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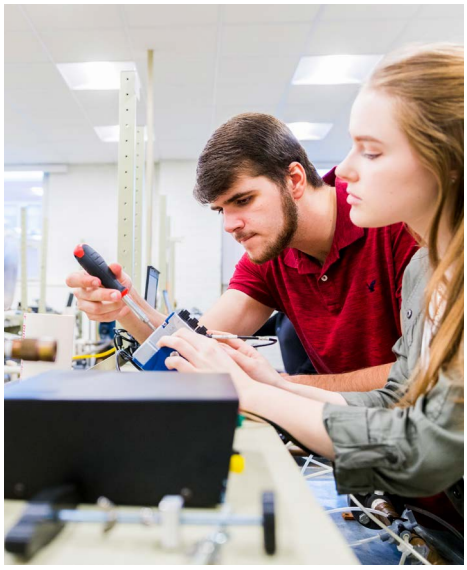
DEGREE APPRENTICESHIP END-POINT ASSESSMENT DILEMMA

The Balancing Act between Business Contribution and Academic Exploration



Abstract:

A growing number of learners join HE institutions through degree apprenticeships with a strong emphasis on both on-the-job and off-the-job training, with apprentices sharing time between lecture theatres and the workplace. In addition to meeting the degree requirements, the completion of degree apprenticeships requires passing a work-based end-point assessment (EPA). EPAs often include a capstone project that is equivalent to a project or dissertation and plays a crucial role in degree apprenticeships, but their execution is not without its problems. This paper identifies common challenges for EPA projects, including academia-business goal misalignment, external factors, confidentiality and commercial sensitivity, and gaps between expectations and experience. Consequently, a set of recommendations is proposed to mitigate the identified challenges.

Degree apprenticeships were designed by employer groups to ensure that training delivered by HEIs and other training providers meets industry needs. Many degree apprenticeships have been developed in recent years to satisfy the growing demand for skill training

Degree apprenticeships are paid jobs linked to 20% off-the-job training and development, and may provide apprentices with degrees from Higher Education Institutions (HEIs) when they successfully complete and pass the apprenticeships (GOV.UK, 2019). Degree apprenticeships were designed by employer groups to ensure that training delivered by HEIs and other training providers meets industry needs. Many degree apprenticeships have been developed in recent years to satisfy the growing demand for skill training. As of April 2021, there are 108 approved degree apprenticeships (Institute for Apprenticeships and Technical Education, 2021a).

Degree apprenticeships offer real-world learning that helps apprentices develop a set of knowledge, skills, and behaviours (KSB) through both on-the-job and off-the-job training throughout the apprenticeship. Each apprenticeship is developed in collaboration with employers, training providers, and professional bodies to ensure that it is appropriate for the specific industry and occupation (Institute for Apprenticeships and Technical Education, 2020). There are two types of degree apprenticeships: integrated and non-integrated. Integrated degree apprenticeships include an end-point assessment (EPA) that marks both the end of the apprenticeship and degree programme, and the apprentices must pass both. Non-integrated degree apprenticeships have a separate EPA, which tests the occupation's KSBs and is separate to the degree assessment.

At the end of the apprenticeships, apprentices are expected to demonstrate how they meet or exceed the KSB competencies listed in the apprenticeship standard at the End Point Assessment (EPA), which typically involves an EPA project and a portfolio consisting of work-based evidence, followed by a professional discussion. The EPA projects often play a crucial role in the EPA, as the apprentices are typically expected to demonstrate the KSB competencies in their EPA projects.

