

SOCIAL RESEARCH NUMBER: 66/2021  
PUBLICATION DATE: 07/10/2021

# Evaluation of the Degree Apprenticeship Programme: Scoping Report

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.

This document is also available in Welsh.

Title: Evaluation of the Degree Apprenticeship Programme  
Subtitle: Scoping Report

Author(s): Oliver Allies, Declan Turner, Llorenç O'Prey, Duncan Melville, Lovedeep Vaid



Allies, O. Turner, D. O'Prey, L. Melville, D. Vaid, L. (2021). *Evaluation of the Degree Apprenticeship Programme: Scoping Report*. Cardiff: Welsh Government, GSR report number 66/2021.

Available at: <https://gov.wales/evaluation-degree-apprenticeship-programme-scoping-report>

Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government

For further information please contact:

Dr. Semele Mylona  
Social Research and Information Division  
Knowledge and Analytical Services  
Welsh Government

Email: [KASEmployabilityandSkillsResearch@gov.wales](mailto:KASEmployabilityandSkillsResearch@gov.wales)

## Table of contents

List of tables.....	2
List of figures.....	2
Glossary.....	3
1.     Introduction and Background .....	4
2.     Methodology.....	12
3.     Findings.....	16
4.     Theory of Change and Logic Model .....	43
5.     Summary of Findings and Next Steps .....	54
References.....	58

## **List of tables**

Table 3.1: Degree Apprenticeship Recruitment 2018/19 and 2019/20.....	35
Table 3.2: Degree Apprenticeships – Allocation and Recruitment 2020/21 .....	35
Table 3.3: Degree Apprenticeships – Existing and New Employees 2020/21.....	36
Table 3.4: Degree Apprenticeships – Protected Characteristics 2020/21 .....	37
Table 3.5: Degree Apprenticeships – Protected Characteristics 2020/21 .....	38
Table 3.6: Degree Apprenticeships – Employers .....	39

## **List of figures**

Figure 4.1: An Example of a Linear Theory of Change .....	43
Figure 4.2: An Outcomes Pathway for the Degree Apprenticeship Programme .....	45
Figure 4.3: Linear Theory of Change .....	46

## **Glossary**

<b>Acronym/Initialism/Keyword</b>	<b>Definition</b>
CEPR	Centre for Economic Policy Research
CIPD	Chartered Institute of Personnel and Development
EconLit	Economics Literature
ERIC	Education Resources Information Center
ESW	Essential Skills Wales
FE	Further Education
HE	Higher Education
HEFCW	Higher Education Funding Council for Wales
HEI	Higher Education Institution
HESA	Higher Education Statistics Agency
HNC	Higher National Certificate
HND	Higher National Diploma
ILO	International Labour Organization
IZA	Institute of Labor Economics
NTfW	National Training Federation for Wales
OECD	Organisation for Economic Co-operation and Development
PSRB	Professional, Statutory and Regulatory Body
QAA	Quality Assurance Agency for Higher Education
QCF	Qualifications and Credit Framework
RPL	Recognition of Prior Learning
RSP	Regional Skills Partnership
SME	Small and Medium-Sized Enterprise
SSC	Sector Skills Council
STEM	Science, Technology, Engineering and Mathematics
VET	Vocational Education and Training
WAO	Wales Audit Office
WBL	Work-Based Learning
WIMD	Welsh Index of Multiple Deprivation

## 1. Introduction and Background

### Introduction

- 1.1 In February 2020 the Welsh Government commissioned Wavehill and the Learning and Work Institute to undertake a formative evaluation of the Degree Apprenticeship Programme in Wales to assess its effectiveness, efficiency and impact. This report presents the culmination of research findings from the scoping phase of the evaluation.
- 1.2 Following its identification as a key aim in the Welsh Government's Apprenticeship and Skills policy plan (2017) and as an explicit recommendation in the Diamond Review of Higher Education Funding (2017), the Degree Apprenticeship Programme was launched in Wales in January 2018.
- 1.3 The Welsh Government initially grant-funded the Higher Education Funding Council for Wales (HEFCW) approximately £20million for the first three years of the programme, with the first apprentices expected to enrol in the programme in September 2018.
- 1.4 The Degree Apprenticeship Programme delivers against a wide range of policy objectives; however, the initial focus has been placed upon supporting:
  - The realignment of the apprenticeship system to deliver higher-level skills driven by the needs of employers and the Welsh economy, as articulated through ministerial priorities.
  - Progressions from the existing apprenticeship programme into higher education, and, in turn, greatly improving the credibility and accessibility of the Welsh Government's apprenticeship offer for those with higher aspirations, particularly those who have not followed the sixth form/college route.
- 1.5 In 2016, in anticipation of a Degree Apprenticeship Programme in Wales, the HEFCW invited Higher Education Institutions (HEIs) to submit plans to develop qualifications that could become part of an apprenticeship framework in Wales within the subjects of IT/computing, engineering, and advanced manufacturing. These areas had been identified by Regional Skills Partnerships (RSPs) as sectors

in which there were skills shortages in technical and highly skilled occupations that drive productivity.<sup>1</sup>

- 1.6 In response, the following areas were identified as fitting with Welsh Government priorities where qualifications could be developed and form part of a degree apprenticeship:
  - Control and instrumentation
  - Data science
  - Civil engineering
  - Digital media
  - Software engineering
  - Mechanical engineering
  - Manufacturing engineering
  - Cybersecurity.
- 1.7 Following this process, degree apprenticeship frameworks in Digital and Engineering and Advanced Manufacturing in the aforementioned areas were commissioned by the Welsh Government. Whilst publication of the Digital framework was achieved on 29<sup>th</sup> April 2018, there were delays in the completion of the Engineering and Advanced Manufacturing framework. Consequently, proposals for degree apprenticeships in the first year of the programme were associated with the Digital framework only.
- 1.8 The HEFCW has overseen annual competitive bidding rounds to fund individual programmes of delivery by HEFCW-funded HEIs. Collaboration in delivering the degree apprenticeships between HEIs, Further Education (FE) colleges, and other Work-Based Learning (WBL) providers is prioritised by the HEFCW within the guidance.
- 1.9 All bar one of the HEFCW-funded HEIs submitted a proposal to the programme for the £3million of funding (based on an allocation of £27,000 per degree apprentice for their entire degree apprenticeship) made available for the first year.
- 1.10 In March 2019, HEFCW-funded institutions were invited to submit proposals for £5million of funding for 2019/20 against the three priority areas of Digital (in the

---

<sup>1</sup> [Aligning Apprenticeships to the Needs of the Welsh Economy](#) (2017)

Digital Degree Apprenticeship (Wales) Framework) and Engineering and Advanced Manufacturing (in the Engineering and Advanced Manufacturing (Wales) Framework). In 2020 the programme secured £12million of funding for 2020/21.<sup>2</sup> The initial phase of funding for the Degree Apprenticeship Programme comes to an end in 2021.

## **The Evaluation**

1.11 A series of specific objectives have been set for the evaluation<sup>3</sup>, namely to:

- Develop a theory of change for the programme.
- Assess the current evidence base underpinning the development and delivery models of degree apprenticeships internationally.
- Assess the performance of the programme against Welsh Government and HEFCW aims and objectives, making recommendations for improvements.
- Review whether and how well the programme has met the objectives of including the Well-being of Future Generations Act, Equalities and the Welsh Language Strategy.
- Assess the extent to which Professional, Statutory and Regulatory Body (PSRB) requirements, as a feature of degree apprenticeships, influence employer and/or apprentice engagement with a programme, and whether this aspect is appropriately considered in framework and curriculum development.
- Investigate and assess (with regard to the Higher Education (HE) sector, employers, and apprentices):
  - Demand, progression and recruitment
  - Benefits, motivation and engagement
  - Partnership and collaboration.

---

<sup>2</sup> [HEFCW \(2020\) Degree Apprenticeships in Wales and Proposals for Funding 2020/21](#)

<sup>3</sup> Welsh Government (2019) *Specification for: Evaluation of the Degree Apprenticeship Programme*, Cardiff, Welsh Government.

- Assess the value of Essential Skills Wales (ESW) as an element of degree apprenticeships, and the appropriateness of current ESW assessment practice and/or assessment of individual learning needs.
- Review the processes used to identify future programme priorities and make recommendations as to how these can be improved.
- Consider and provide a range of options for sustainable ways of funding the Degree Apprenticeship Programme.
- Develop a framework for evaluating the longer-term impact of degree apprenticeships, including a value-for-money aspect with regard to funding spent on programme delivery versus the return in terms of outcomes achieved.

1.12 The evaluation is being delivered over two phases:

- A scoping phase (culminating in this report) that includes evidence gathered through the literature review and via initial engagement with strategic stakeholders involved in the planning, implementation, management and delivery of degree apprenticeships.
- A final phase that will involve fieldwork with employers, apprentices, HE providers, FE colleges, and WBL providers to capture feedback on the experiences of delivering/participating in the Degree Apprenticeship Programme.

### **COVID-19 and the Associated Impact**

1.13 The progress of the Degree Apprenticeship Programme has been affected by the COVID-19 pandemic. On 20<sup>th</sup> March 2020, FE colleges and HEIs were closed in response to the pandemic. On 23<sup>rd</sup> March 2020, the UK Government announced the first national lockdown.<sup>4</sup> For HEIs this necessitated a rapid transition in the provision of learning to a remote, digital offer, whilst measures were established to allow the reopening of universities for some in-person learning in September 2020. The

---

<sup>4</sup> See [UK Government speeches – PM address to the nation on coronavirus 23<sup>rd</sup> March 2020](#) for full details on the announcement.

subsequent ‘firebreak’<sup>5</sup> and further national lockdowns (from 20<sup>th</sup> December 2020) have led to further restrictions on in-person learning within HEIs.

1.14 Reflecting on the impact of COVID-19, in May 2020 the Quality Assurance Agency (QAA) circulated a paper (QAA, 2020) to highlight some of the key challenges that providers are identifying, and the sources of support being used. The paper identified three key elements for providers to reflect upon (which will be reflected in the approach to the evaluation):

- their ability to adapt their teaching/training
- the capacity of the employer to continue to provide an appropriate setting for work-based learning
- the extent to which the requirements of the apprenticeship can continue to be delivered.

1.15 A key longer-term challenge identified in the paper is that of maintaining the integrity of the apprenticeship and its roots in WBL. While academic delivery can usually continue in a distance/online learning format, the work-based links are dependent on the employment situation and whether apprentices are able to gain the experience required or will be able to do so in the near future. The extent to which this affects delivery will vary depending on the nature of the course.

1.16 The impact of and response to the pandemic have therefore been included as a further objective for the evaluation.

### **Welsh Parliament Economy, Infrastructure and Skills Committee Inquiry into Degree Apprenticeships**

1.17 In November 2019 the Senedd Cymru launched an inquiry that examined the operation of the initial phase of the Degree Apprenticeship Programme and the future direction and potential of degree apprenticeships. The launch of the inquiry coincided with the commencement of the commissioning process for this evaluation.

1.18 The committee received 24 responses to its consultation from a range of organisations in the FE and HE sector and from employers, and the review

---

<sup>5</sup> Enforced between 23<sup>rd</sup> October and 9<sup>th</sup> November 2020.

culminated in a report (Senedd Cymru, 2020) published in November 2020 with 12 recommendations for the programme. The Welsh Government has now issued its response to these recommendations, accepting or partially accepting all of them<sup>6</sup>:

- The Welsh Government should develop a degree apprenticeship framework standard that requires the developer to set out how the framework meets the Quality Assurance Agency (QAA) expectations for a degree apprenticeship.
- The Welsh Government should enable, fund and support more formal structures or groups for relevant stakeholders and industry to come together to develop and refresh degree apprenticeship frameworks through the use of their detailed occupational and sectorial expertise.
- The Welsh Government should set out its approach to deciding which future degree apprenticeship frameworks to develop and fund and how it will manage any potential conflict between regional coherence, coherent learner pathways, and economic demand.
- The Welsh Government, through the Wales Advisory Apprenticeship Board, should consider broadening the range of degree apprenticeships available, including by supporting, funding and enabling the development of degree apprenticeship frameworks that are not delivered using public funding, where there is an appetite from employers for this.
- The Welsh Government should clarify how its original £20million funding commitment to the three-year degree apprenticeship pilot will be met.
- The Welsh Government should justify retaining two different funding models, including a rationale for continuing with the procurement model for awarding contracts to apprenticeship providers; set out how this is compatible with having coherent learning pathways from level 2 to level 6 and how the procurement of the new apprenticeship provision will address this; and give assurances as to the reliability and efficiency of the contractual approach, including that lessons have been learned from the discontinued Job Support Wales procurement.

