



Investigative study into higher education delivery in Wales

Commissioned by: Higher Education Funding Council for Wales

Research team: Anna Verhamme, John Britton, Huw Landeg Morris and Jan Watkins

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Executive Summary

Wales is at a pivotal moment in its post-secondary education history. The establishment of the Commission for Tertiary Education and Research (**CTER**) provides the opportunity to ensure learners of all ages have access to the full range of education opportunities, and thereby to narrow educational inequalities, expand opportunities and raise standards in Wales.

In preparation for this work the Higher Education Funding Council for Wales (**HEFCW**) commissioned Anna Verhamme Consulting to conduct an investigative study of higher education delivery in Wales. Our study addresses five questions: to what extent is there a diversity in delivery models in Wales; what are the contributing factors driving student choice; is the current diversity of delivery models meeting student needs; what are the barriers to higher education (HE) providers providing more diverse delivery models; and how are funding arrangements driving institutional behaviours.

The study is both qualitative and quantitative. Our quantitative analysis should be seen as a first attempt to develop a comprehensive picture of the diversity of delivery models in Wales and we make a number of recommendations for further data collection and analysis. Our analysis is supplemented by rich qualitative data gained via the extensive engagement we conducted as part of the study. By using a mixed methods approach we gained a broader, deeper and richer understanding of the diversity of higher education in Wales.

Our study found that, whilst there are diverse models of HE delivery in Wales, there is still a dominant delivery model: the three-year, full-time undergraduate honours degree. Other forms of undergraduate higher education provision in Wales are available but there are fewer opportunities on offer. The sector is not homogenous and the extent of diversity differs between groups of providers.

Only 1 in 3 young Welsh people actually chooses to engage with higher education, and the higher the levels of multiple deprivation and the lower the educational attainment of the people around them, the less likely a person is to engage with higher education. People living in Wales who: have a disability, are carers, come from Roma, Gypsy and Traveller backgrounds, from Bangladeshi and White and Black Caribbean ethnic backgrounds, or are young men, have traditionally been underrepresented in higher education.

Around 27 to 31% of people living in Wales who choose to study at higher education level, choose to study outside of Wales, and the majority of those study for a first degree¹ or a masters taught degree. An important driver for whether people living in Wales will study in Wales or outside of Wales is age the younger the person the more likely they are to study outside of Wales. Focusing on full-time undergraduate study only, there are distinct patterns between levels of deprivation, parental education, socio-economic classification and school type, which suggests that privilege is another factor which influences whether a person living in Wales who chooses to undertake higher education level study studies in Wales or outside Wales.

There are a number of patterns to the choices Welsh students make when they choose to study at undergraduate higher education level in Wales which are driven by their personal characteristics.

¹ **First degree** includes all first degrees at level H/6 (including those with eligibility to register to practice with a health or social care or veterinary statutory regulatory body), ordinary (non-honours) first degrees, first degrees with Qualified Teacher Status (QTS)/registration with a General Teaching Council (GTC), postgraduate bachelors degree at level H/6, integrated and enhanced first degrees (including those leading towards obtaining eligibility to register to practice with a health or social care or veterinary statutory regulatory body), first degrees obtained concurrently with a diploma and intercalated first degrees. (HESA)

With reference to the data, whilst students with a disability typically do not favour specific modes or levels of study at undergraduate level, a higher proportion of students who choose to study at distance have a disability. Of the students who choose to study at a distance there is a higher proportion of students with two or more conditions and a lower proportion of students with a specific learning difficulty compared with students who chose to study face-to-face at a provider or partner. Age is a significant factor driving students to choose specific delivery models. Younger students choose undergraduate degrees, whilst students over 31 choose HNC and Certificates in HE. Younger students choose to study undergraduate degrees full-time, whilst students over 31 choose to study part-time. More students older than 31 choose to study at a distance than students aged under 20. More female students choose part-time delivery models, distance learning and standalone modules and short courses when compared with male students. Proportionally more white students choose to study for foundation programme, Diploma of HE, HND and standalone modules and short courses. Proportionally more white students choose to study part-time. Proportionally more Black, Asian and ethnic minority students choose to study at a provider.

