Lessons learnt from Degree Apprenticeship's Design and Development Practice at WMG

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SUMMARY

Degree apprenticeships (DAs) are a new educational route that combine work-based learning with academic study. They offer the opportunity to gain an undergraduate or postgraduate degree while working towards a professional qualification. This paper shares the lessons we learnt during the course conception, design, and delivery of Undergraduate (UG) and postgraduate (PG) Degree Apprenticeship (DA) programmes at WMG. The focus will be on the aspects of quality assurance and student experience. The quality of the learning and teaching process is essential for the success of DA programmes.

This practice report explores the development and implementation of DA programmes at WMG, focusing on quality assurance and student experience. It discusses the unique challenges and considerations in designing apprenticeship curricula that meet both academic and industry standards. The report emphasises the importance of putting students at the centre of education, establishing policies for teaching quality, and maintaining effective processes to ensure programmes success and continuous improvement.

INTRODUCTION

Degree apprenticeships (DA) are a new educational route, launched by the Government in England, in 2015 which are like higher apprenticeships (HA) but differ in that they provide an opportunity to gain an undergraduate (UG) degree, i.e., level 6, or postgraduate degree (PG),

i.e., level 7 (UCAS, 2023). At WMG, we offer several undergraduate and postgraduate DA programmes which incorporates several stakeholders including employers, apprentices, senior management university staff and regulatory bodies (such as Institute of apprenticeships& Technical Education (IFATE), Quality assurance agency (QAA), Ofsted, education, and skills funding agency (ESFA) and Engineering council). The aim of this paper is to share the lessons we learnt during the course conception, design, and delivery of the UG and PG degree apprenticeship programmes at WMG. We will be focussing on aspect of quality assurance and student experience in depth.

Internationally, different criteria exist measuring education quality, and the perspective ranges from intellectual property to student engagement (Akhtar & Butt, 2020). From the DA standard's point of view, the quality of the learning and teaching process and the success of the education process in general, can be evaluated based on the criteria derived from a pre-defined set of Knowledge and Skills to be acquired and the Behavioural milestones to be achieved by the learners which are set by Institute of Apprenticeships and Technical Education (IFATE). For DA, this is quite a granular approach and is fine-tuned per programme and further for each stream within a programme. The quality assessment for these programmes comprises various processes implemented by Designated Quality Body (DQB), External Quality Assurance (EQA), the end of programme assessment etc (DQB, 2023). As it has been depicted in Figure 1, the implication of these on QA means teaching/learning must precisely meet layers of the standard requirements, and at the same time, meet the common practice in HE such as assignment moderation, student feedback survey, staff-student liaison committee etc. This has led to the growing understanding of the need for innovation and special considerations in DA design (Hughes & Saieva, 2019).

*Figure 1. The different stakeholders involved in QA for apprenticeship programmes*
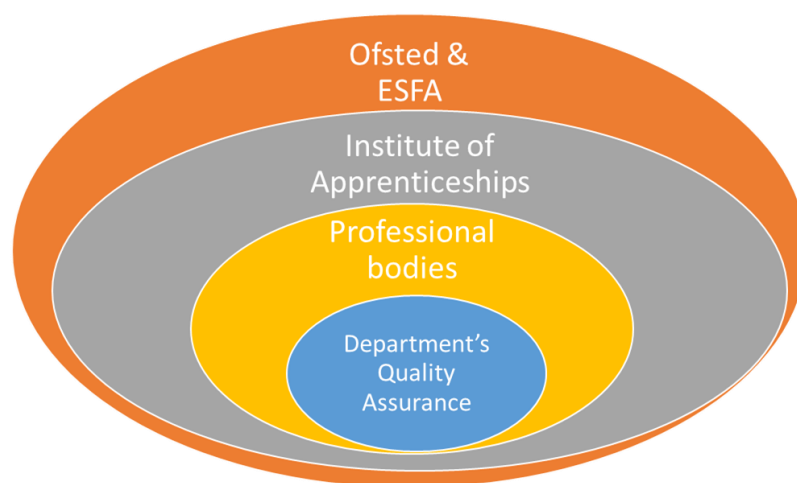
Whilst it is difficult to give quantitative indications of education quality, we will be discussing in this paper that it is evident from our practice that main factors which contribute to QA in HE and especially in the DA context are the following:

- Putting students at the heart of education. Co-creation is the key to success in the education context, and encouragement to learners at different levels to perform well in the system. Within our practice, students and DA employers were actively involved in the design process through direct surveys, in-depth feedback analysis, and structured discussions with industry partners. This collaborative approach ensured both industry relevance and student engagement.
- Establishing policies to review teaching quality at different levels. This include both teaching and assessment, as well as curriculum design/re-design in the broader sense.
- Effective processes need to be in place to hold the above two key elements together. Specific timeline and key staff need to be identified.