---

<sup>6</sup> The Welsh Government response to the EIS Committee's report on Degree Apprenticeships can be found here: [Welsh Government response to Degree Apprenticeships](#)

- The Welsh Government should provide clarity to the committee with regard to the costs of degree and non-degree apprenticeships in similar subject areas.
- The Welsh Government should develop and utilise a costing model that is consistent for all apprenticeship provision from foundation to degree apprenticeships and that reflects variations in the costs of delivery across different levels and subjects.
- The Welsh Government must develop or commission a strategy for widening access to degree apprenticeships for underrepresented groups.
- The Welsh Government should set out how it will a) address concerns surrounding ensuring that degree apprenticeships fully consider the Welsh language and bilingualism, and b) collect adequate data on degree apprenticeships completed in the medium of Welsh.
- The Welsh Government should develop a strategy for promoting degree apprenticeships that includes outreach to teachers and schools with regard to the opportunities offered by degree apprenticeships, and also ensure that careers information and guidance include degree apprenticeships.
- The Welsh Government should introduce a degree apprenticeship certificate, issued by Apprenticeship Certification Wales, which would ensure that claims to a degree apprenticeship have met all of the on-the-job and off-the-job training and academic requirements. It should complement the institution's own degree certificate.

1.19 Given the degree of alignment between the inquiry and this evaluation, it is important that the key findings and recommendations of the inquiry are taken into consideration in the design of the evaluation framework and the discussion areas for the remainder of the evaluation.

### **QAA Review of Degree Apprenticeships in Wales**

1.20 In August 2020 the QAA were commissioned by the HEFCW to undertake a review of HEFCW-funded degree apprenticeships in Wales for the 2020–21 academic year. The review is designed to be a developmental review that is focused on HE providers' delivery of the programme (including WBL). There will be a sector-wide

report published that will provide an anonymised summary of the provision and findings for all of the reviews and make recommendations for the future delivery of apprenticeship programmes. It is anticipated that the review will complement this evaluation.

## **Report Structure**

1.21 The remainder of this report is structured as follows:

- **Section 2** outlines the methodological approach used thus far in the evaluation.
- **Section 3** presents findings from the scoping phase of the evaluation.
- **Section 4** sets out an initial theory of change for the programme, which informs the key areas for investigation for the remainder of the evaluation.
- **Section 5** summarises the findings from the evaluation, proposes initial recommendations and outlines the next steps for the evaluation.

## 2. Methodology

### Methodological Approach

2.1 Immediately following the inception meeting to commence the evaluation of the Degree Apprenticeship Programme, the first national lockdown in response to the COVID-19 pandemic was announced by the UK Government. The challenges that this presented to Higher Education Institutions (HEIs), employers, and policymakers led to an initial postponement in the evaluation until July 2020.

2.2 Since recommencing the evaluation, the following methods, as part of the scoping phase of the evaluation, have been undertaken.

#### *Scoping Interviews*

2.3 A series of scoping interviews, predominantly on a one-to-one basis (and conducted virtually via Microsoft Teams or other videoconferencing software), have been undertaken throughout the scoping phase of the evaluation. Initially, preliminary scoping interviews were held (in August/September 2020) with six key representatives of the Welsh Government and the HEFCW. The interviews explored the rationale that underpins the Degree Apprenticeship Programme and the specific elements of its design and implementation, in addition to perceptions of progress in delivery. Furthermore, they provided the opportunity to discuss the priorities for the remainder of the evaluation.

2.4 A final phase of scoping interviews took place (November/December 2020) with 16 lead representatives for degree apprenticeships from each of the HEIs, in addition to a representative from Universities Wales. Again, given the COVID-19 pandemic, all interviews were undertaken by virtual means. The contacts for engagement were identified by the Welsh Government and the HEFCW. A list of those interviewed and a copy of the discussion guide used in those interviews are available on request. The interviews gathered perspectives on the design and scope of the Degree Apprenticeship Programme. Each discussion then explored the approach that each HEI had taken in response to the opportunity to participate in the programme and the rationale for responding in this manner.

2.5 Interviewees reflected on their progress in delivering the programme and how their approach to delivery had evolved. Moreover, they provided perspectives on the impact of the COVID-19 pandemic upon progress in delivery. Approaches to the capture of monitoring information were also confirmed. The interviews culminated in an exploration of plans and aspirations for degree apprenticeships in Wales, including any thoughts on whether the programme should be expanded and, if so, in what manner and how this could be financed.

*Desk-Based Research*

2.6 Alongside scoping interviews, an extensive review of a host of documentation associated with the Degree Apprenticeship Programme has been undertaken. This has involved a review of key policy, key documentation associated with the programme's design, programme-related updates (via HEFCW circulars), and programme-wide monitoring information, alongside a review of evidence gathered as part of the examination of the Degree Apprenticeship Programme undertaken by/on behalf of the Economy, Infrastructure and Skills Committee of the Senedd Cymru.

*Literature Review*

2.7 A review of literature on degree apprenticeships and apprenticeships at higher levels globally and within other home nations of the UK was conducted between August 2020 and January 2021 to explore the context, development, design (and the role of employers in that design) and success of similar programmes elsewhere. The review aimed to identify:

- The prevalence of a degree apprenticeship-type model in a country
- How demand and supply for those apprenticeships are managed
- The role, influence and engagement of employers in those apprenticeships
- Any evidence of impact or cost–benefit analysis from the models adopted.

2.8 The review focused on evaluation evidence from across a wide range of sources, from peer-reviewed academic research to grey literature, including governmental evaluations. It involved a review of academic databases including the ERIC,

EconLit, Web of Science, and Google Scholar, as well as the bibliographies of specialist research institutes including the OECD, the CEPR, IZA, and the ILO.<sup>7</sup>

2.9 The approach drew on methodological filters to focus searches systematically and on other reviews of the evidence. This approach necessitated an expansion, however, due to a paucity of apparent research synthesis in this field. Thereafter, we broadened the search criteria a further two times, firstly to remove methodological filters and then to be more sensitive to apprenticeship research as a whole.

2.10 There have been challenges associated with this process and it may be possible that within broader apprenticeship research there are evaluations of programmes that contain elements of tertiary academic provision or engagement with HEIs. Linguistically, there is significant variation in the language and terminology used to describe apprenticeships, with degree apprenticeships being nomenclature solely in the UK (in England and Wales only). The review is ongoing (with a summary presented within section 3 of this report). Once the research appears to have exhausted the search and screened citations, the research will be critically appraised for the robustness of their research designs, drawing on an adjusted version of the Maryland Scientific Methods Scale (SMS).

#### *Theory of Change Workshop*

2.11 Developing a theory of change is an important feature of the scoping phase of an evaluation and it will be used to explain how the investment and activities undertaken are intended to lead to the production of a series of results and outcomes that contribute towards the impact and ultimate goal of the Degree Apprenticeship Programme. To assist in the development of the theory of change, a workshop was held with representatives from the Welsh Government, the HEFCW, and Universities Wales. The questions explored during the workshop were:

- What is the goal of the Degree Apprenticeship Programme? What's the outcome that the programme is seeking to achieve?

---

<sup>7</sup> ERIC – Education Resources Information Center, OECD – Organisation for Economic Co-operation and Development, CEPR – Centre for Economic Policy Research, IZA – Institute of Labor Economics, ILO – International Labour Organization.

- What are the intermediary outcomes that we can use to map the progress that the programme is making towards that goal?
- What assumptions have been made that underpin the theory of change? What are the barriers that need to be overcome and what are the key enablers?

2.12 The evidence gathered via the workshop has informed the design of an initial theory of change for the programme (section 4), alongside insight from the literature and interviews. The findings from the theory of change provide the framework for the (remainder of the) formative and process evaluation, informing the key evaluation questions for exploration as set out within the evaluation framework.<sup>8</sup>

---

<sup>8</sup> The evaluation framework is available on request

### 3. Findings

#### Introduction

3.1 This section presents the findings from the research undertaken during the scoping phase of the evaluation. It specifically draws on evidence obtained via the review of policy and programme-related documentation, a literature review of international approaches to degree apprenticeships, management information, and evidence gathered via the scoping interviews.

#### International Models of Degree and Higher-Level<sup>9</sup> Apprenticeships

3.2 Internationally, there has been a trend towards expanding apprenticeship opportunities, including in provision that offers tertiary academic content (Govender and Valand, 2021). The respective fields of Vocational Education and Training (VET) and Higher Education (HE) have traditionally been viewed as serving different economic and social objectives. In many countries this has served to create dual systems, with VET providers and Higher Education Institutions (HEIs) largely operating independently of each other (Beach, 2019).

3.3 Recently, the relative merits and role of vocational training have been debated internationally. There has been increasing recognition of the value of vocational education in addressing skills gaps and preparing learners for the world of work (Ervin et al., 2019). There have been corresponding debates surrounding the importance of expanding different routes to develop higher-level knowledge and skills, and in promoting greater parity between vocational and academic training and education.

3.4 Internationally, these and other debates have led to significant reforms of educational systems, including around apprenticeships. These have included expanding apprenticeship opportunities generally and giving learners an increased number of routes into different professions and trades. Additionally, these have led to the expansion of apprenticeship programmes that incorporate higher-level skills and training provision that traditionally formed part of undergraduate or postgraduate degree courses. In many cases, these have also included making

---

<sup>9</sup> Internationally, various terms are used in relation to apprenticeships at a degree level, including 'higher-level'.

traditional degrees more relevant to the world of work with the inclusion of greater vocational training. These reforms have also served to weaken the traditional distinctions and institutional divides between VET providers and HEIs (Ervin et al., 2019).

- 3.5 There are significant differences in the nature and extent of apprenticeship system reforms internationally. These include in the inclusion of tertiary academic content and knowledge within apprenticeship courses, and in the role that HEIs have in coordinating and delivering apprenticeships. Even in countries that have developed broadly similar approaches to apprenticeships there can be significant variation in the organisation and content of training and teaching. Across Austria, Germany, and Switzerland, for example, they have developed distinct organisational forms that connect VET providers, HEIs, and employers. Pre-existing relationships between HEIs, VET providers, and broader industry and business have also served to shape the nature and direction of reforms of apprenticeships (Bauer et al., 2016).
- 3.6 Together, this has led to significant variation in the structure, content and focus of apprenticeship models internationally. Furthermore, there is significant variation within countries. This is perhaps exemplified in the example of Germany, wherein there is considerable diversity in the precise nature and extent of local apprenticeship provision.

#### *Germany*

- 3.7 Apprenticeships are an integral part of the educational system, with federal governments and chambers of commerce closely involved in regulating content and quality. Over 40 per cent of general secondary school leavers in Germany complete an apprenticeship, which can last up to three years. Apprenticeships have traditionally been delivered largely through vocational schools and colleges; however, there has been a gradual expansion of higher-level apprenticeships including programmes that provide post-secondary content. The first programmes to encompass higher skills were created via a bottom-up approach by local stakeholders that found a niche in the grey area between HEIs and VET providers (Wieland, 2015).

3.8 Having grown and expanded, these programmes seek to combine two distinct learning environments, namely a scientific grounding within HEIs and practical training within the workplace (Deißinger, 2000). The programmes usually lead to a bachelor's degree in three to four years and are delivered by lecturers, trainers from industry, and sometimes vocational schoolteachers (Wieland, 2015). These programmes are expanding rapidly and attracting increasing attention from major stakeholders, including from business and industry. Moreover, there is a significant degree of flexibility in the specific forms of coordination between firms and educational organisations (e.g. Reischl, 2008).

*Austria*

3.9 The approach in Austria has sought to strengthen and extend provision within an existing network of VET colleges. This has served to create a hybrid institutional structure that provides vocational and academic training side by side. They combine learning processes from both VET providers and HEIs that straddle the boundary between VET and HE as well as between upper secondary and post-secondary forms of learning. The qualifications that students receive through their apprenticeship are well regarded, and VET colleges enjoy an excellent reputation with both young people and Austrian employers (Culpepper, 2007). This approach has allowed VET colleges to become firmly established and expand into territory traditionally covered by HEIs. In the UK there has been the reverse, wherein HEIs have been invited to expand vocational provision through degree apprenticeships.

*Switzerland*

3.10 A similar approach has been undertaken in Switzerland. The Swiss sought to create an integrated model that brought together a range of existing stakeholders and institutions within a new organisational structure. Higher VET colleges, higher technical schools, and higher economic and administrative schools were brought together under the umbrella of Universities of Applied Sciences (UAS). Together with the UAS, a new certificate programme was introduced, namely the vocational baccalaureate. The configuration systematically links upper secondary VET with post-secondary HEI provision but is delivered via VET providers (Trampusch, 2010).