One of the key answers this study sought to find was the extent to which the existing higher education delivery models on offer in Wales are meeting the needs of its learners. Our conclusion is that a growth in 'non-dominant' delivery models is needed to address the needs of people living in Wales and to close the participation gap, and that a need to develop even more alternative delivery models has become even more acute as the cost of living crisis is impacting more students. We argue for innovation in delivery models, but our discussion of higher level and degree apprenticeships also leads us to caution against a focus on diversity of delivery models without considering student outcomes. We attempt to take a look at student outcomes for each of the delivery models. The information we have looked at suggests that different delivery models do not produce consistent patterns of differences in student experiences or of likelihood of entering work or further study; there is a mixture of positive and negative student experiences and the same is true for the proportion of students being in work or further study. There looks to be, however, a pattern in continuation rates between delivery models: HND or diploma qualifications have lower continuation rates. What is more striking is that particular student groups have less positive educational experiences, not necessarily because of the delivery model itself, but because of their broader educational experience. Whilst diverse delivery models may be helpful in addressing the needs of some learner groups, improvements in educational outcomes of particular learner groups should equally be the policy focus.

We identified six financial barriers which reduce or slow the diversity of delivery models being developed and offered by HE providers:

1. As an ecosystem, the student finance system and teaching funding allocated to HE providers favour the dominant delivery model.
2. The long-term impacts of student debt on a student's future finances and life opportunities are not well understood by students and parents.
3. Significant levels of investment are made into funding student loans for Welsh students studying outside the Welsh HE sector. This reduces the amount of funding available to Welsh Government for investment in other priorities, which could include the expansion of alternative delivery models in Welsh HE providers.
4. The continued fall in levels of public funding are causing concern about the sector's ability to sustain its current business models. It has driven HE providers to grow income associated with delivery models with proportionally high margins, which has led to increased competition for international and some UG and PG students. It has also driven a number of HE providers to chase small pots of additional public funding for the development of new

delivery models, which compete for resources with their existing delivery models and which at times unnecessarily duplicate delivery across Wales.

5. HE providers' mix of business models not only makes it difficult for the HE sector to calculate the real cost of its delivery models and to clearly articulate the size of the gap in funding, it also generates overhead costs and makes cost control harder.
6. The way some FEIs, alternative providers and their students currently access teaching funding or student loans leads to additional costs associated with the contractual and regulatory arrangements that allows them to do that. Processes around accreditation and validation add costs to delivery.

In addition, we identified seven non-financial barriers to developing innovative delivery models or delivering good educational outcomes for all student groups:

1. Current HE funding arrangements and quality assurance frameworks make it harder and more costly for providers to innovate and collaborate.
2. There is a gap between analysis and plans developed through the Regional Skills Partnerships and the delivery and implementation of Wales-wide changes to higher education provision. Change is often fragmented in local initiatives, limited to existing partnerships with costly overheads associated with bespoke time-limited arrangements and an ad-hoc infrastructure. Strategic collaborations have worked well when a shared infrastructure has been put in place, but this requires effort and resources.
3. Developing alternative delivery models could free up costs relating to buildings, energy and infrastructure.
4. HE providers' current digital infrastructure is outdated; at best it works for the dominant delivery model and makes supporting non-dominant delivery models difficult and costly.
5. Data definitions describing delivery models are too narrow and too focused on the dominant model, and data relating to non-dominant models often does not exist, or is of poor quality and returned in multiple external returns.
6. Many providers are improving their core education processes to improve outcomes for students and there is an opportunity for the sector to collaborate and develop an evidence base for what works.
7. Some higher education organisational cultures struggle to support their staff to innovate or promote healthy risk taking.

HEFCW is preparing to transition into the Commission for Tertiary Education and Research and work has started on developing a strategy for the tertiary education sector which articulates what is required of it to meet CTER's strategic priorities and how it will support Welsh Government priorities in health, education, civic society and the economy. We make thirteen recommendations which we hope will help shape important aspects of that strategy. These would be for CTER to drive forward, in collaboration with relevant organisations across Wales:

Funding and resourcing

Recommendation 1:

To create an investment strategy that sustains a thriving HE sector in Wales whilst driving institutions to innovate, invest, operate with financial prudence and perform to high standards. To develop and implement a financial strategy that will:

- reduce the costs associated with administering and regulating the system by removing duplication of services,
- remove nugatory competition and foster agile and effective competition,

- make more strategic use of existing funding by reviewing size, scale and effectiveness of current budgets,
- increase the volume of education delivery in Wales to students living in Wales by continuing to raise standards and quality of Welsh HE provision and using policy levers such as fees and support, and
- consider coupling the level of student tuition fees with changes in costs and inflation. (This will only be acceptable if the system and the value of private benefit to the learner is better understood.)