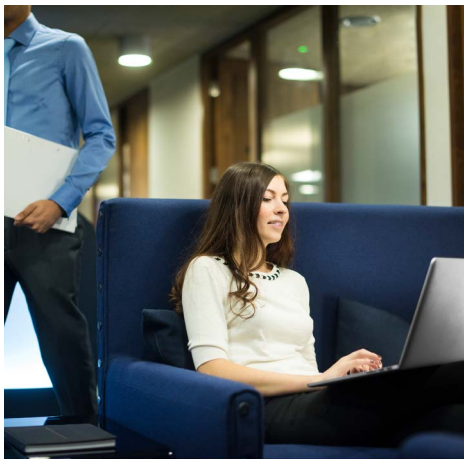
Due to the significance of EPA projects, HEIs tend to work with employers in advance to identify suitable EPA projects to ensure that KSB standards can be met. However, projects are by nature associated with a degree of uncertainty, which can be closely related to information availability (Pich *et al*., 2002). Therefore, this paper aims to identify the key themes and challenges associated with EPA projects and then provide a set of recommendations. We collected data from EPA project supervisors and apprentices to identify the challenges they faced, and we subsequently produce a set of recommendations to overcome the challenges.

Relevant Work

Degree Apprenticeships

The UK government aims to equip people of diverse backgrounds with the required skills and knowledge through an employer-led apprenticeship and technical education system. According to Universities UK (UUK) (2016), degree apprenticeships can be particularly attractive to non-traditional students and therefore support the widening participation goals for HEIs. Many UK HEIs have responded positively to the government drive for degree apprenticeships by becoming recognised and approved training providers. The increased offering of degree apprenticeship training providers across the country should have boosted the awareness and consequently uptake of degree apprenticeships. Additionally, the introduction of the apprenticeship levy for large organisations and the government contribution of 95% of the funding for small and medium-sized enterprises (SMEs) provide an incentive for organisations to hire apprentices. Yet, despite the government push and a steady increase of degree apprentices, the uptake of apprenticeships remains lower than the government target (*Financial Times*, 2019).

Many factors contribute to the lower-than-expected uptake of degree apprenticeships. There are some employer concerns regarding degree apprenticeships, including benefits to the organisation, apprentice retention after completion,



selection of apprentices, employer involvement and commitment, and funding mechanisms (Hughes and Saieva, 2019). Rowe *et al*. (2017) stated that the recruitment process and expectation management can also be challenging for employers. Since degree apprenticeships are still relatively new to many organisations, it is not surprising that some have such concerns.

However, with the appropriate support infrastructure from HEIs, many employers can see the benefits of hiring degree apprentices (Hughes and Saieva, 2019). Apprenticeships could help businesses with their strategic workforce planning whilst utilising public funding (Higgs, 2021). This could be an effective way to upskill organisations by gaining training that would not have been available within the organisations. Apprenticeships could also contribute an opportunity to address the gender imbalance in the technology sector by offering a route to previously under-represented groups (Smith *et al*., 2020). However, apprenticeships are not panacea, and it requires employers to make suitable arrangements to benefit from them. Studies have found that the proper recognition of apprentices at work, appropriate work experience, and learning support are critical to apprenticeship success (Baker, 2019).

Degree apprenticeships are designed to be embedded in the workplace. With both on-the-job and off-the-job training aspects, degree apprenticeships focus strongly on work-based learning by demonstrating that the apprentices can apply knowledge and skills in a real environment, not a simulated one, and that they can develop appropriate professional behaviours via mentoring and interaction at work. Therefore, the following section will consider the application and challenges of work-based learning.

Work-Based Learning

Work-based learning may refer to either a vague notion, such as any learning taking place in the workplace or happening as a consequence of professional work (Lester and Costley, 2010), or a more specific delineated concept such as structured learning as part of a professional role (Levy *et al*., 1989, p.4, as reported in Little and Brennan, 1996), where it takes place as part of the job role. However, dedicated learning outside of the professional role needs to take place as well. Little and Brennan themselves conclude that work-based learning is derived from experience gained during work-based activities.

Learning by doing and on-the-job training are commonly used in both knowledge management and learning (Becerra-Fernandez *et al*., 2004). In a broader context, it is often applied to address specific issues such as skill shortages, youth unemployment and labour market participation for underrepresented groups, but also to achieve larger outcomes such as the reversal of income inequality or revitalisation of the manufacturing sector (Fortwengel *et al*., 2019).