### *United States of America*

3.11 The experience of the United States of America has been very different. Historically, there has been little engagement with apprenticeships overall, and most existing provision has focused on construction and manufacturing. Whilst centralised apprenticeship programmes exist at the federal level, there is significant local variation, with much programming organised on a state-by-state basis. Furthermore, there is considerable diversity within programmes in the relationships and organisational structures between private sector organisations, colleges, and HEIs. There are examples of programmes being led by industry, HEIs, and VET providers that incorporate some form of tertiary academic content (Messing-Mathie, 2015).

### *International Evidence Base on Impact*

3.12 There appears to be little rigorous international research exploring the impact of degree apprenticeships. The literature review found no systematic reviews, meta-analyses or broader reviews, for example, as well as no apparent international research that explicitly evaluates degree-level or higher apprenticeships.

3.13 This apparent paucity of research and evidence could be related to a number of factors. The broader evidence base supporting our understanding of traditional apprenticeships is generally weak. Overman et al. (2015), for example, found only one experimental study exploring the impact of an apprenticeship programme (Schaeffer, 2014). This study explored the impact of a programme aimed at high-risk young offenders, support that is qualitatively and quantitatively different from most traditional apprenticeships. As degree apprenticeships themselves are a relatively novel innovation, it is unlikely that the evidence base supporting the approach would have addressed the limitations within research on more traditional apprenticeships.

3.14 There is, however, broader research that could provide an indication of the effectiveness of apprenticeship provision generally. There is an existing body of evidence of variable quality that explores economic returns, including some studies that look directly at apprenticeships (e.g. Overman et al., 2015). These evaluations typically find large, significant, positive wage and employment gains to individuals who have participated in apprenticeships in comparison to individuals who have not.

3.15 There are potential limitations with comparative analysis and drawing on international evidence in understanding the Welsh context. The significant heterogeneity in the systems and approaches with respect to apprenticeships ultimately leads to variations in the precise education and training that young people receive. In terms of comparative analysis, extensive and complex heterogeneity serves to weaken the generalisability of research and evidence emanating from specific contexts or programmes. This issue has also been raised by the Wales Audit Office (WAO) (2019), who identify that the increasing difference in apprenticeships across the UK and in other countries presents challenges in generalising from research on the impact of apprenticeships.

### **The Policy Context for Degree Apprenticeships in Wales**

3.16 The Welsh Government (2017a) published its Apprenticeship Skills policy plan in 2017 to meet the needs of the Welsh economy and its people. The Welsh Government set a target of achieving 100,000 apprenticeship starts during the 2016–2021 term of the Welsh Assembly. Within the plan, the Welsh Government state that the priorities for apprenticeships will be to:

- address acute higher-level skills shortages
- support an all-age approach
- support jobs and growth
- achieve higher quality and benchmarking
- improve access, equality and diversity for underrepresented groups and those with additional learning needs
- deliver apprenticeships in Welsh
- develop skills pathways into the wider educational system, especially between higher education and employer education, with degree apprenticeships
- increase collaboration and partnership between all stakeholders, and
- establish a new system for framework review and development.

3.17 A key aim within the plan is the commitment to further developing degree apprenticeships in Wales, particularly in relation to apprenticeships in Science, Technology, Engineering and Mathematics (STEM) occupations.

3.18 Following publication of the apprenticeship plan, recommendations from the Diamond Review (2017) of Higher Education Funding and Student Finance Arrangements in Wales were published in July 2017. The panel associated with the review considered how best to enhance opportunities for students pursuing work-based or occupation-related higher education programmes. They saw an '*opportunity for Wales to develop degree apprenticeships or employer-sponsored provision in a way that makes the slogan 'learn while you earn' a reality*'. In addition, they viewed their recommendations to be a mechanism intended to enhance partnership working between FE colleges, HEIs, training providers, and employers.

3.19 The review included the explicit recommendation for the '*Welsh Government to support financially the development of new employer-sponsored HE programmes or higher/degree apprenticeships involving universities, colleges or training providers, through new public investment of £1million per annum*'.

3.20 In their response, the Welsh Government accepted this recommendation, stating: '*We agree the need to increase the availability of higher-level apprenticeship programmes, especially in key areas such as engineering and advanced manufacturing. In the light of future budgetary settlements for the Welsh Government, further consideration will be needed to decide if the proposed funding is sufficient to deliver the objectives. To aid this we will commit £500k for the development of relevant degree level content to support higher level apprenticeship frameworks during 2016/2017. From 2017/2018 onwards, we will commit a further £5m to test and undertake wide-scale piloting of these arrangements*' (Welsh Government, 2018).<sup>10</sup>

3.21 Published in September 2017, the Welsh Government's national strategy, i.e. Prosperity for All<sup>11</sup>, establishes the framework for economic policy in Wales. The strategy recognises five areas as having the greatest potential contribution to long-

---

<sup>10</sup> [The Welsh Government response to the recommendations from the Review of Student Support and Higher Education Funding in Wales \('the Diamond Review'\)](#)

<sup>11</sup> [Welsh Government Prosperity for All National Strategy](#)

term prosperity and well-being. One of these areas is Skills and Employability. The vision within this priority is for '*an economy founded on high quality skills, giving businesses the resources to grow and innovate, and people the ability to prosper*'. To fulfil this vision, the strategy focuses on lifelong accessibility to training and the need for complementarity in the main routes to higher skills (including apprenticeships, work-based learning, and further and higher education).

3.22 The Wales Audit Office (WAO) (2019) is responsible for evaluating how well the Welsh Government have met their sustainable development principle when setting their well-being objectives and taking steps to meet them regarding the Well-being of Future Generations Act (2015). The Act offers guidance as to how Wales should improve the social, economic, environmental and cultural well-being of Wales through seven well-being goals that are to ensure:

- A prosperous Wales
- A resilient Wales
- A healthier Wales
- A more equal Wales
- A Wales of cohesive communities
- A Wales of vibrant culture and thriving Welsh Language
- A globally responsible Wales

3.23 One of three policy areas of focus (that contribute to 'Prosperity for All') for the WAO report is the aim of having 100,000 high-quality apprenticeship starts in the 2016–2021 term of the Welsh Assembly with the report summarising findings from work undertaken between February and May 2019. It noted that by increasing the proportion of **higher apprenticeship** starts from 46 per cent in 2012 to 58 per cent in 2018 it will support the development of higher skills for the Welsh economy and for individuals to gain and remain in employment. Moreover, there was positive appraisal in terms of the 'all-age' focus of the apprenticeship programme, with increases to 62 per cent of all apprentices being over 25 years of age from 53 per cent in 2012.

3.24 There were several areas outlined in the report as opportunities for improvement. These included **ensuring that funding is sustainable long-term**. The report identified increasing the demand for apprenticeships, particularly in more costly STEM subject areas and at higher levels, leading to difficult decisions regarding funding certain sectors/levels.

3.25 The report also recommended that the Welsh Government work towards a better understanding of the **actual cost to employers of supporting an apprentice**. This would better inform decisions regarding future support and employers' capacity to support more apprentices.

3.26 The report identified the opportunity to **understand the impact of apprenticeships upon careers and earnings**. The report described a lack of evidence on the long-term outcomes for people completing different types of apprenticeship in terms of career and pay progressions. Furthermore, the report noted the increasing differences in apprenticeships across the UK and in other countries, which presented challenges in generalising from research undertaken elsewhere on the impact of apprenticeships.

3.27 A further area of opportunity related to the **balance of apprenticeships that go to new recruits rather than to existing employees to increase their skills**. The WAO report that over half of apprentices are already working for their employer when they start an apprenticeship. The WAO raised the concern that whilst this offers advantages for accrediting existing skills, it is not clear as to whether they (existing employees) are learning new skills. However, it should be noted that on the Degree Apprenticeship programme, recognition of prior learning (RPL) takes account of existing knowledge, understanding or skills that a Degree Apprentice may possess.<sup>12</sup> Through this process, potential duplication and repetition of learning is avoided, enabling existing employees to be developed to learn new skills, knowledge and behaviour. Further, HEFCW's (2021) Circular inviting HEI's to submit proposals for funding, states that funding could be adjusted downwards based on modules not completed, withdrawals or if the total number of credits for the course is less than 360 credits due to RPL.

---

<sup>12</sup> See the [CQFW e-brochure](#) for further details.

3.28 The WAO report also proposed that work was needed in order to support a faster pace of sectorial review of qualifications frameworks for apprenticeships to meet the demand. **Gender equality within STEM apprenticeships** was also questioned. The report proposed increased collaboration **on programmes to encourage female participation in the Science, Technology, Engineering and Mathematics (STEM) sector** to address the disparity.

3.29 The opportunity regarding gender equality is echoed in the Senedd Cymru's Economy, Infrastructure and Skills Committee report (2018), reviewing the Welsh Government's work on apprenticeships during the first year of the pilot programme. The report recommends that the Welsh Government ensure that there is better and more equitable representation from underrepresented groups, and highlights how work is to be undertaken to increase gender equality, as well as to increase engagement among those with a disability and among young people. The National Assembly also state that the Welsh Government need to set Welsh language targets for post-compulsory education and apprenticeships.

#### *Welsh Language*

3.30 The Welsh Government have set a target of one million Welsh speakers by 2050 and believe that apprenticeships will support the fulfilment of this aim (thereby aligning with the Welsh Government's Welsh Language Strategy and Cymraeg 2050 ambitions). Welsh and bilingual apprenticeships should support a seamless opportunity to use Welsh and transition from statutory education to the workplace and within industry across Wales.

3.31 The Welsh Government have set targets for bilingual apprenticeships in childcare, construction and agriculture, wherein the Welsh language is vital to delivering effective services and supporting people in feeling comfortable about communicating in the Welsh language. Moreover, there is the plan to expand bilingual apprenticeships in other industries so as to further support the Welsh language target and they acknowledge that better recording and better monitoring of Welsh and bilingual apprenticeships are needed in order to support a fuller understanding and comparison between the medium of learning and the language skills available for use in the workplace (Welsh Government, 2018a).

3.32 In response to recommendations from the Economy Infrastructure and Skills Committee (see section 1 of this report), and to support HEIs to develop a robust approach to Welsh language and bilingualism within their Degree Apprenticeship programmes, HEFCW is working jointly with Coleg Cymraeg Cenedlaethol to share its Welsh-medium Action Plan 2050 with Degree Apprenticeship leads in each HEI. This provides a strategic approach to skills development modelling for apprenticeship providers, designed to increase rates of progression, and support for Welsh language skills development socially, and in the workplace. This approach is consistent with the main apprenticeship programme.

## **Programme Design**

### *Sectorial Priorities*

3.33 Alongside a desire to develop degree apprenticeships, Welsh Government (2017a) policy placed an emphasis on an expansion in, and the uptake of, apprenticeships (at all qualification levels) in Science, Technology, Engineering and Mathematics (STEM) occupations.

3.34 For degree apprenticeships there was a specific focus within STEM occupations upon IT/computing, engineering, and advanced manufacturing. These sectors were identified (as outlined in section 1 of the report) by RSPs where skills shortages in technical and highly skilled occupations that drive productivity were most acute.

3.35 Whilst these sectors were identified as being of the greatest need, males traditionally predominate them. Indeed, the WAO (2019) report cited admissions data that showed 10 times more men than women starting apprenticeships in engineering in 2017/18.

3.36 It is understood that the existing gender imbalance within the target sectors was a concern for those involved in the design of the programme. Targeting these sectors would potentially undermine the ability to widen access to and promote equality of opportunity. However, and in alignment with the recommendations of the WAO report, policy officials sought the pursuit of approaches that encourage female participation within STEM subjects to address this disparity.

### *Funding Model*

3.37 Following a period of engagement and discussion with a range of organisations including existing apprenticeship providers, FE networks, and HEIs, the fact that degree apprenticeships would require a degree-level qualification that only HEIs (in Wales) are able to award led to the grant funding of the HEFCW being identified as the most viable route for the programme.

3.38 The decision to offer grant funding to the HEFCW for delivering the Degree Apprenticeship Programme was itself not without risk. There were concerns (as reiterated in the recent Senedd Cymru inquiry) that the approach might create a divide in the apprenticeship network (with apprenticeships at lower levels delivered through the WBL network) and undermine potential continuity in the learner pathways (and particularly progression through the various levels of apprenticeships). To support delivery, the HEFCW set out within the HEFCW circular inviting proposals for funding (HEFCW 2018, 2019 and 2020)<sup>13</sup> the importance of collaborating with FE colleges and WBL providers. Encouraging collaboration may have also reduced the risk of continuity in learner pathways being undermined.