Action: Welsh Government and CTER (Lead)

Recommendation 2:

To redesign the student finance system in Wales so that it releases the latent demand for more diverse forms of HE. The new system will (as a minimum):

- support a much wider range of delivery models (including online),
- be known about and understood by all potential students,
- be simple and easy to use for all but especially those with multiple barriers to education,
- give courses with alternative modes of attendance funding parity with the full time model, and
- make it easier for second chance learners to study in HE (by including funding for Access courses and Maths and English skills boosters).

The new system will be clearly communicated to all stakeholders in a form that can be understood by all.

Action: Welsh Government (Lead) and CTER

Recommendation 3:

To ensure that the regulatory framework facilitates the registration and funding of a broader range of HE providers delivering models that innovatively address learner needs while minimising costs for them to do so.

Action: CTER (Lead)

Recommendation 4:

To support tertiary education providers to articulate fully the cost structures of their delivery models, by commissioning a holistic study of the costs of higher education delivery which recognises the triple mission of HE providers – to deliver teaching, research/knowledge transfer, and to be civic anchor institutions – and, where appropriate, uses existing provider workload data.

Action: CTER (Lead)

Structures and systems

Recommendation 5:

To simplify how teaching funding is allocated and administered.

Action: Funding bodies (Welsh Government, HEIW, CTER (Lead))

Recommendation 6:

To ensure, through review and redesign, that the awarding system can not only support, but also encourage:

- diversity of provision
- efficient provision
- ease of creating varied forms of provision
- ability to create new provision quickly
- international quality reputation of 'Welsh' qualifications.

Action: Qualifications Wales (Lead) and HE providers

Recommendation 7:

To develop and invest in a digital infrastructure strategy for the higher education sector, which gives prospective learners and, initially, HE learners visibility of and access to all delivery models equally (e.g. the creation of a Higher Education Learner Progression – HELP – system which gives school leavers, FE learners and those seeking employer-related provision, visibility of all HE learning opportunities in one place) and gives all providers the opportunity to serve their diverse community of learners (i.e. urban and rural) equally. This might possibly be extended to cover the whole tertiary education provision in Wales.

Action: CTER (Lead)

Recommendation 8:

To develop a data strategy for the tertiary education sector, which:

- maps out how management information system costs (including student records and associated external returns) can be reduced through data architecture and cloud technology,
- simplifies and expands the definitions describing delivery models, and
- improves the availability, consistency and quality of data across all delivery models, with a focus on student outcomes rather than diversity per se.

Action: CTER (Lead)

Recommendation 9:

To include tertiary education providers in regional capital planning and environmental sustainability strategies, and to focus on additional tertiary sector building needs as well as what estates can be rationalised, re-purposed and improved.

Action: Local Authorities (Lead)

Collaboration and collaborative infrastructure

Recommendation 10:

To create a Wales-wide vehicle through which employer-facing provision could be developed and delivered collaboratively through a wide range of education models by experts in the field (either

from one or many Welsh HEIs) and be made available to employers, irrespective of the place of employment.

- work with HEIW to pilot the vehicle for the health sector,
- evaluate, review and develop a vehicle blueprint for other sectors, with sector needs driving planning and funding, and
- roll out the approach to other strategic economic sectors.

We sketch out what we mean by a vehicle in appendix 11 to this report.

Action: CTER (Lead) and HEIW

Recommendation 11:

To ensure CTER has the necessary tools to guide, develop and regulate the sector:

- Invest in CTER's planning, analysis and evaluation capacity
- Develop a common set of published data dashboards used to clarify performance expectations, support regulation of the sector, inform stakeholders and support strategy review.
- Develop a CTER sector research function that commissions effective research into how the sector can best deliver. This will:
 - inform policy and strategy development and implementation
 - inform operational improvement
 - support strategically significant innovation.

Action: Welsh Government and CTER (Lead)

Recommendation 12:

To work with HE providers to develop a 'study in Wales' offering to attract Welsh-domiciled students who choose to study outside Wales back to Wales, to study Welsh-medium modules, thus enhancing their bilingual skills.

- Explore, with select English HE providers, the creation of a one-year, primarily Welsh-medium, 'study in Wales' offer along the lines of year abroad offer.
- Work with providers in England so that Welsh-speaking students in England can include online/distance Welsh-medium modules from Welsh providers within their degree programmes. An initial linkage with between five and eight English providers would offer considerable percentage coverage of Welsh-domiciled students in England.