THE BACKGROUND OF THE EDUCATION PACTICE

DAs are a growing and popular option for young people in the UK. They offer a unique combination of academic study and practical work experience, leading to a high-level qualification and a guaranteed job at the end of the apprenticeship. A recent analysis of DA and non-DA programmes in the UK shown in Figure 2 reveals that the number of DA starters in the UK has increased steadily in recent years (Office for Students, 2020). Number of level 6 and 7 DA starts has increased further from 19,360 in 2021/22 to 22,060 in 2022/23 (Prospects, 2023). Most of the DA starts are at Level 6 (Bachelors), with Level 7 (Masters) apprenticeships making up a smaller proportion.

Figure 2. Analysis of level 6 and 7 apprenticeships (Office for Students, 2020)
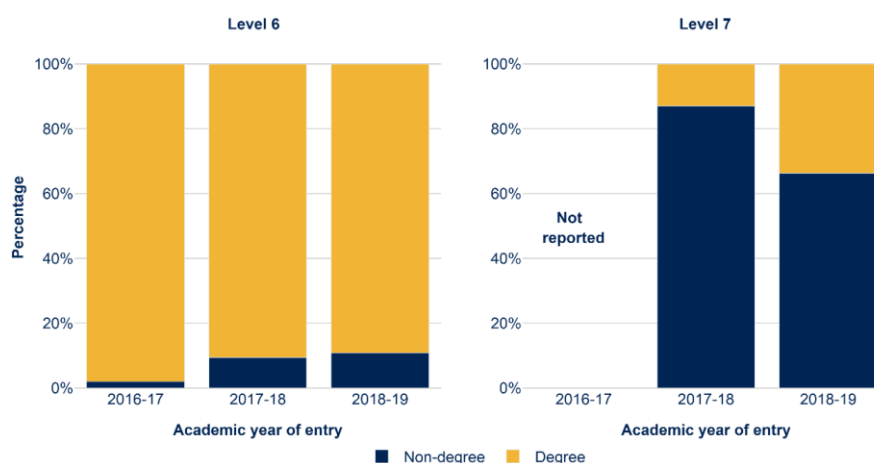
It must be mentioned that the landscape of level 6 and level 7 apprenticeship programmes across the UK reveals some disparities. As visualised in Figure 3, their distribution in terms of

both apprentice employment and study locations varies considerably. Level 6 apprenticeships gravitate towards the East of England and the Southeast. Level 7 programmes, on the other hand, lean towards London and the Southwest, potentially reflecting the higher concentration of industries and organisations demanding these advanced skillsets.

Figure 3. Analysis of apprenticeships regional distribution (Office for Students, 2020)
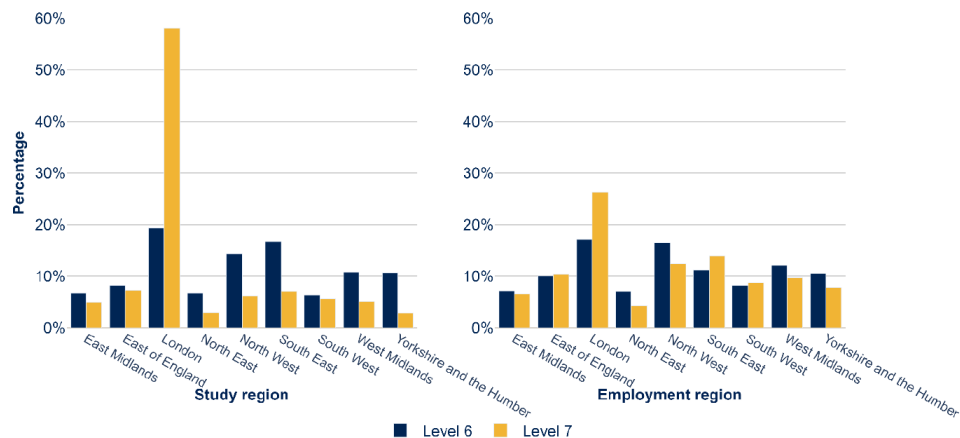
DA is an opportunity to earn a degree while gaining practical work experience and earning a salary. It involves multiple stakeholders including the employers, apprentices, university staff, and regulatory bodies. So, as it has been shown in Table I, course and curriculum design for DA faces some internal and external challenges from course provider's point of view. Among them the following three aspects are more critical for DA programmes, specifically those related to the courses whose content is changing at fast pace such as information technology or computer science:

- Employers' collaboration: This perspective focuses on how to ensure that the curriculum is relevant to the needs of employers and the workforce.
- Real-world applications: This perspective focuses on how to ensure that the curriculum prepares students for real-world challenges and opportunities.
- Technology evolution: This perspective focuses on how to ensure that the curriculum reflects the latest technological advances and prepares students for the future of work.
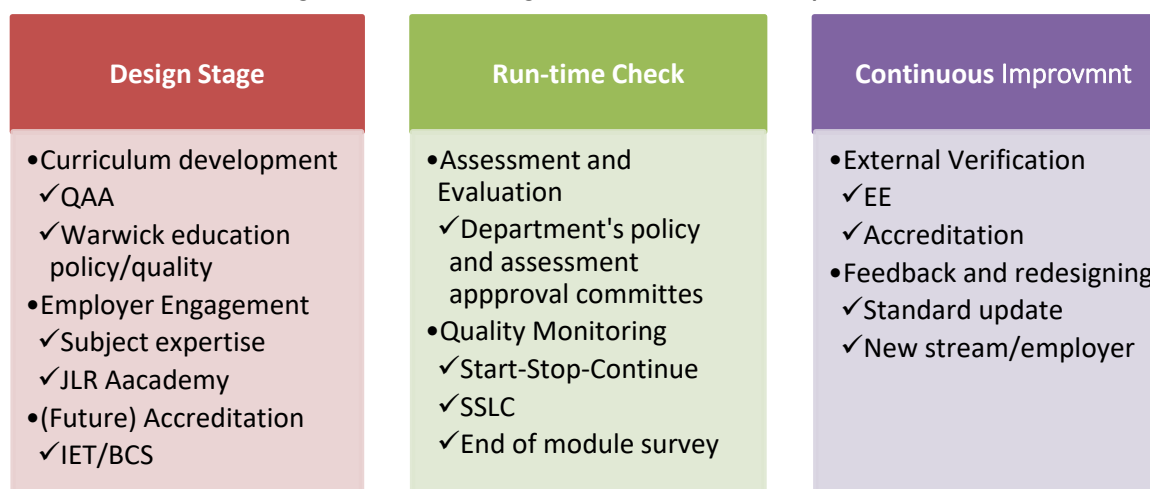
Table I. DA Programme & Curriculum Challenges: Provider Perspective

Nature of the challenge	Examples
Internal Challenges	• Teaching practices • Expected performance
External challenges	• Employers' collaboration • Intellectual properties • Real-world applications • Technology evolution

DESCRIPTION OF INTERVENTION / PRACTICE

Our Quality Assurance (QA) approach aims to deliver a high-quality, industry-aligned learning experience for the DA program. Figure 4 outlines this curriculum development cycle driven by IfATE and QAA requirements, encompassing three key stages: design, assessment & evaluation, and continuous improvement.

Figure 4. Various stages of curriculum development

Design Stage	Run-time Check	Continuous Improvmnt

•Curriculum development
  ✓QAA
  ✓Warwick education policy/quality
•Employer Engagement
  ✓Subject expertise
  ✓JLR Aacademy
•(Future) Accreditation
  ✓IET/BCS
	•Assessment and Evaluation
	  ✓Department's policy and assessment appproval committes
	•Quality Monitoring
	  ✓Start-Stop-Continue
	  ✓SSLC
	  ✓End of module survey
		•External Verification
		  ✓EE
		  ✓Accreditation
		•Feedback and redesigning
		  ✓Standard update
		  ✓New stream/employer

Design Stage: We define curriculum goals and objectives, determine content and learning activities, and secure accreditation to meet recognised standards. Critical engagement with employers ensures workforce relevance, reflected in content and module design.

Run-time Checks: This stage focuses on assessing and evaluating the curriculum's effectiveness through data on student learning outcomes (Figure 5). Continuous feedback loops inform improvement recommendations:

- *Day 1 module feedback*: Gauges initial student satisfaction with teaching approach.
- *End-of-module feedback*: Provides a comprehensive view of student learning experiences.
- *Termly SSLc meetings*: Enable structured team reflection and improvement planning.
- *Fortnightly team meetings*: Facilitate regular discussions with apprenticeship tutors.
- *Monthly employer meetings*: Gather direct feedback from industry stakeholders.

Continuous Improvement: Feedback from students, teachers, and employers is collected to identify areas for enhancement. The curriculum is updated to reflect industry changes and develop new streams or modules to meet evolving needs (Figure 5).

Figure 5. Module development and delivery life cycle

Figure 6 illustrates our comprehensive run-time feedback sharing approach, ensuring effective exchange among stakeholders and facilitating quality improvement.