In the UK, integrating work practice and academic learning can be traced back as far as the 1950s and usually took the form of courses with placement elements (so called sandwich courses). It enjoyed a particular revival in the 1990s and 2000s (Fortwengel *et al*., 2019). As academic degrees proliferated, HEIs shifted from the traditional ambition of being more than just learning for work, to an increased focus on professional requirements (Little and Brennan, 1996). For example, government consultations recommended that HEIs implement foundation degrees as undergraduate degrees between levels 3 and 6, combining vocational and academic elements to motivate the take-up of level 2

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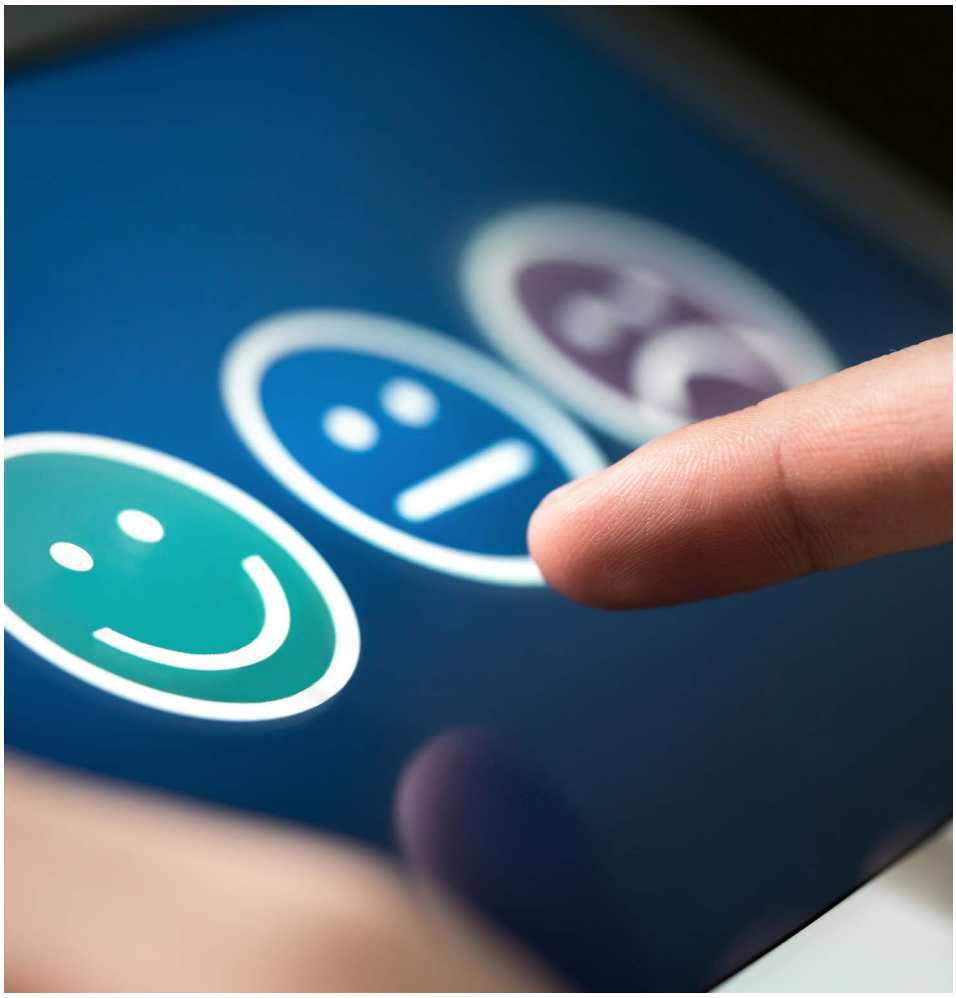