Action: CTER (Lead) and Coleg Cymraeg Cenedlaethol

Further research

Recommendation 13:

To further develop a more comprehensive and nuanced picture of the diversity of delivery models on offer, which should include:

- further development of the typology to include the subjects taught,
- analysis of the additional factors driving students living in the rest of the UK to study in Wales
- analysis of the factors that drive Welsh students to choose to study outside Wales, including the delivery models they choose,

- analysis of the factors driving students from different ethnic minority backgrounds to choose delivery models and programmes, and investigation into the importance of Welsh medium provision to the choices students make about where and how they study at higher education level.

Action: CTER (Lead)

1. Introduction

Wales is at a pivotal moment in its post-secondary education history. The Tertiary Education and Research (Wales) Act 2022 sets out a new vision for the future of post-16 education. The vision, informed by the Well-being of Future Generations goals sets out a clear direction for the Tertiary Education and Research (TER) sector².

The Act also creates a new national steward for post-16 education. The establishment of the Commission for Tertiary Education and Research (CTER) brings together responsibility for overseeing Wales's higher and further education, school sixth forms, apprenticeships, and research and innovation in one place. The Minister for Education and Welsh Language has set out an ambitious agenda for CTER:

“By taking a whole-system approach to tertiary education, we will narrow educational inequalities, expand opportunities and raise standards. Our tertiary education and research reforms will support the different but complementary strengths of all institutions, so that learners of all ages have access to the full range of opportunities and are able to contribute economically, academically, and to our communities.”³

The Higher Education Funding Council for Wales (HEFCW), currently responsible for Higher Education (HE) in Wales, recently identified a need to increase the *[higher education]* opportunities for students to be able to study with flexibility and to support the up-skilling and re-skilling of mature students⁴ (W21/07HE, *our addition*). HEFCW commissioned this investigative study to explore the correlation between opportunity to access higher education and the extent of diversity of HE delivery models in Wales.

In this investigative study we address five questions: to what extent is there a diversity in delivery models in Wales; what are the contributing factors driving student choice; is the current diversity of delivery models meeting student needs; what are the barriers to higher education (HE) providers providing more diverse delivery models; and how are funding arrangements driving institutional behaviours.

At the end of our report, we make thirteen recommendations which address each of the barriers to developing more diverse delivery models which we hope will help shape important aspects of CTER's developing strategy for the tertiary education sector. Our scope and methodology are described in appendix 2.

² [See Post-compulsory education and training: strategic vision | GOV.WALES](#)

³ Miles, J. (2023). *Our national mission: high standards and aspirations for all*. Welsh Government.

⁴ [The background to and rationale for the investigative study is described in appendix 1.](#)

2. Assessing the diversity of higher education delivery models in Wales

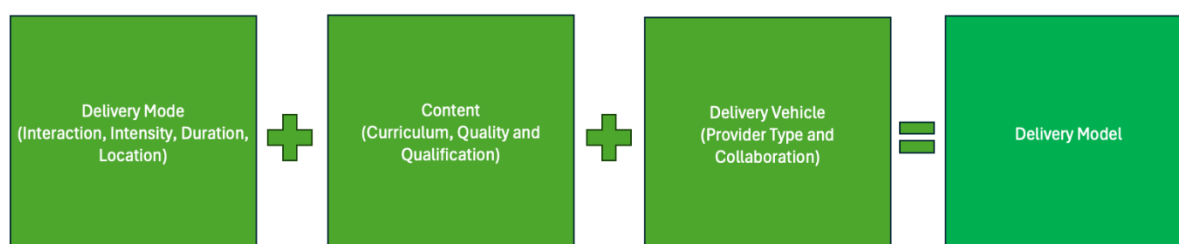
Summary: There currently is no clear and comprehensive set of data describing the full diversity of delivery models on offer from Welsh HE providers. We developed a simple typology and used it to assess HESA’s DiscoverUni dataset which covers 2,485 undergraduate programmes and is the “authoritative source of information for higher education.” We also manually added information from 66 degree apprenticeship programmes. Our assessment is that there are diverse models of HE delivery in Wales. However, there is still a dominant delivery model: the three-year, full-time undergraduate honours degree is the largest offering. Other forms of higher education provision in Wales are available but there are fewer opportunities on offer. The sector is not homogenous and the extent of diversity differs between groups of providers. Our assessment matches with the perceptions of people working in the Welsh HE sector. We offer throughout this report recommendations for further data collection and analysis to develop the methodology.