Figure 6. A run-time approach for sharing feedback with relevant individuals
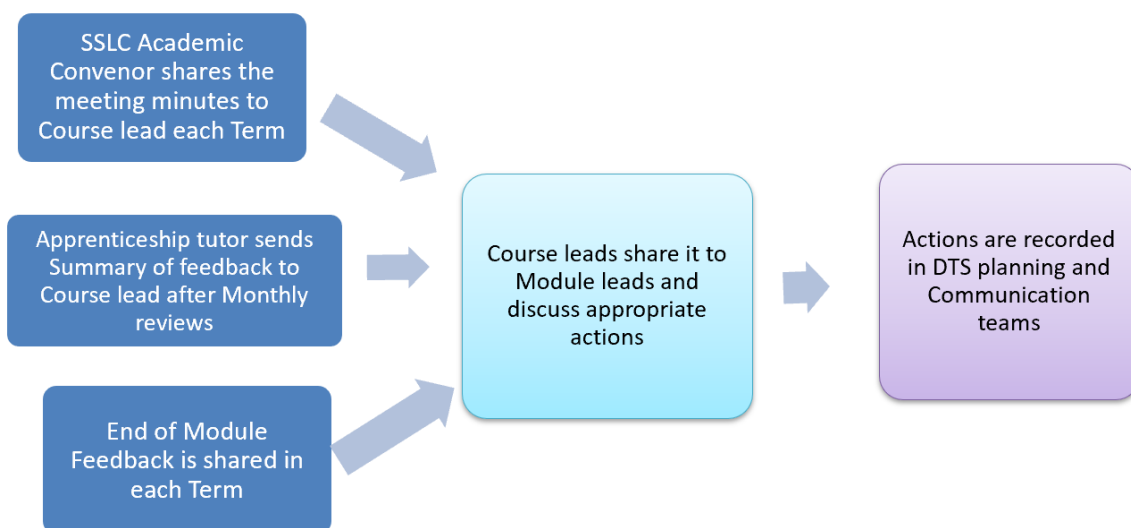
EVALUATION OF INTERVENTION / PRACTICE

Aiming to bridge the gap between the realisation of Industry 4.0 and educational organisations, we developed a degree apprenticeship in Digital Technology Solutions (DTS) programme (WMG, 2022), providing specialisation in three pathways (Software Engineering, Data Analysis and Network Engineering) in a 4-year programme. Taking QA as the heart of course development, the curriculum was designed in a close collaboration with industry where all modules were developed from scratch taken into business requirements adhering to the Institute of apprenticeships & Technical education (IFATE), Institute of Engineering & Technology (IET) and Quality Assurance Agency (QAA) benchmarks. Apprentices studied 12 core modules in Year 1 and Year 2 that sets the foundation to specialise in one of the aforementioned pathways by learning the combination of core and elective modules in Year 3 and Year 4 (WMG, 2023).

General feedback gained through the very recent NUSS 2023 survey revealed that the students in our DA programmes are generally satisfied with the teaching quality. DTS apprentices outshined their peers, with 44% graduating with 1st class degrees in 2023, compared to the university's average and the national figure of 32% (HESA, Jan23). In addition, our DA programmes have assisted the apprentices in gaining recognitions in the public as well as performing well in their company roles.

WMG and University-wide policies and update to those policies have made possible the high-quality education offering. For example, the resit assessment has always been re-working on the previous failed ones. However, the recent policy change of requiring distinct resit assessments have made measuring the learning outcomes more effective and ensure better delivery of the learning outcomes, see that assessment is part of the learning circle. Also, the establishment of mitigating circumstances policy has given the apprentices reasonable justifications to allow them the opportunity to have more time/support for completing their coursework.

The new roles established in the Department have allowed the process to be more effective and provide better guidance to staff and support to students, these include the designated academic conductor officer and their team, designated ethical approval officer, and the work-based education team. Along with other colleagues, these keys roles keep relevant practice under close examination, under relevant policies, to ensure that the DA offering is of high quality and also to establish the mechanism for continuous improvement.

CONCLUSIONS & RECOMMENDATIONS

Designing and implementing a DA requires balancing traditional HE practices with industry standards. The 20% academic contribution equals a full HE credits and must meet academic standards. Apprentices evolve during the programme, potentially increasing vocational commitment while decreasing workplace responsibilities, which differs from the traditional academic progression.

QA requirements for workplace contributions may face challenges due to mismatches between apprentices' roles and academic streams, making it hard to align KSBs and WBL elements. A QA-focused process for DA should be comprehensive and adaptable to the dynamic ecosystem, covering students, policies, teaching, assessment, and curriculum design. Effective QA should prioritise quality, undergo continuous review, and address the needs of apprentices and employers.

In conclusion, QA is vital for degree apprenticeships. Providers can develop effective QA processes based on design models while considering both academic rigor and industry requirements, ensuring flexibility to accommodate apprentices' changing needs.

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