3.39 Amongst HEIs engaged as part of the scoping exercise, they broadly welcomed this funding model and felt it to be the most suitable for the programme. Furthermore, stakeholders reported a sense of comfort from WBL providers of this model through unofficial discussions during the programme design. However, the Senedd inquiry identified concerns, primarily from the National Training Federation for Wales (NTfW) and from Colleges Wales. The NTfW described 'annoyance' from its members who were unclear as to why the HEFCW had been able to administer its own approval process for providers (through the use of a grant model), whereas for non-degree apprenticeships a competitive procurement process is used (Senedd Cymru, 2020). These concerns illustrate the importance of engaging with these stakeholders in the subsequent phase of the evaluation to ensure that their perspectives are captured.

---

<sup>13</sup> [HEFCW circulars in relation to degree apprenticeships](#).

3.40 Determining the scale of funding to assign to the Degree Apprenticeship Programme is understood to have been a challenging process. Funding from the UK-wide administered Apprenticeship Levy is not ringfenced in the allocation to the Welsh Government, and judgement as to the scale of investment is complicated by a lack of evidence (as a new programme) on the potential uptake and interest. It is understood that the investment of £20m represents approximately 10–15 per cent of the apprenticeship budget. This is a similar proportional allocation of budget for higher-skilled apprenticeships to that awarded in Northern Ireland.

### **Governance Structure**

3.41 The governance and strategic direction of the Degree Apprenticeship Programme could be perceived to be complicated by the fact that the broad Apprenticeship Programme sits within the portfolio of one Minister (i.e. the Minister for Economy, Transport and North Wales), whilst higher education sits within the ministerial portfolio of another (i.e. the Minister for Education<sup>14</sup>). The Degree Apprenticeship Programme is marketed as a higher apprenticeship and positioned as a skills model.

3.42 The roles and responsibilities of the HEFCW and the Welsh Government in the governance of the Degree Apprenticeship Programme have at times (through the scoping interviews) been described as 'rather blurred' and 'a little confusing'. That being said, the relationship has widely been viewed as strong and reflected upon as a key success of the programme. What is more, there is clarity in the fact that the Welsh Government hold overall accountability for the programme and assume the lead role in setting the direction of policy, selecting the priority sectors, and the budgetary allocation for the programme.

3.43 From the perspective of the Welsh Government and the HEFCW, the HEFCW lead on funding allocations (appraising HEI proposals), the programme specification, quality assurance, and (working with HEIs and employers) on the recruitment and admissions process.

3.44 Elements of governance in which there is perceived to be joint responsibility across the HEFCW and the Welsh Government include marketing and stakeholder

---

<sup>14</sup> Following the Welsh Parliament elections in May 2021, this split between the two Ministerial Portfolios remains.

engagement (including RSPs, Careers Wales, and the FE sector), although these are increasingly led by the HEFCW.

## Implementation

### Frameworks

3.45 The development of the degree apprenticeship frameworks was both a necessary and a critical element of the design and implementation of the Degree Apprenticeship Programme. The process enabled employers to engage in the framework design and helped to facilitate conversations with HEIs. There was, reportedly, a desire to learn from the approach in England, wherein apprenticeship standards are centred on skills statements (rather than on set qualifications) and, therefore, are likely to be more relatable to the employer and the learner. However, a representative of the HEIs felt that the frameworks became something of a 'wish list' of all the employers involved, with a larger number of learning outcomes than those associated with a traditional degree:

*[I] think it was matched to something like 200 learning outcome, compared to a normal degree (which is 30–40). Some were very specific — [e.g.] “you need to know this”. Others were very vague and depending on how you interpreted, it could be 30 minutes’ teaching or a whole year’s study.’ (HEI Representative)*

3.46 Early on within the Degree Apprenticeship Programme the Welsh Government commissioned the relevant two Sector Skills Councils (SSCs) to develop the frameworks. A bespoke process, with additional funding, was designed. The process included a more in depth needs analysis and greater engagement with employers and other stakeholders when compared to previous processes. The digital framework was developed within timeframes.

3.47 There were considerable delays in the design of the Engineering and Advanced Manufacturing framework, an issue that the HEFCW attributed in their written evidence to the recent inquiry to the diminished capacity within the SSCs to undertake this role. In the past, SSCs would normally have been commissioned to develop the frameworks, but since losing their role in the English apprenticeship systems their capacity has seriously declined. The delays led to the commissioning of an external consultant to work with the SSC to complete the work.

### *HEI Engagement*

3.48 The HEFCW issued a circular for proposals in the first year of the Degree Apprenticeship Programme for the Digital Framework on 29<sup>th</sup> April 2018 (with a submission deadline of 23<sup>rd</sup> July 2018). Year 1 of the programme secured a £3million allocation. Proposals were reviewed by a task and finish group comprising representatives of the HEFCW, the Welsh Government, and Industry Wales, with confirmation of funding for each HEI by 6<sup>th</sup> August 2018.

3.49 The total allocation for funding degree apprenticeships across both frameworks in 2019/20 amounted to £5m. A proposal deadline of 26<sup>th</sup> April 2019 was set, with the associated allocation of numbers subject to the acceptance of qualification onto the relevant framework by 24<sup>th</sup> May 2019. Similar timeframes for submission were offered in 2020, with £12m confirmed for allocation for 2020/21.<sup>15</sup>

3.50 All but one of the HEFCW-funded institutions in Wales (i.e. Aberystwyth University) responded to the request for proposals to deliver the Degree Apprenticeship Programme. Most of the HEIs who responded to the opportunity were already active in these sectors and had pre-existing relationships with FE colleges via franchise arrangements.

3.51 For Aberystwyth University the time-bound nature of the programme investment (an initial investment of three years) was one factor in their reluctance to engage. There was a concern that the programme may not be sustained and there was a reluctance to invest in the necessary infrastructure because of such uncertainty.

3.52 HEIs described the challenge of gaining traction within their organisation beyond their core team to pivot towards degree apprenticeship delivery. Moreover, there was a degree of hesitancy amongst HEIs with regard to the extent to which they invested in infrastructure to deliver degree apprenticeships, as HEIs interpreted the investment to be a pilot with no guarantee of sustained investment. Indeed, some HEIs felt that degree apprenticeships remained somewhat peripheral to their core operation as a result. The fact that levels of funding for the programme were announced annually (reportedly) increased such hesitancy amongst HEIs:

---

<sup>15</sup> HEFCW (2020) [Degree Apprenticeships in Wales and Proposals for Funding 2020/21](#).

*'Degree apprenticeships have lived "on the side" due to the lack of permanency [...] every year we need to secure approval to run year on year. The university is looking to diversify to limit the risks coming through and this is a course that would add to that diversification but is offset against the temporal nature of the programme. So, it has a limbo state [in the university's opinion] — a permanent programme but not guaranteed.' (HEI Representative)*

3.53 That being said, HEIs viewed the programme to be an opportunity to strengthen engagement with employers and strengthen their presence and role within their local economy. However, a key challenge of engagement with the programme, as identified across all HEIs, related to the timing of funding announcements and the short timeframe in which to submit a proposal in response to these announcements. The timings were particularly condensed for the Engineering and Advanced Manufacturing framework, wherein delays in issuing the framework in 2019 delayed the call for proposals and their appraisal (which took place in July), with the programme due to commence in September.

## **Promotion and Engagement**

### *Welsh Government and HEFCW*

3.54 Prior to the evaluation, limited marketing and promotion of the Degree Apprenticeship Programme were undertaken by the Welsh Government or the HEFCW. Limited promotion reflected concerns that it may generate levels of interest and engagement beyond that which could be met through the available budget. However, at the time of consultation there were plans for some marketing, although the messaging and approach are yet to be finalised. The proposed introduction of marketing activity is in response to concerns surrounding increased redundancies and the furloughing of staff as well as an associated reduction in the number of employers looking to enrol staff in a degree apprenticeship.

3.55 The Welsh Government have been analysing data<sup>16</sup> to estimate the impact of the pandemic and the associated economic downturn upon apprentices. Whilst the analysis encompasses foundation through to higher apprenticeships (and,

---

<sup>16</sup> Management information from apprenticeship providers and records from the Lifelong Learning Wales Record (LLWR).

therefore, excludes degree apprenticeships), it, nevertheless, provides some insight into the effect of the pandemic upon the completion of apprenticeships. The latest analysis<sup>17</sup> illustrates that around 0.5 per cent of apprenticeships had ended due to redundancy, whilst 4.4 per cent of apprentices are, as of January 2021, partially or fully furloughed. This compares to early May 2020 (when the proportion of apprentices furloughed had reached 20.2 per cent). This data suggests a limited impact (to date) on the completion of existing apprenticeships. Furthermore, degree apprenticeships, being of a longer duration, require a more sustained commitment from the employer and the apprentice and, therefore, are less likely to be impacted by short-term issues associated with the pandemic. Degree apprenticeships are also not available in sectors in Wales that have been particularly exposed to the economic effects of the pandemic. Collectively, this suggests that issues of redundancy and furlough might be less prevalent amongst those studying degree apprenticeships than amongst those studying other apprenticeships.

3.56 There have also been challenges in relation to the terminology associated with the programme and, in particular, to whether the programme is referred to as a 'pilot' or whether the programme is in its 'initial phase'. The use of the term 'pilot' suggests that this is something of a trial, influencing external perceptions of the likelihood of sustained investment. Whilst the programme is not being widely referred to as a pilot, some stakeholders have interpreted it as such. As outlined previously, the associated lack of evidence of sustained commitment beyond the initial three years of investment has influenced how some stakeholders (particularly HEIs and also, reportedly, employers) have responded to the opportunity.

#### *HEIs*

3.57 The extent to which HEIs (and their partner FE colleges and WBL providers) have promoted the programme directly to employers has been somewhat determined by their prior experience of engaging with employers and employer networks within these sectors. Where existing networks are in place, HEIs tended to promote the programme directly to those employers. Moreover, HEIs relied on FE colleges and WBL providers to promote the programme to their employer networks. Some HEIs

---

<sup>17</sup> Welsh Government (2021) [Apprentices furloughed or made redundant during the coronavirus \(COVID-19\) pandemic: up to 8 January 2021](#), released 19<sup>th</sup> January 2021.

are active in the delivery of degree apprenticeships in England, with staff members having been actively involved in the trailblazer groups responsible for developing degree apprenticeship standards (alongside employers), for example. These pre-existing links have also been useful in promoting the programme to employers where they have a presence in Wales.

3.58 With no guarantee of programme funding prior to funding announcements and only a short timeframe following announcements in which to engage employers and enrol apprentices, HEIs and their partners were limited in their ability to attract new employers to the programme:

*'We can't go out and sell degree apprenticeships to companies without certainty. That in itself is the problem. We bid for places and it's all just been too late — bidding in April, not finding out until June for starting in September.'* (HE Representative)

3.59 This has meant that employer engagement has largely been limited to those where relationships between the employer and the HEI/FE college already existed. Often these are large (more than 250 employees) employers, wherein the scale of training needs (in terms of the number of employees) warrants an established and ongoing relationship.

3.60 The programme has sought to promote regional coherence, whereby degree apprenticeships are designed by HEIs in response to the requirements of employers in their region. In some areas, HEIs reiterated their links with FE colleges and WBL providers in identifying networks and responding to their needs. However, there are multiple cases of employers having pre-existing relationships with HEIs in regions of Wales other than where they are based. Furthermore, some of the larger businesses (e.g. Airbus) have relationships with several HEIs.

3.61 The pursuit of regional coherence aligns with the regionalisation agenda set out within the Welsh Government's Prosperity for All: Economic Action Plan (Welsh Government, 2019). The plan describes an aspiration for a stronger regional voice through a regionally focused model of economic development. Adopting this model, it is hoped, will enable the Welsh Government to respond more effectively to discrete challenges and opportunities faced by each of the regions.

3.62 The desire of regional coherence in the context of the Degree Apprenticeship Programme provides the opportunity to respond to the unique set of economic circumstances that employers in each region face. Moreover, it sought to avoid creating a climate in which universities in different localities were competing for apprentices from the same employer. In pursuing regional coherence there were concerns raised that the limited volume of providers may necessitate an employer looking to providers from other regions. Furthermore, there was a sense that HEIs wanted to be responsive to and meet employer demand, regardless of the location, and that placing an emphasis on employers locally may place those HEIs where a lack of medium-sized and large businesses exist at a disadvantage. HEIs were therefore encouraged in their proposals to illustrate where partnerships with employers based outside of their region existed and provide reasons as to why this was justified.

3.63 A further challenge has emerged where employers operate across England and Wales and, therefore, gain a very different experience of degree apprenticeships in each country. Furthermore, where employers pay the levy, there can be a different level of expectation for the programme that may be influenced by their experience or awareness of the offer in England. An exploration of the impact of this experience upon employers will form a key area of investigation in the next phase of the evaluation.