2.1 Approach

There currently is no clear and comprehensive data set which describes the full diversity of delivery models. Data is held in different datasets, which often can’t be combined because of differing definitions and the data is collected by different organisations. Data relating to full-time undergraduate programmes and the students who apply via UCAS is, for example, significantly more comprehensive than data about flexible, part-time CPD modules. In this investigative study we want to start building a more comprehensive picture but we recognise that the picture will necessarily be incomplete and lack nuance.

FINDING 1: there is no clear and comprehensive dataset which describes the full diversity of delivery models in Wales

To analyse the diversity of higher education delivery in the Welsh HE sector, we developed a simple typology of higher education delivery models, combining the three factors that combine to enable delivery – essentially the ‘how, what and who’ of delivery:



This is simplified typology: each component has its own collection of types and each of those in turn interacts with each other. We describe the typology, its nuances and interconnectedness in more detail in appendix 3. Because of resource and time constraints we made a conscious decision not to include the subject taught as part of the model. We recommend further analysis.

To assess the diversity of delivery models in Wales, we included eight components in our analysis and made use of the programme information for 2,551 undergraduate programmes taught in Wales⁵

⁵ Details of key programme components were obtained for 2,485 programmes from the Discover Uni HESA dataset, accessed in February 2024 (version 7.2 produced on 28/09/2023). The Discover Uni HESA dataset includes 33,438 programmes. A subset was created for this study by including all programmes taught by an HE

(2485 from DiscoverUni plus 66 degree apprenticeship programmes). This dataset determines what information is available to learners exploring entry into higher education and includes programmes delivered by the range of HE providers in Wales shown in figure 1.

Figure 1: HE providers in Wales, by type of provision

<p>Predominantly HE Providers (research-led and teaching-led):</p> <p>Bangor University/Prifysgol Bangor*</p> <p>Cardiff Metropolitan University/Prifysgol Metropolitan Caerdydd*</p> <p>Cardiff University/Prifysgol Caerdydd*</p> <p>The Open University in Wales/Y Brifysgol Agored yng Nghymru*</p> <p>Aberystwyth University/Prifysgol Aberystwyth*</p> <p>Swansea University/Prifysgol Abertawe*</p> <p>University of South Wales/Prifysgol De Cymru*</p> <p>University of Wales: Trinity Saint David/Prifysgol Cymru Y Drindod Dewi Saint*</p> <p>Wrexham University/Prifysgol Wrecsam*</p>	<p>Predominantly FE providers:</p> <p>Bridgend College/ Coleg Penybont</p> <p>Cardiff and Vale College/Coleg Caerdydd a'r Fro</p> <p>Coleg Cambria</p> <p>Coleg Gwent</p> <p>Coleg Sir Gâr</p> <p>Coleg y Cymoedd</p> <p>Gower College Swansea/ Coleg Gŵyr Abertawe</p> <p>Grŵp Llandrillo Menai</p> <p>Neath Port Talbot Group of Colleges/Grŵp Colegau NTPC</p> <p>Pembrokeshire College/ Coleg Sir Benfro</p> <p>The College Merthyr Tydfil/Y Coleg Merthyr Tudful</p>
<p>Alternative Providers:</p> <p>Black Mountain Activities Ltd.</p> <p>Centre for Alternative Technology/Canolfan y Dechnoleg Amgen</p> <p>St-Padarn's Institute/Athrofa Padarn Sant</p> <p>Union School of Theology</p>	<p>Specialist Provider:</p> <p>Royal Welsh College of Music and Drama/Coleg Brenhinol Cerdd A Drama Cymru</p>
<p>*Providers with degree awarding powers</p>	

provider in Wales, including the Open University. ([Discover Uni Home](#) | [Discover Uni](#) is the official, authoritative source of information and guidance on higher education in the UK.) Details on an additional 66 degree apprenticeship programmes were added manually and were taken from the HEFCW website.

Table 1 sets out the eight components included in our assessment:

Table 1: Eight components of the delivery models in Wales

<p>1. Remote learning</p> <p>Not available for distance learning Distance learning</p> <p>2. Mode/Intensity of study</p> <p>Full-time Part-time</p> <p>3. Duration</p> <p>Years</p>	<p>4. Qualification level</p> <p>Level 4 Level 5 Level 6 Level 7</p> <p>5. Qualification Aim</p> <p><i>Language of instruction</i></p> <p><i>Language through which content is delivered.</i></p>	<p>6. Type of HE provider</p> <p>Predominantly HE institution Specialist HE institution Predominantly FE institution Alternative provider</p> <p>7. Institutional Collaboration</p> <p>Delivered by single provider Delivered by multiple providers</p> <p>8. Joint delivery with partner</p> <p>Delivered by HE provider & employer (work-based) Delivered by HE provider & HE provider abroad</p>

Whilst providing the most comprehensive and holistic overview possible of the diversity of undergraduate programmes offered in the sector within the time and resource limitations of this study, we acknowledge that this approach is limited by a number of constraints, from incomplete data (we have, for example, excluded programmes leading to Master’s and Doctoral degrees, although integrated masters are included and we do not include data on employees undertaking professional development), to too-simplistic definitions⁶.

