. Apprenticeships are not always particularly well thought-out in terms of how they fit with organisational aims and operations; sometimes this appears simply due to a lack of planning and internal co-ordination, while there were also reports of apprentices being recruited (or drawn from existing staff) with little thought to how their programmes would fit in to the organisation and its working practices. A more common problem is day-to-day pressures overshadowing the learning aspect of the apprenticeship, leading to limited on-the-job learning, a lack of support for off-the-job learning, and conflict between 'worker' and 'apprentice' roles. The latter was reported particularly strongly in nursing, where healthcare assistants moving to a nursing apprenticeship in the same department were often under pressure to carry on with their existing duties.

A number of structural and policy matters were also raised as having an inhibiting effect on the success and sustainability of DAs. Several respondents from institutions and employers commented on current instabilities in the policy environment, including a lack of explicit political commitment, the possibility of funding being reduced below a sustainable level, and concerns that IfATE is creating barriers to the approval or reapproval of DAs. The last point, also discussed in recent reports (e.g. WECD 2019 and UVAC/SDN 2017), was raised particularly strongly in relation to the digital industries DA, where the degree is in some respects a forward-looking requirement geared to professionalisation and attracting suitable talent, rather than a response to easily-documented professional body or employer demands.

Conclusions

The study indicates almost universal support for DAs from those who are involved in them, whether from institutions or employers, or as apprentices. While some instances of opportunistic and poorly thought-out practice were encountered, the potential of DAs to support public-sector recruitment, contribute to social mobility and workforce diversity, and provide benefits to economically critical and skills-shortage industries is unequivocal. DAs have already become embedded as a means of entry to nursing, where they are a critical component of the recruitment strategy and are also creating a talent pipeline from assistant-level posts, and policing, where they are attracting a substantially more diverse entry-cohort than conventional recruitment methods. Their value to the engineering and digital sectors in recruiting new entrants and creating progression pathways within the existing workforce is also becoming clear.

The study also indicates a clear direction of travel that is needed for DAs to become an established part of the higher education and professional training sectors in England, and fully realise their dual aims of contributing to social mobility and economic development. To realise this, the following points are central:

- Institutions and employers working in effective partnerships, both at a strategic level to identify needs, develop apprenticeship standards, and design programmes, and operationally to recruit apprentices, deliver and assess programmes, and provide support and mentoring for learners.
- Programmes that are designed specifically as apprenticeships, ensuring integration between practical and theoretical learning, enabling learning pathways to be tailored to individual contexts, providing effective learner support that bridges between the institution and the workplace, and providing co-ordinated assessment and quality assurance.
- A clear rationale and position in the workplace for apprenticeships, both from the perspective of integrating learning with work activity and in supporting workforce development and business or service goals.
- Effective promotion of DAs in order to establish them as a high-quality alternative to full-time higher education, with more attention to creating entry- and progression-routes for potential learners who may not have considered higher education or professional careers.

Finally, the multiple agencies that are responsible for various aspects of DAs at a national level need to provide the policy and funding stability that allows institutions and employers to commit to investment in developing sustainable programmes. They also need to ensure that their requirements, systems and processes aid rather than hinder the above direction of travel and avoid placing unnecessary burdens on employers and institutions.

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