#### *HEI Delivery Models*

3.64 The majority of HEIs were already working in partnership with FE colleges and WBL providers to some extent prior to the launch of the Degree Apprenticeship Programme. In most cases the programme has led to an initial strengthening in that relationship, particularly from an operational perspective, whilst two HEIs described the partnerships with FE as a strategic alliance. FE colleges have typically been heavily involved in employer engagement and WBL aspects including work visits (which typically take place every eight weeks). In some areas, HEIs reported how FE colleges are delivering the initial year and year 2 of the degree apprenticeship prior to the university delivering learning in the latter stages of the degree apprenticeship.

3.65 There are some isolated examples of learner pathways being established, particularly within the advanced manufacturing and engineering sector. HEIs spoke of WBL providers offering progression routes from existing apprenticeships at level 3, for example, or from HNDs/HNCs. What is more, there were examples of potential applicants to a level 4 or 5 apprenticeship, where the course has not then been delivered, being referred to a degree apprenticeship in that field.

3.66 Within the digital sector, learner pathways have been more challenging to establish, with one HEI highlighting little provision in relation to computing (for example) being available amongst FE colleges in their region. (Learner pathways will be explored from the participant's perspective in the next phase of the evaluation.) This has, reportedly, created challenges in recruiting to the programme:

*'One of the difficulties we have had with partnership engagement is lack of provision at low levels, which means there is less of a pipeline. Quality of what is there is mixed and may not transfer easily to our [degree apprenticeship].'* (HEI Representative)

## **Progress to Date**

### *Progress in Recruitment*

3.67 Table 3.1 (below) presents data collated by the HEFCW that outlines progress in the recruitment of apprentices to each framework. The delays associated with issuing the Engineering and Advance Manufacturing framework meant that delivery of this framework commenced in the 2019/20 academic year, one year after the commencement of the Digital framework.

3.68 The table illustrates that recruitment for both frameworks has fallen short of the allocation levels (the number of degree apprentice spaces allocated in response to the proposals received). From the HEI perspective, the primary reasons behind these shortfalls were reported to be the annualised funding announcements and the tight timeframes associated with these. HEIs and FE colleges struggled to engage employers to enrol staff in a multi-year course in which there is no guarantee of sustained funding.

3.69 For the Digital framework (wherein the reported 2019/20 figures are cumulative with those recorded for 2018/19) the extent of the shortfall is greater from the 2019/20

academic year than that encountered in 2018/19, leading to an overall shortfall of 47 per cent.

**Table 3.1: Degree Apprenticeship Recruitment 2018/19 and 2019/20<sup>18</sup>**

<b>Framework</b>	<b>2018/19</b>			<b>2019/20 (Cumulative)</b>		
	<b>Allocated</b>	<b>Recruited</b>	<b>Variance</b>	<b>Allocated</b>	<b>Recruited</b>	<b>Variance</b>
Digital	210	155	-26%	465	245	-47%
Engineering and Manufacturing				275	170	-38%

3.70 Table 3.2 (below) provides an update on the levels of recruitment for the initial months of the 2020/21 academic year. It illustrates that 215 apprentices have continued in the programme (from the previous year) within the Digital framework (in comparison to 245 who were in the programme in the previous academic year), with a further 105 recruited to the programme. This compares to an allocation of 710 apprentices for that framework. For the engineering and advanced manufacturing sector, 140 of the 170 continued in the programme (with a further recruitment of 195 apprentices).

**Table 3.2: Degree Apprenticeships – Allocation and Recruitment 2020/21<sup>19</sup>**

<b>Framework</b>	<b>Allocated</b>	<b>Recruited</b>		<b>% Difference</b>
	<b>New &amp; Continuing 2020/21</b>	<b>Monitoring Period 1 (01/08/2020–15/11/2020)</b>	<b>Total</b>	
Digital	710	215	105	320
Engineering and Advanced Manufacturing	450	140	195	340
<b>Total</b>	<b>1160</b>	<b>355</b>	<b>300</b>	<b>-43%</b>

Source: HEFCW

<sup>18</sup> All numbers are rounded up or down to the nearest multiple of 5. Any number lower than 2.5 is rounded to 0. Halves are rounded upwards (e.g. 2.5 is rounded to 5).

<sup>19</sup> All numbers are rounded up or down to the nearest multiple of 5. Any number lower than 2.5 is rounded to 0. Halves are rounded upwards (e.g. 2.5 is rounded to 5).

## Student Profiles

3.71 Table 3.3 (below) provides an overview of the origin of degree apprentices where known and illustrates that the vast majority of those recruited to the programme were existing employees within a participant employer, whilst only nine per cent of those recruited were new employees to a participant employer. Again, HEIs attributed this to the timeframes associated with funding announcements:

*'One of our frustrations is that the majority of our learners are people upskilling [existing employees]. The exception is Airbus. For employers to take on those [degree apprentices] as new roles, that will require some additional, sustained resource and also lengthening the timeframes.'* (HEI Representative)

3.72 These profiles contrast with those reported in England, wherein reference was made by Universities UK (2019) to criticisms regarding the level of opportunity for current employees to gain entry to degree apprenticeships in comparison to younger apprentices who enter directly from school or an FE college.

**Table 3.3: Degree Apprenticeships – Existing and New Employees 2020/21<sup>20</sup>**

Framework	Employees Recruited: Monitoring Period 1 (01/08/2020–15/11/2020)			Total	
	Existing employees	New employees			
Digital	260	84%	50	16%	310
Engineering and Advanced Manufacturing	315	98%	5	2%	320
<b>Total</b>	<b>575</b>	<b>91%</b>	<b>55</b>	<b>9%</b>	<b>630</b>

Source: HEFCW

3.73 Of those newly recruited to or continuing in the Degree Apprenticeship Programme, (up until 15<sup>th</sup> March 2021) 180 (27 per cent) were Welsh speakers, whilst 20 per cent were below the age of 21. Fourteen per cent identified as female (95/660)<sup>21</sup>, which compares to 16 per cent of students enrolled in degrees in computer science

<sup>20</sup> All numbers are rounded up or down to the nearest multiple of 5. Any number lower than 2.5 is rounded to 0. Halves are rounded upwards (e.g. 2.5 is rounded to 5).

<sup>21</sup> HEFCW analysis of data collected from HE providers for the 2019/20 and 2020/21 intakes

or engineering and technology being female.<sup>22</sup> This contrasts with the perspectives of some stakeholders who had suggested that the Degree Apprenticeship Programme had secured an overrepresentation of females in the programme in comparison to the intake in university degrees in these sectors.

3.74 The contrasting perspectives illustrate the need for further, more detailed analysis of management information and associated benchmarking data in the next phase of the evaluation to determine the progress in increasing female representation in these sectors. Establishing benchmarking data including comparisons with apprenticeships and undergraduate programmes has also been identified by the HEFCW; however, the latest performance indicators available from the Higher Education Statistics Agency (HESA) are for 2019/20 and these have only just been released. Therefore, whilst benchmarking performance remains a key aim of the evaluation, it is currently unclear as to whether it will ultimately be feasible within the existing timeframe for the evaluation due to the time lag in the availability of data.

**Table 3.4: Degree Apprenticeships – Protected Characteristics 2020/21**

Welsh Speaker Status		Age		Sex		
Welsh speaker	Not a Welsh speaker	Aged below 21	Aged 21 or above	Male	Female	Other
180	475	130	530	565	95	0

3.75 Further evidence of the characteristics of degree apprentices is presented in Table 3.5 below. The data shows that eight per cent of those participants in degree apprenticeships in 2020/21 had a declared disability (50/660) compared to 15 per cent of students enrolled on a first degree in engineering and technology or computing. A total of 95 per cent of those recruited described themselves as being of white ethnicity.

<sup>22</sup> HEFCW analysis of HESA student records for the 2018/19 and 2019/20 intake.

**Table 3.5: Degree Apprenticeships – Protected Characteristics 2020/21**

Disability		Ethnicity		
Declared disabled	No known disability	White	Black and minority ethnic groups	Not known
50	610	630	20	10

Source: HEFCW

3.76 Additional insight into student profiles is available through the HESA for 2018/19 and 2019/20. This data, analysed by HEFCW, identifies that whilst 24 per cent of the 2018/19 intake had previous qualifications at degree or postgraduate level this had fallen to 15 per cent in 2019/20.<sup>23</sup> This compares to 37 per cent of learners in level 6 degree apprenticeships in England (Wavehill, 2019). It therefore suggests that the programme in Wales has been better able to widen participation in degree apprenticeships for those who have yet to gain qualifications at this level.

3.77 Analysis of HESA data also identifies that 18 per cent of degree apprentices in 2018/19 and 2019/20 resided in one of the top 20 per cent most deprived areas in Wales (according to the Welsh Index of Multiple Deprivation (WIMD)). This compares to 21 per cent of students in Wales on First Degrees in Engineering & technology of Computing (HESA, 2021). However, 17 per cent of degree apprentices are from low participation neighbourhoods compared to 15 per cent of students on first degrees. Also, of particular note is the disparity in the proportion of parents with no HE qualifications. Amongst degree apprentices over 60 per cent had parents with no HE qualifications whilst amongst those undertaking first degrees in engineering and technology or computing this figure fell to 42 per cent.

## Employers

3.78 Finally, HEFCW have undertaken an analysis of the nature of employers engaging with the Degree Apprenticeship Programme. Table 3.6 shows that four in 10 employers engaging with the programme are Small and Medium-Sized Enterprises (SMEs) with fewer than 250 employees. Those employers engaging with the

---

<sup>23</sup> However, it should be noted that, for funding purposes, eligibility requires that previous qualifications at level 6 and above must be in a different programme area.

Engineering and Advanced Manufacturing framework are marginally more likely to be an SME than are those engaging with the Digital framework. As outlined previously within the report, HEIs described the timeframes associated with the award of funding as a key factor in their ability to engage SMEs in the programme:

*'Because we already have a wide employer footprint, it has been harder for SMEs to engage because of workforce planning timelines — the bigger employers have seen the opportunity to do so and have the resource to collaborate.'* (HEI Representative)

**Table 3.6: Degree Apprenticeships – Employers**

Framework	Employers Recruited: Monitoring Period 1 (01/08/2020–15/11/2020)				Total
	SME	Not SME			
Digital	35	37%	60	63%	95
Engineering and Advanced Manufacturing	45	43%	60	57%	105
<b>Total</b>	<b>85</b>	<b>41%</b>	<b>120</b>	<b>59%</b>	<b>205</b>

### **Impact of COVID-19**

3.79 The COVID-19 pandemic has led to HEIs shifting much of their delivery online to enable remote learning. Where blended approaches of delivery have been adopted (i.e. a mixture of online and campus-based), the timing of lectures has been adjusted and often condensed to a certain day each week to adhere to social distancing restrictions.

3.80 Reflecting on responses from across the HEIs, this shift would appear to have been most impactful on degree apprenticeships within the advanced manufacturing and engineering sector and, in particular, where the use of specialised equipment might be required.

3.81 Amongst learners it is understood that embedding learning within the workplace has been challenging, particularly where they are working from home. Moreover, there

have been concerns surrounding learners suffering from isolation as a result of the shift to remote learning and remote working.

3.82 The impact of the pandemic upon the demand for degree apprenticeships is less clear. Within the digital sector, some HEIs are reporting an increase in demand, which may be driven by a combination of the increased use of online technology and the prominence of statistical modelling and analysis of big data associated with the pandemic. More generally, HEIs are reporting that word of mouth is leading to an increased demand for degree apprenticeships, either from colleagues within existing employers or from other employers within their network. It is currently unclear as to how this anecdotal description of an increased demand is influencing potential levels of allocation for degree apprenticeships in the forthcoming financial year.

3.83 The timing of the pandemic and the associated lockdown, however, were particularly problematic for recruitment for the September 2020 intake. The lockdown restricted the ability to engage employers, whilst employers focused on adjusting, operationally, to the restrictions of the lockdown. In response, several of the HEIs are planning additional intakes of apprentices in January and/or March 2021.

### **Reflections on Programme Implementation**

3.84 Those involved in scoping interviews were asked for their initial reflections on the implementation of the Degree Apprenticeship Programme. Several (Welsh Government and HEFCW representatives) referred to, in spite of the concerns surrounding the distinction in roles and responsibilities between the two organisations, the strength of the relationship between the Welsh Government and the HEFCW. HEIs also echoed the strength of the role that the HEFCW have had in overseeing the programme and, generally, programme management is viewed positively.

3.85 There is also a sense that HEIs are beginning to expand their engagement to different employers, facilitated by emerging stories of success and positive experiences from apprentices and their employers. Currently, this evidence is only anecdotal and the pandemic has (reportedly) restricted progress in this regard. The

analysis of management information in the next phase of the evaluation will include the mapping of patterns and trends in employer engagement.