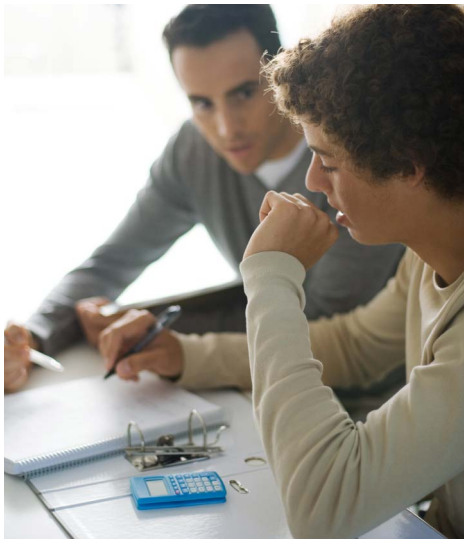

Thematic analysis is used to determine the patterns of feedback and concerns from both apprentices and supervisors, in order to identify the empirical challenges and ways to mitigate them

qualifications and allow progression to further education (Department for Education and Employment, 1999). At the same time, the demand for some skills traditionally taught in HEIs had risen to the point where a shortage needed to be addressed. Work-based learning fits into this development, as it aims to facilitate both the general concept of life-long learning, and to teach or provide those skills in a format that is an alternative to the orthodox higher education model, and finds learners beyond the traditional clientele of pre-career school leavers. For instance, by providing learners for professionals already in employment (Lester and Costley, 2010).

Work-based learning programmes are usually structured through a learning contract specifying exactly the extent of structured learning, as well as the duties and contributions of learner, institution (e.g., a university), and employer (Lester and Costley, 2010). In this context, structured learning means a clear identification of what is to be learned, how it is to be learned (i.e., learning strategies), and how the learning will be evidenced on the conclusion of the programme.

However, work-based learning in higher education appears to be reliant on both political support and adaptation by employers, as otherwise it might fail (Fortwengel *et al.*, 2019). Further, work-based learning does not automatically conform to traditional higher education and usually requires the creation of new structures (Costley and Lester, 2009).

Approach

Feedback and insights from EPA project academic supervisors and final-year apprentices from a range of employers in both public and private sectors were collected and then reviewed through thematic analysis. The thematic system aims to identify the pattern of meanings and behaviours (Braun and Clarke, 2019). Thematic analysis is used to determine the patterns of feedback and concerns from both apprentices and supervisors, in order to identify the empirical challenges and ways to mitigate them. The sample was selected from the level 6 Digital and Technology Solutions Professional (DTSP) degree apprenticeship and the level 7 Digital and Technology Solutions Specialist (DTSS) degree apprenticeship taught at UWL. One-to-one interviews were conducted to collect the data. Based on the interview data, a few key challenge themes were identified and will be further discussed in the following sections.

Challenging Themes

Based on the interviews, the four following challenge themes for the EPA projects in degree apprenticeships were identified:

- Academia-business goal misalignment
- External factors
- Confidentiality and commercial sensitivity
- Gap between expectation and experience

Below, these themes will be elaborated on in more detail:

Academia-business goal misalignment

The academic drive for knowledge advancement from the university might not always align with the value-creation needs in the business sector. Academic knowledge advancement aims to benefit the wider community by experimenting with and validating theories and frameworks. Whilst such an approach advances the body of knowledge, it might not provide the imminent empirical value creation sought by the business in question. In some cases, however, academic knowledge advancement and empirical value creation are fully aligned through the EPA project, and therefore, the implementation of the EPA project is given high priority and even receives additional resources. Nonetheless, in some cases, business as usual (BAU) needs could appear more urgent than academic knowledge advancement.

Such alignment often lies in the employer's perception of the level of usefulness of the EPA project. In some cases, the projects were fully aligned with the apprentices' BAU tasks, and they tended to spend most of the working hours (greater than 20%) on the EPA projects.

However, not all EPA projects are fully aligned with BAU, which is not necessarily optimal. Several participants mentioned that the EPA projects were referred to disparagingly as 'university work', by the employers although the EPA projects were work-based and had clearly defined business value. The term 'university work' certainly indicates that some employers or managers view the EPA projects as not directly associated with work.

For instance, one employer was facing financial problems and was effectively in a survival mode. It is thus understandable that all business resources would be diverted to activities that could either immediately generate income or reduce costs. Although the employers honoured the 20% off-the-job commitment and gave the apprentices time for their EPA projects, EPA projects normally benefit from a greater alignment with BAU tasks.