3.86 Whilst the nature and level of collaboration between HEIs and FE colleges and WBL vary, it is proving to be an effective means of widening HEI–employer engagement. Each approach is slightly different but there is a tendency for FE colleges and WBL providers to be the facilitators of such employer engagement. HEIs then tend to cement those relationships with employers over time and, in particular, as a degree apprentice progresses through their apprenticeship.

3.87 The design and development of the frameworks gained mixed feedback. Some referred to their development as a strength, especially given the timeframes to which they were working, whilst others, particularly HEIs, felt that more collaboration on the framework design would have overcome some of the limitations encountered.

3.88 There remain concerns more widely surrounding the narrative associated with the programme (as an initial phase), the associated lack of marketing and promotion and, collectively, how that undermines its perceived longevity. Similarly, most HEIs referred to the implications of the tight, annualised deadlines for proposal submissions, employer engagement, and programme delivery.

3.89 An analysis of progress illustrates that the programme, to date, has recruited fewer apprentices than allocated. Whilst the COVID-19 pandemic (undoubtedly) impacted recruitment for September 2020, shortfalls in the levels of recruitment preceded the outbreak. The volumes enrolled in the Degree Apprenticeship Programme in January 2021 and anticipated for March 2021 will reduce the level of the shortfall in comparison to the allocation; however, the extent of the reduction is currently unclear. Early evidence suggests that the programme has been relatively successful in recruiting employees from SMEs (whilst SMEs represent 99 per cent of all businesses in Wales, they represent 60 per cent of all employees).<sup>24</sup> That being said, HEIs felt that the timeframes associated with the funding award, the annualised funding announcements, and the lack of sustained investment all restricted their ability to engage SMEs. Further analysis of degree apprenticeship

---

<sup>24</sup> ONS (2020) [Business population estimates for the UK and regions: 2019 statistical release](#) – published 14<sup>th</sup> January 2020.

performance elsewhere within the UK will help to benchmark performance in relation to SME engagement.

3.90 Progress in relation to widening participation is less clear. The overarching analysis identifies that females represent 14 per cent of participants engaging in the programme and the proportion of learners who reside in areas of deprivation are comparable with those undertaking a first degree. However, as outlined earlier within this section, there has been a marked reduction in the proportion of degree apprentices enrolling who have previously completed a degree (from 24 per cent in 2018/19 to 15 per cent in 2019/20<sup>25</sup>, and far fewer degree apprentices have parents with HE qualifications than students undertaking first degrees.<sup>26</sup>

3.91 A more detailed analysis of performance will be undertaken in the forthcoming phase of the evaluation to explore and identify patterns of performance and success by HEIs. The evidence captured will be benchmarked against evidence held by the HESA on mainstream degrees and against evidence available for Degree Apprenticeship Programmes in the other home nations of the UK.

3.92 The following section draws on these findings in the development of the theory of change and the associated evaluation framework, which collectively shape the approach to the remainder of the evaluation.

---

<sup>25</sup> HEFCW analysis of HESA student records for the 2018/19 intake and analysis of data collected from HE providers for the 2019/20 and 2020/21 intake.

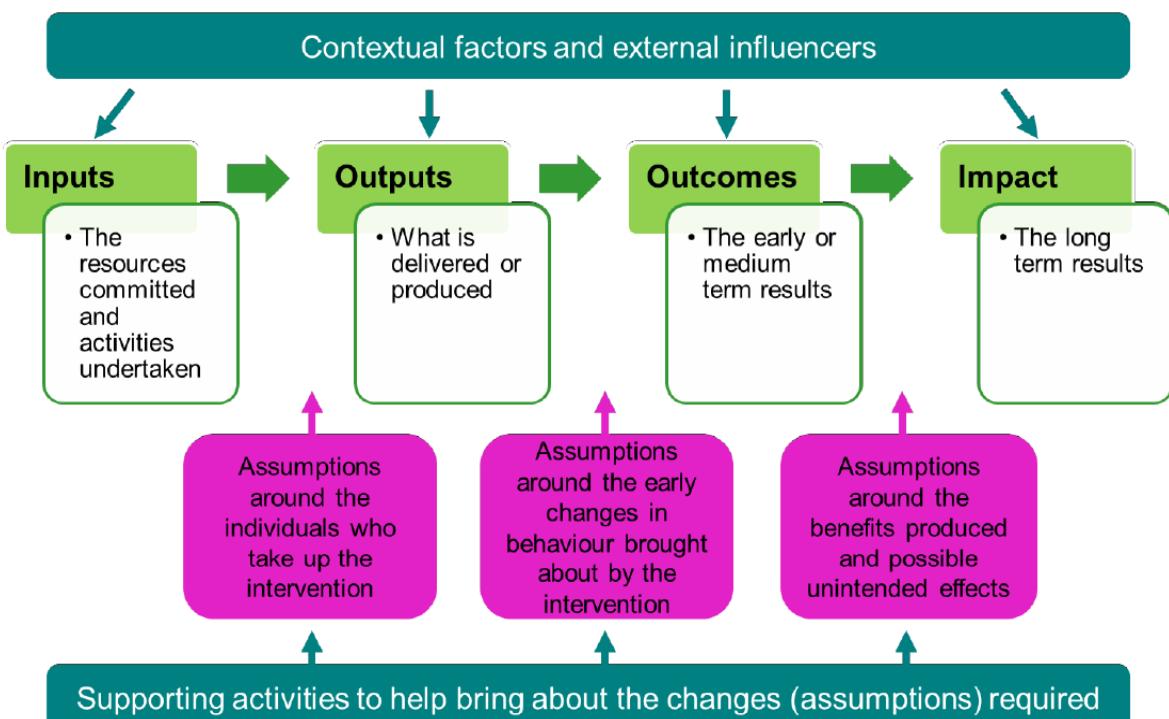
<sup>26</sup> HEFCW analysis of HESA student records for 2018/19 and 2019/20.

## 4. Theory of Change and Logic Model

4.1 HM Treasury's (2020) Magenta Book states that good policymaking necessitates a thorough understanding of the intervention and how it is expected to achieve the outcomes expected. A good evaluation also requires this understanding, and a theory of change is an approach that helps to ensure that the subject of an evaluation is fully understood.

4.2 A theory of change explains how an intervention is expected to work (setting out all of the steps anticipated to be involved in achieving the outcomes desired), the assumptions that underpin the fulfilment of these steps, the quality and strength of the evidence supporting them, and the wider contextual factors. Developing a theory of change typically involves considering the inputs proposed (what investment/actions will take place) and the causal chain that leads from these inputs through to the expected outputs (what is delivered or produced), outcomes (the early or medium-term results) and, ultimately, impact (the long-term results).

**Figure 4.1: An Example of a Linear Theory of Change<sup>27</sup>**



<sup>27</sup> HM Treasury (2020).

4.3 The theory of change has been shaped by a combination of the desk review and the scoping interviews. The review informed the rationale for the intervention and the inputs (investment) to the programme as well as the anticipated outcomes and impacts. The interviews helped to identify activities in delivering degree apprenticeships as well as the underpinning risks and assumptions associated with the programme.

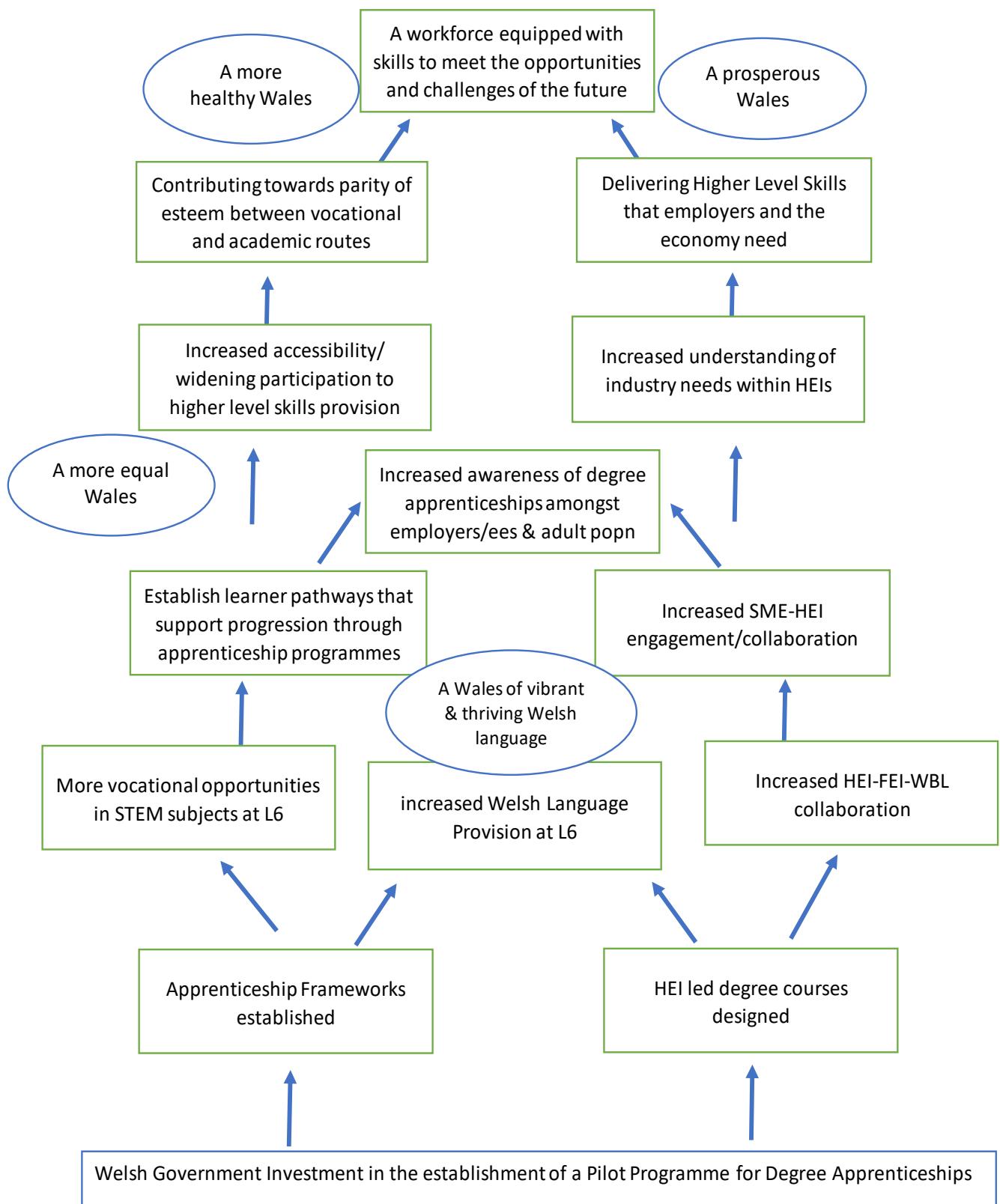
4.4 Following the scoping interviews, a workshop with those involved in the design, implementation and management of the programme sought to map out the envisaged outcomes associated with the Degree Apprenticeship Programme and how these contribute to the goal of the programme. The workshop proposed an overarching goal for degree apprenticeships to develop 'a workforce equipped with skills to meet the opportunities and challenges of the future'. The outcomes towards that goal are presented in Figure 4.2 and have been mapped sequentially as a pathway towards that goal.

4.5 The theory of change is structured around three 'stakeholders' associated with degree apprenticeships, namely HEIs and FE colleges, apprentices, and employers. Those outcomes on the right-hand side are associated with HEIs, FE colleges, and employers, while those on the left-hand side are associated primarily with the apprentice.

4.6 Following the mapping of outcomes, the workshop explored the assumptions, the barriers and risks, and the enablers that would influence the realisation of the theory of change associated with the programme. A linear theory of change for the programme is presented in Figure 4.3. It is important to note that the theory of change is a work in progress, with the perspectives of employers, apprentices, HEIs, and FE colleges captured during the next phase of the evaluation likely to lead to further refinement and development of the theory of change.

4.7 Following the presentation of the theory of change overleaf, a discussion regarding the key elements identified how this compares to the evidence gathered through the evaluation. Moreover, it explores the key areas for consideration in the evaluation framework, shaping in turn the approach to the remainder of the evaluation.

**Figure 4.2: An Outcomes Pathway for the Degree Apprenticeship Programme**



**Figure 4.3: Linear Theory of Change**

Within Control of the Degree Apprenticeship Prog.		Outside Control of the Degree Apprenticeship Prog.		
Inputs	Activities (Outputs)	Outcomes A	Outcomes B	Impacts
<ul style="list-style-type: none"> <li>• £20m grant fund to HEFCW over three years</li> <li>• Labour market intelligence on sectors in which skills needs are most acute with the greatest potential impact (from HEIs, employers, RSPs, and WG)</li> <li>• SSC–employer collaboration in the design of apprenticeship frameworks</li> <li>• Evidence and experience internationally and of other home nations in delivering Degree Apprenticeships</li> <li>• Staffing/infrastructure investment amongst HEIs</li> </ul>	<ul style="list-style-type: none"> <li>• Design and issue of apprenticeship frameworks</li> <li>• Design and validation of HEI-led Degree Apprenticeship courses</li> <li>• HEI–FE college collaborations</li> <li>• Development and submission of Degree Apprenticeship proposals</li> <li>• Recruitment/reallocation of HEI staff to deliver Degree Apprenticeships</li> <li>• Employer engagement and collaboration (numbers)</li> <li>• Apprentice mentoring</li> <li>• Degree Apprenticeship delivery</li> <li>• Essential skills provision</li> <li>• Additional study sessions/courses/boot camps</li> <li>• Tripartite meetings/sessions with apprentice/employer/provider</li> <li>• Apprenticeship matching service established</li> <li>• Commission of initial evaluation</li>   <b>Outputs</b> <li>• No. of apprentices (new and existing employees) enrolled</li> <li>• No. of apprentices with protective characteristics enrolled</li> </ul>	<p><b>Apprentices</b></p> <ul style="list-style-type: none"> <li>• Improved work-related skills/knowledge</li> </ul> <p><b>Employers</b></p> <ul style="list-style-type: none"> <li>• No. of employers/SMEs engaged</li> <li>• Increased awareness of Degree Apprenticeships amongst employer/ees &amp; adult population</li> </ul> <p><b>HEIs/FE Colleges</b></p> <ul style="list-style-type: none"> <li>• Increased Welsh language provision at L6</li> <li>• More vocational opportunities at L6</li> <li>• Learner pathways that support progression through apprenticeships</li> <li>• Increased accessibility to higher-level skills</li> <li>• Innovations and refinements in approaches to teaching and learning</li> </ul>	<p><b>Apprentices</b></p> <ul style="list-style-type: none"> <li>• No. of those enrolled completing apprenticeships</li> <li>• Improved career prospects/earnings</li> <li>• Improved well-being/life satisfaction</li> </ul> <p><b>Employers</b></p> <ul style="list-style-type: none"> <li>• Increased rates of staff retention</li> <li>• More embedded culture of work-based learning amongst employers</li> <li>• Skills shortages in the workplace addressed</li> </ul> <p><b>HEIs/FE Colleges</b></p> <ul style="list-style-type: none"> <li>• Broader HEI–employer collaborations</li> <li>• Increased HEI–FEI–WBL-provider collaboration</li> <li>• Increased understanding of industry needs in HEIs</li> <li>• Contributing towards parity of esteem between vocational and academic routes</li> </ul>	<p>Contributing to:</p> <ul style="list-style-type: none"> <li>• Widened participation in higher-level skills provision</li> <li>• Increased skills levels amongst the labour market</li> <li>• Increased innovation and competitiveness</li> <li>• Increased social mobility</li> <li>• A workforce equipped with skills to meet the opportunities and challenges of the future</li> <li>• Positive impact on WBFG goals on health, well-being, prosperity, Welsh language, and equality in Wales</li> </ul>

**Assumptions**

- That all HEIs want to and have the capacity to participate in and deliver through the Degree Apprenticeship Programme
- That strategic partnerships with FE/WBL providers are established and sustained
- That regional coherence will be adhered to unless there is a clear reason for it not to be
- That the routes to understanding and forecasting skills needs are responsive, effective and accurate
- That there is a relationship between skills development and productivity gains
- That degree apprenticeships are the right tools and build the right skills to generate a benefit for the employer and the economy
- That there is a sufficient budget/resource to fulfil the existing demand for degree apprenticeships within the digital economy and advanced manufacturing and engineering sectors
- That evidence can be captured to understand the multiple benefits of this model in comparison to other models of workforce development
- That the evaluation identifies and/or develops models to establish the value of the programme across the economy, employers, individuals, and wider community
- That there is a demand for degree apprenticeships to be delivered in Welsh

**Barriers and Risks**

- A time-bound three-year initial investment undermines HEIs' willingness to invest/mainstream Degree Apprenticeships
- HEI competition and employer desire may not align with aims of regional coherence
- The allocation of funding for the programme is perceived to be of poor value for money
- A lack of sustained collaboration with FE/WBL undermines the ability to improve continuity of learner pathways
- The pursuit of regional coherence restricts employer engagement with preferred providers
- Timeframes associated with annual funding announcements create challenges in getting programmes validated and engaging 'new' employers
- Remote delivery makes tripartite meetings and work-related visits with apprentices challenging
- A lack of active promotion of the programme limits the scope to engage 'new' employers
- Targeting STEM subjects where there is an existing imbalance in the gender profile of the workforce may limit equality of opportunity
- Levy-paying employers being frustrated by not being able to access the skills that they perceive their business to need at the degree apprenticeship level
- Misperceptions/misunderstandings surrounding the term 'apprenticeship'
- Cross-border working of employers and HEIs may create confusion and/or migration from one apprenticeship programme to another
- COVID-19 and the associated recession led to a reduced appetite to engage/apprenticeship redundancies
- A failure to integrate degree learning and training from the employer/employee experience

**Enablers**

- Multiple HEIs delivering degree apprenticeships in similar subject areas provides employers with the ability to engage in courses most suited to their needs
- Expansion into other subject areas where there is clear need, potential impact, and demand is evident
- Sectorial experts with the right skills and experience to develop frameworks
- The ability to demonstrate the value — the business case for all stakeholders

## **Programme Rationale**

4.8 There is a need to increase the availability of provision in higher-level, industry-focused skills, knowledge and behaviours in Wales to respond to existing and forecasted demand for higher-level skills within the economy. A degree apprenticeship offers the opportunity to meet such demand through work-integrated learning that culminates in the award of a degree to the apprentice.

4.9 Apprenticeships are viewed by the Welsh Government to be a vehicle for delivering the skills that will define Wales' future competitiveness. They are viewed to be a key route to enabling Wales to develop into a highly skilled nation that is capable of raising productivity, providing an alternative route into higher education and a parity of esteem between vocational and academic routes, reducing barriers to work, and supporting people into employment.

4.10 STEM subjects, particularly those aligned to the engineering and advanced manufacturing and digital technology sectors, have been identified as the priority for degree apprenticeships. These sectors are considered to be the areas in which higher skills needs are most acute and the strongest opportunities exist for job creation and productivity improvements.

## **Inputs**

4.11 Determining the scale of planned investment in the Degree Apprenticeship Programme (£20million over three years) proved to be complicated due to the need to balance what might be a realistic budget against the potential demand (where a lack of evidence on demand existed). The duration of funding for the Degree Apprenticeship Programme combined with the annualised award of funding has influenced HEIs' willingness to engage with and invest in the programme.

4.12 Labour market intelligence has informed the selection of the two sectors and the subsequent development of the apprenticeship frameworks, drawing on insight from employers, RSPs, the Welsh Government, and HEIs. SSCs were identified as playing a key role in the development of the frameworks. However, one SSC's lack of capacity to fully engage with this process led to delays in the framework implementation and necessitated the commissioning of an external consultant to strengthen the process and help fulfil the task.

4.13 In prioritising these sectors, the programme has faced a difficult balancing act in determining how many sectors to pursue, against a finite resource over a three-year period, with no prior experience of degree apprenticeships upon which to draw. This influenced a degree of caution surrounding promotional activity to avoid demand becoming unfulfilled. Management information, however, shows that the programme is operating with less than half of the number of apprentices allocated for the Digital framework and less than two thirds for the Engineering and Advanced Manufacturing framework. Whilst the risk of a considerable reduction in demand arising from the COVID-19 pandemic and the associated recession was impossible to foresee, an element of this shortfall arose prior to the pandemic. The next stage of the evaluation will involve a more detailed analysis of performance by HEIs and a more targeted investigation into the key influencers in relation to demand. At this stage it would appear that the lengthening of timeframes for recruitment, a more sustained programme of investment, and increased investment in marketing and promotion would all influence demand.

4.14 In gearing up to respond to the request for proposals to deliver degree apprenticeships, HEIs have invested in their staff and in their relationships with FE colleges/WBL providers and employers. However, their ability to respond to these opportunities has been somewhat constrained by the timeframes associated with each annual announcement of proposals and funding award.

### **Activities (Outputs)**

4.15 Timings associated with the package of funding for the programme have also influenced the ability of HEIs (or FE colleges and WBL providers) to engage with employers. HEIs reported how the tight timeframes had meant that SMEs were less able to engage with this process without the guarantee of investment.

4.16 The principal output of the Degree Apprenticeship Programme during the pilot phase is the number of apprentices enrolled in the programme. The evaluation is interested in understanding the characteristics of those individuals to explore the extent to which the programme is facilitating a widening of participation in higher skills provision. Furthermore, it will explore the prior situation of apprentices, i.e. whether they are new to employers or are existing employees. A programme-wide analysis of the data provides initial evidence of widening participation (in terms of the proportion of apprentices from areas of deprivation and with prior learning at this

level). There is little evidence, however, of progression in female enrolment. Programme-wide evidence<sup>28</sup> suggests that 14 per cent of current degree apprentices in Wales are female (95/660); however, the proportion of females enrolled in the Degree Apprenticeship Programme has fallen over the first two years (with female representation accounting for 22 per cent of enrolments in 2018/19 and 16 per cent in 2019/20). That being said, the proportion of female enrolment surpasses that of apprenticeships, with the WAO (2019) identifying for the engineering sector female enrolment in apprenticeships of around 10 per cent and is comparable with the gender profile of first degrees in engineering and technology or Computing<sup>29</sup>. Concerns were identified at the programme design stage with regard to this issue, and the need for targeted activity in order to increase female participation in STEM subjects is referenced in various reports (see Welsh Government (2016a and 2016b), for example). This is possibly an area in which more proactive, targeted marketing, particularly amongst schools, might encourage female uptake and interest.

- 4.17 The employer journey to engagement with the programme is an important area to explore. The breadth and nature of engagement and the extent to which employers without pre-existing relationships with HEIs and FE colleges have engaged with the programme are key areas to consider. Feedback from HEIs suggests limited expansion in employer engagement beyond pre-existing relationships due to a low profile for the programme and the timeframes for delivery. That being said, understanding how employers become aware, as well as what attracts them to the programme, will be important in determining the likely demand if or when additional promotional activities are undertaken, or additional subject areas are introduced.
- 4.18 Comparing and contrasting the delivery models adopted by each HEI in the delivery of the programme will help to identify what works and for whom in the delivery of support. There are a number of key requirements to which each HEI needs to adhere. These include, for example, the in-work visits, which identified that additional learning needs are supported and that Welsh language skills are being both promoted and supported through delivery of the programme. Whilst the scoping phase of the evaluation has touched on these aspects, a more detailed review of the delivery processes is planned for the next phase of the evaluation. It

---

<sup>28</sup> HEFCW analysis of data collected directly from Wales HEIs.

<sup>29</sup> Ibid.

will also be important in determining how service provision has adapted in response to the COVID-19 pandemic, as well as the extent to which those adaptations may influence delivery models beyond the pandemic.

## **Outcomes**

- 4.19 The outcomes associated with the programme have been assigned by stakeholder type, namely the individual (apprentice), employer, and service provider (HEI/FE college). Outcomes associated with the individual are centred on their ability to complete the programme and the implications of such completion for their own career and well-being. These are key areas for exploration in the next phase of the evaluation and will include the development of a framework for establishing the longer-term impact arising from undertaking a degree apprenticeship.
- 4.20 For employers the evaluation will explore, following their engagement, perspectives on their experience of the programme and how the experience has influenced their attitude towards degree apprenticeships and towards workforce development more generally. What is more, it will consider their likelihood of sustained engagement and whether engagement and collaboration with the HEI has led to any associated benefits or 'spillover' effects.
- 4.21 Exploring the perceived value of the programme to employers, capturing their perspectives on the funding model and their potential willingness to pay (or contribute to the costs), may also provide insight into the potential options for sustaining the funding of degree apprenticeships beyond the initial phase of the programme.
- 4.22 Amongst HEIs and FE colleges the programme has encouraged collaboration, with the expectation that FE colleges would provide a useful route to employer engagement and would co-deliver elements of the degree apprenticeship offer. The specific structure of these partnerships will be explored in further detail in the subsequent phase of the evaluation, alongside aspirations (amongst both FE colleges and HEIs) for sustaining these in the future.

## **Impacts**

- 4.23 A high-level goal for the programme is to develop a workforce equipped with the skills with which to meet the opportunities and challenges of the future. In delivering

this goal there is a contribution to a wealth of other policy objectives associated with employability, economic development, and well-being.