External factors

External factors that are beyond the scope of the project could sometimes influence project viability. An employer needs to adjust its business strategy and position in response to its external environment, e.g., customer needs, regulatory change, etc. As a result, any project could become obsolete because of strategic change or could lose key project members through resignation or redundancy.

In some cases, the organisation could be forced to liquidate, which effectively eliminates the environment in which the project resides. Despite the risk planning for any project, such factors could still have significant impacts on the viability of the project. And there is no exception for EPA projects. For example, one apprentice was made redundant in the final few months of their EPA project. Although the apprentice was permitted to continue working on the EPA project so as to complete the degree apprenticeship, they took on additional paid contract work offers from their former employer to ease the financial burden. The additional work became the priority, which led to less time on the EPA project. As a result, the EPA project took longer than expected to complete and delivered reduced results. Curiously, most of the actual project work had been done by the time the apprentice started to focus on the work contracts, and a significant portion of the remaining EPA project work was formal (such as writing up existing results).

Most projects use output from other projects as their inputs. Therefore, the dependency on other projects could affect the project scope and schedule. For instance, one apprentice's EPA project required the input from external consultants that the employer had hired. However, due to the senior management team change, the appointment of external consultants was significantly delayed, resulting in the EPA project not being completed within the expected EPA end date.

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Confidentiality and commercial sensitivity

Virtually any professional context includes an aspect of confidentiality and commercial sensitivity. Usually, this involves the protection of information and processes, with the consequence that certain data cannot be collected, shared, published, or perused. Generally, sensitive areas include:

- Any kind and volume of customer data
- Use of proprietary, in-house-developed technology
- Licensed technology

The exact level of sensitivity and secrecy depends on the organisation, position, and subject area. However, a general consequence is that affected EPA projects need to obtain additional approval and review processes, impacting their practicality; that affected projects are infeasible to begin with; and that apprentices cannot demonstrate their abilities fully. It should be noted here that non-disclosure agreements (NDAs) are generally not a solution, but a red flag, as signing an NDA does not resolve the issue. Academically, HEIs are geared towards openly sharing subject matter and are unlikely to have the facilities and processes in place to guarantee commercial sensitivity, such as ensuring that all academic supervisors, examiners, and involved administrative staff have signed the same NDA.

Gap between expectations and experience

When apprentices engage in a project, certain expectations would be formed, based on their understanding of the project. However, it is important to recognise that their self-formed expectations might not be realistic. As an individual participating in a project, they may not fully understand the environment and other factors that could influence its implementation and impact. Whilst the high expectations and enthusiasm could be a strong motive for individuals participating in the project, the subsequent realisation of their own unrealistic expectations would of course dampen the individual's motivation and effort in the project.

Since EPA projects take place in a real work environment, apprentices might expect their project outputs to be fully implemented and utilised. Many apprentices see EPA projects as an opportunity to finally work on their own projects, set their own goals, and make critical decisions. While this is correct, the objective of their project, such as what artefact to develop, or what data to analyse, is still subject to the same constraints as all other projects at the place of employment, and often quite a few more such as approval, progress review, etc.

While EPA projects meet the requirements set in the assessment plan, such requirements do not necessarily conform to the requirements or processes conducted in the workplace (or *vice versa*). In fact, for the purposes of actual assessment, it might be easier if the EPA projects were conducted outside the general project control framework of employer organisations, as otherwise, the controls and constraints placed on projects in a workplace setting might quickly overpower the requirements set in the assessment plan. Furthermore, this approach would defeat the whole aim of the EPA. Therefore, it is not uncommon for apprentices to experience EPA project scope or impacts being limited due to other constraints. Consequently, motivation could drop when apprentices inevitably gain a more realistic understanding of the value placed on their project within their place of employment. Resulting disappointment can dampen any motivation quickly.

The perceived separation between university-work (off-the-job) and work-work (on-the-job) often lead to goal misalignment between universities and business, which eventually affect the EPA projects

Recommendations

Based on the identified four challenge themes, this paper proposes a set of recommendations for mitigating such challenges. The recommendations were developed iteratively, based on the feedback from apprentices and tutors, as well as practical experience. The proposed recommendations are as follows.

Higher integration of off-the-job and on-the-job

The perceived separation between university-work (off-the-job) and work-work (on-the-job) often lead to goal misalignment between universities and business, which eventually affect the EPA projects. This issue could be addressed by ensuring a higher integration of off-the-job and on-the-job training of the entire degree apprenticeship. The Institute for Apprenticeships and Technical Education (2021b) proposed a similar change through the integration of on-the-job and off-the-job training.

Greater integration could lead to a greater proportion of apprentices' time on the EPA projects, as the EPA projects are more likely to overlap with BAU work. Seamless integration could overcome the barrier between university-work and work-work, which is sometimes observed as a challenge to successful EPA projects.

Considering GDPR and commercial sensitivity during project inception

Protection issues of privacy and commercially sensitive material should be considered right away at project inception. For example, if the apprentice has signed an NDA at some point during their employment, any project proposal draft should be examined in terms of conflicts with the NDA. This might need to be done on the employer side, as the supervisor provided by the university may not be privy to the information covered by the NDA. Similarly, project proposals should be examined for potential conflicts with policies of the employer organisation.

A good general approach might be to have the project signed off by the respective employer stakeholders, e.g., data privacy officer, legal department, and apprentice mentor and manager; especially where clear rules have not been formulated, or protected organisational assets have not been identified explicitly.

Integrate more risk planning as part of the project planning and development

External factors have been identified as a key challenge. Since EPA projects are real-world ones, there are inevitably some uncertainties that could impact their viability. While it is not possible to entirely eliminate such risks, major risks can be identified and mitigated to increase the likelihood of EPA project success.

A more structured risk-planning approach to EPA projects could be formalised by the EPAOs. Risk-planning templates and guidance can be integrated into the project proposal sign-off stage. Any major risk should have mitigation responses specifically allocated to responsible individuals, who could be the apprentice, employer, or tutor. The monitoring of the identified risks should be part of the project review meeting agenda. If any risk occurs, the three parties can decide and agree on the best course of action to mitigate the impacts on the EPA projects.

Expectation management

Generally, it should be made explicit to apprentices that the purpose of the EPA project is to serve as an assessment and evidence of their learning achievements.

Apprentices planning a project to resolve a specific problem they have observed at work, should be prepared for the possibility that while this problem might indeed exist, their employer may for various reasons dismiss the respective analysis or solution generated during the apprentice's EPA project, if it was not arrived at following the employer's project processes. Ultimately, EPA projects are still essentially academic. Generally, any expectation that one's solution will find productive application is more often than not disappointed.

Conclusion

Considering the growing popularity of degree apprenticeships in England, it is imperative to understand the challenges faced by apprentices, in order to find a way to enhance the apprenticeship support mechanism. EPA projects are one of the most significant milestones in degree apprenticeships, and they can impact substantially on the results of a degree apprenticeship. However, there has not so far been much research in this area.

Accordingly, this paper identifies the empirical challenges related to EPA projects, namely goal misalignment, external factors, confidentiality and expectations. Consequently, a set of recommendations has been proposed. The identification of EPA project challenges provides important insights into degree apprenticeship, so that stakeholders can work together to develop a mechanism for supporting EPA projects in the future.

One of the limitations of the study is that while the results provide some insights into potential ways to address EPA project challenges, due to sample size, they should not be overgeneralised. The identified challenges and recommendations presented are based on a limited sample from several intakes of apprentices at one HEI. The aim is to generate an understanding of EPA project success factors to help us understand and mitigate common issues faced by apprenticeship students and related stakeholders.

Another limitation of the paper is related to the type of apprenticeships involved. Although this paper refers to data from two degree apprenticeships at different levels (levels 6 and 7), they are both in the 'digital' route. Therefore, the challenges identified might not reflect other apprenticeship routes, e.g., creative and design, business and administration, construction, etc.

The next steps for this study may entail a verification of identified challenges and recommendations with stakeholders from other HEIs following the same apprenticeship standard. Alternatively, new insights may be generated by conducting formal theory-generating research following a qualitative analysis method.

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Key words

Apprenticeship, end-point assessment, higher education, vocational education

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