4.24 The breadth of influence on policy of the impacts listed illustrates the potential of the programme, driving the development of high-end skills as well as increasing social mobility amongst the adult population, contributing to employability and driving up levels of productivity. Establishing an impact framework that can explore the role of degree apprenticeships in contributing to these impact areas over the longer term will be a critical outcome for the evaluation.

### **Key Assumptions, Enablers and Barriers**

4.25 The development of the theory of change for the programme has identified a number of important assumptions underpinning the programme design, many of which have been referred to in relation to each stage of the theory of change in the aforementioned narrative.

4.26 Whilst ongoing consultation took place with HEIs to establish the interest in the Degree Apprenticeship Programme, there remained an assumption in the lead-up to its rollout that HEIs would respond with proposals to deliver degree apprenticeships within the two sectors identified.

4.27 The programme has also placed a considerable reliance upon Labour Market Intelligence (LMI) in that there is sufficient demand within the identified sectors, that these should be prioritised and that they offer the most potential. When areas of potential growth for the programme were discussed with HEIs there was a desire for both vertical (level 7 degree apprenticeships) and horizontal (into other sectors) expansion. Construction and health and social care were most commonly identified as being sectors of interest with the view that considerable demand exists in these areas. Furthermore, it is understood that the HEFCW are currently consulting with HEIs with regard to potential areas of expansion. The approaches being used to identify future programme priorities will be explored in further depth in the next phase of the evaluation.

### **Barriers/Risks and Enablers**

4.28 As a new programme in receipt of initial investment, there are perhaps more risks and potential barriers than with policy interventions that have a more established context. Key areas of risk include the extent to which HEIs are mainstreaming their

delivery model for degree apprenticeships when commitment to the programme is limited to three years.

4.29 There are other areas that the evaluation will need to explore, including how levy-paying employers respond to this programme in comparison to what is on offer in England, particularly where they are operating in both countries. One HEI described how '*companies are finding it hard to see the return from the levy. Paying to Westminster, back to Cardiff and then to HEFCW, there are too many links in the chain*' (HEI Representative).

4.30 More widely, there are risks associated with the perceived value for money of degree apprenticeships, particularly when faced with relatively crude comparisons of the cost of a degree apprenticeship to that of a 'standard' apprenticeship. The funding for degree apprenticeships is drawn from the wider allocation for apprenticeships in Wales. The opportunity cost of pursuing degree apprenticeships (at the perceived 'expense' of apprenticeships at a lower level) reinforces the need to identify a model for determining the relative value for money and the impact arising from this investment.

## **Conclusion**

4.31 In modelling the theory of change for the Degree Apprenticeship Programme, its contribution to a breadth of Welsh Government policy is evident. It delivers against a suite of outcomes that, in turn, lead to a relatively complex theory of change, influenced in part by the key stakeholders that are central to its success.

4.32 Through its breadth of scope and the number of outcomes identified, the potential of the programme is clearly evident; however, as an initial investment, there are numerous risks and barriers that may impact on its success. The theory of change combined with the evidence presented via feedback from the scoping phase, identifies a series of key areas of investigation. Details on the approach to the exploration of these are presented within the evaluation framework.<sup>30</sup>

4.33 The next section summarises the findings of the research and outlines the recommendations and next steps for the evaluation.

---

<sup>30</sup> The evaluation framework is available on request.

## 5. Summary of Findings and Next Steps

5.1 The Degree Apprenticeship Programme in Wales has been designed in a targeted manner to focus on specific areas within two sectors in which higher-level skills needs are considered most acute and productivity gains are most likely.

5.2 Determining funding allocations for the programme and establishing the infrastructure with which to deliver (particularly the apprenticeship frameworks) have been proven to be challenging. Initial evidence would suggest that at a programme-wide level there has been an over-allocation of apprenticeship places for this initial phase. However, the initial three-year programme, the annualised funding announcements, the timeframes of funding awarded and, more recently, the COVID-19 pandemic have all influenced progress.

### ***Recommendations***

If annualised funding continues, earlier (within the year) announcements of the annual allocation, as well as implementation of the proposal and approval process, would support the progress and success of the programme.

That management information held by each HEI be analysed (through the evaluation) to identify patterns of progress and performance and shape subsequent discussions with HEIs, FE colleges, and WBL providers.

5.3 The governance structure of the programme appears to be a particular success and is understood to have led to a strengthening of the partnership between the Welsh Government and the HEFCW. A thorough review of options led to grant-funding the HEFCW in the delivery of the programme — this would still appear to be the most appropriate model to adopt. Risks identified in the adoption of this approach and the subsequent concerns raised as part of the inquiry will be explored through fieldwork in the next phase of the evaluation.

### ***Recommendation***

That FE colleges and WBL providers (alongside HEI representatives) be included in the next round of stakeholder consultation for the evaluation.

5.4 There is evidence that the programme is facilitating increased engagement between HEIs and employers and has also cemented partnerships between HEIs, FE colleges, and WBL providers. How these partnerships are structured, how they are

evolving and the aspirations for these will all be areas of consideration in the fieldwork with these groups.

5.5 Existing employees predominate in comparison to those enrolling in a degree apprenticeship in Wales, which contrasts with the evidence in England. Their journeys into the programme (including the key drivers of their engagement) in comparison to those individuals who are newly recruited employees will be a key area for the remainder of the evaluation.

### **Next Steps**

5.6 The next phase of the evaluation commences with the design of research tools (informed by the theory of change, the evaluation framework, and findings from the scoping interviews) for engagement with:

- HEIs
- FE colleges and WBL providers
- Employers
- Apprentices

5.7 Prior to commencing the fieldwork, detailed management information on the programme delivery will be sourced from each HEI (including contact details for apprentices and employers engaged through the programme).

5.8 The management information will serve several purposes. It will:

- Enable the analysis of performance, patterns and trends of interest, and progress to date against key output and outcome areas within the theory of change.
- Identify further areas for detailed exploration in subsequent engagement with HEIs to capture perspectives on patterns of progress and delivery.
- Inform the sample frame for fieldwork with employers and apprentices.

5.9 Interviews are then planned with stakeholders involved in delivering the Degree Apprenticeship Programme. It is expected that this will include representatives from HEIs, FE Colleges and Work-based learning providers and will explore the processes involved in delivering degree apprenticeships and any reflections on these.

5.10 Wider stakeholder interviews are also planned with representatives of other organisations including RSPs, Universities Wales, and the NTfW to capture their perspectives on the programme and its future direction and focus. Furthermore, key representatives associated with the Longitudinal Educational Outcomes (LEO) data will be engaged in order to discuss options for developing the framework for establishing the longer-term impact arising from undertaking a degree apprenticeship.

5.11 A survey of apprentices is planned with the aim of engaging around one third (200–250 apprentices) of those enrolled in the programme from 2018/19 onwards. The survey will draw heavily on the question areas set out in the previous chapter in order that the journeys, motivations and experiences are captured alongside any impacts emerging from their participation. Moreover, it will provide the opportunity to capture key information on indicators that will inform the modelling of value for money for the programme.

5.12 Employer interviews are planned to run concurrently with the fieldwork with apprentices, with a focus on exploring those discussion areas set out within the framework. What is more, employer and apprentice interviews will inform the development of a small selection of case studies that will clearly articulate the journeys of employers and apprentices both into and through the programme. Furthermore, and where it is considered to be feasible to do so, engagement with employers within the target sectors that have chosen not to participate in the Degree Apprenticeship Programme will be undertaken. The feasibility of various routes to engaging this group of employers will be explored as part of the interviews with those involved in the delivery of the programme.

5.13 To inform the development of a framework for assessing the value for money and the longer-term impact of degree apprenticeships, the feasibility of a number of key areas will be explored:

- The availability and scope of the Longitudinal Education Outcomes (LEO) dataset, which offers the potential to track the progression of earnings amongst degree apprentices.
- The extent to which a range of costs associated with the programme can be captured to inform the value-for-money assessment, including:
  - Referral costs

- Programme delivery costs
- Administrative costs
- Costs borne by employers and apprentices.

- The nature of benefits that could be captured, including:
  - Economic benefits: those that can be valued or monetised to compare against the programme costs
  - Non-economic benefits including health and well-being benefits.

5.14 Collectively, the delivery of these tasks will generate a comprehensive evidence base for analysis, which will help to shape the final report, the value-for-money modelling, and the framework for assessing the longer-term impact of the programme.

## References

Bauer, W. and Gessler, M., 2016. *Dual vocational education and training systems in Europe: lessons learned from Austria, Germany and Switzerland* in Vocational Education and Training in Sub-Saharan Africa, p.48.

Beach, I. (2019) *The effectiveness of scrutiny for improving education practice: the case of modern apprenticeships*. MPhil(R) thesis, University of Glasgow.

Culpepper, Pepper D. (2007) 'Small States and Skill Specificity: Austria, Switzerland, and Interemployer Cleavages in Coordinated Capitalism'. *Comparative Political Studies*, 40(6).

Deißinger, Thomas. 2000. 'The German 'Philosophy' of Linking Academic and Work-based Learning in Higher Education: The Case of the 'Vocational Academies''. *Journal of Vocational Education & Training*, 52(4): 605–626.

Diamond, I. (2016) *Review of higher education funding and student finance arrangements: final report*, Welsh Government, Cardiff.

Ervin, Williamson, Yates, and Hinson (2019) *Skilling Up: The Scope of Modern Apprenticeship*, Urban Institute.

Govender, C.M. and Valand, T.I. (2021) *Work Integrated Learning for Students: Challenges and Solutions for Enhancing Employability*, Cambridge Scholars Publishing, Newcastle.

HEFCW (2019) *Degree Apprenticeships in Wales and Proposals for Funding 2019/20*. [HE degree apprenticeships in Wales and proposals for funding 2019-20](#)

HEFCW (2020) *Degree Apprenticeships in Wales and Proposals for Funding 2020/21*. [HE Degree Apprenticeships in Wales and proposals for funding 2020-21](#)

HEFCW (2021) *Degree Apprenticeships in Wales and Proposals for Funding 2021/22*. [HE Degree Apprenticeships in Wales and proposals for funding 2021-22](#)

HM Treasury (2020), *The Magenta Book: Central Government Guidance on Evaluation*. HM Treasury, London.

Messing-Mathie, A. (2015). *Building apprenticeship systems for middle-skill employment: Comparative lessons in innovation and sector-based strategies for apprenticeships*. National Academies Board on Science, Technology, and Economic Policy.

National Assembly for Wales (2018). "Apprenticeships in Wales", retrieved from [Economy, Infrastructure and Skills Committee - Fifth Senedd](#)

Overman H. et al. (2015) *Apprenticeships, Evidence Review*, What Works for Local Economic Growth.

QAA (2020) COVID-19 supporting resources: *The Impact of COVID-19 on Higher Education in Apprenticeships: An Overview of the Challenges Facing Higher Education Providers*, QAA.

Reischl, K. (2008) *Bestandaufnahme der bisher in Deutschland akkreditierten dualen Studiengänge*. Bonn: Bund-Länder-Kommission.

Schaeffer, CM; Henggeler, SW; Ford, JD; Mann, M; Chang, R; Chapman, JE (2014). 'RCT of a promising vocational/employment program for high-risk juvenile offenders', *Journal of Substance Abuse Treatment*, Vol.46, pp.114-148.

Senedd Cymru Economy, Infrastructure and Skills Committee (2020) *Degree Apprenticeships*, the Senedd, Cardiff.

Trampusch, C. (2010) 'Employers, the State and the Politics of Institutional Change: Vocational Education and Training in Austria, Germany and Switzerland'. *European Journal of Political Research*, 49(4): 545–573.

Universities UK (2019). ["The Future of Degree Apprenticeships"](#), ISBN978-1-84036-426-2.

Wales Audit Office (2019). ["Implementing the Well-being of Future Generations Act – Welsh Government"](#), Document reference: 1536A2019-20, retrieved from [Implementing the well-being of future generations act -Welsh Gov](#)

Welsh Government (2016a) *Talented Women for a Successful Wales – a report on the education; recruitment; retention and promotion of women in STEM-related study and careers.*

Welsh Government (2016b) *Science, Technology, Engineering and Mathematics (STEM) in Education and Training: A Delivery Plan for Wales.*

Welsh Government (2017). [Aligning the apprenticeship model to the needs of the Welsh economy](#), WG30448 / Digital ISBN 978-1-4734-8639-3.

Welsh Government (2018). ["Inclusive Apprenticeships: Disability Action Plan for Apprenticeships 2018-21"](#), Digital ISBN: 978-1-78964-505-7.

Welsh Government (2019) *Prosperity for All: Economic Action Plan*, Welsh Government, Cardiff.

Wieland, C. (2015) 'Germany's dual vocational-training system: Possibilities for and limitations to transferability'. *Local Economy*, 30(5), pp.577-583.