But our aim is to start painting a picture of the diversity of delivery models currently available to students. We recommend that this picture be further explored and understood, as it contains layers of complexity and nuance that require further data collection and analysis. For example, one critical delivery model component raised by many of our study participants is when classes are timetabled and the extent to which a students’ timetable works with caring duties and part-time work.

Recommendation 13 advocates the further development of a comprehensive and nuanced picture of the diversity of delivery models on offer in Wales with the gathering and analysis of more data.

We also want to stress that this paints a picture of the diverse range of programmes that are on offer. It does not necessarily follow that the programmes on offer are equally favoured by students. We look in more detail at student choices later in this report.

⁶ Jim Dickinson rehearses some of the challenges of defining what a full-time student is, for example in Dickinson, J. (2023, November 3). *What even is a “full-time” course anyway?* Wonkhe.

2.2 Assessment

Table 2 shows that the majority of programmes offered are:

- not available via distance learning
- full-time
- 3 to 4 years in duration
- at level 6
- lead to an honours degree
- delivered by a single HE institution
- without opportunity of work-based learning through sandwich year
- without opportunity of a year abroad.

Table 2: Overview of the number of and proportion of programmes offered by Welsh HE providers classified against delivery components

	Proportion of programmes available via distance learning	Number of programmes available via distance learning
Not at distance	94.6%	2412
Distance learning	5.3%	136
Both	0.1%	3
	Proportion of programmes by mode of attendance	Number of programmes by mode of attendance
Full-time	81.1%	2069
Part-time	18.9%	482
	Proportion of programmes by duration	Number of programmes by duration
3 years	42.8%	1092
4 years	28.1%	718
Flexible (part-time)	16.3%	416
2 years	6.2%	158
3 to 5 years	2.6%	66
5 years	2.1%	54
1 year	1.8%	46
6 years	0.0%	1
	Proportion of programmes by qualification level	Number of programmes by qualification level
Level 6	79.6%	2030
Level 5	12.3%	315
Level 7	6.2%	157
Level 4	1.9%	49

	Proportion of programmes by qualification	Number of programmes by qualification
Honours Degree	77.0%	1964
Integrated Masters	6.2%	157
Higher National Diploma	4.8%	122
Foundation Degree	4.3%	109
Diploma of Higher Education	3.3%	84
Degree apprenticeship	2.6%	66
Certificate of Higher Education	1.9%	49
	Proportion of programmes by provider type	Number of programmes by provider type
Predominantly HE institution or "University"	97.6%	2489
Predominantly FE institution or "College"	2.1%	53
Alternative Provider	0.4%	9
	Proportion of programmes delivered by institutions collaborating	Number of programmes delivered by institutions collaborating
Single institution: HEI	93.7%	2390
Single institution: FEI	2.1%	53
Collaboration HEI with FE	3.8%	97
Single institution: alternative provider	0.4%	9
Collaboration HEI with alternative provider	0.1%	2
	Proportion of programmes delivered collaboratively with employers through work-based sandwich years	Number of programmes delivered collaboratively with employers through work-based sandwich years
No sandwich year	76.4%	1948
Optional sandwich year	11.4%	290
Compulsory sandwich year	9.7%	247
Programme delivered at employer	2.6%	66
	Proportion of programmes with year abroad study opportunity	Number of programmes with year abroad study opportunity
No year abroad study	83.5%	2131
Compulsory year abroad	8.8%	224
Optional year abroad	7.7%	196

Source: HESA DiscoverUni dataset including 2485 programmes and 66 degree apprenticeship programmes available via HEFCW website

A more interesting picture emerges when we put all of the components together to assess the diversity of programmes.

Figure 2 presents a Sankey chart to visualise how the different delivery components⁷ are combined.

At the bottom of the figure we show each of the 8 delivery components (from distance learning on the left to sandwich year or year abroad on the right). Combined, they make up some of the key differences in the programmes offered by Welsh HE providers.

Each line represents one programme; the wider the flows the more programmes are offered with that characteristic or delivery model component.

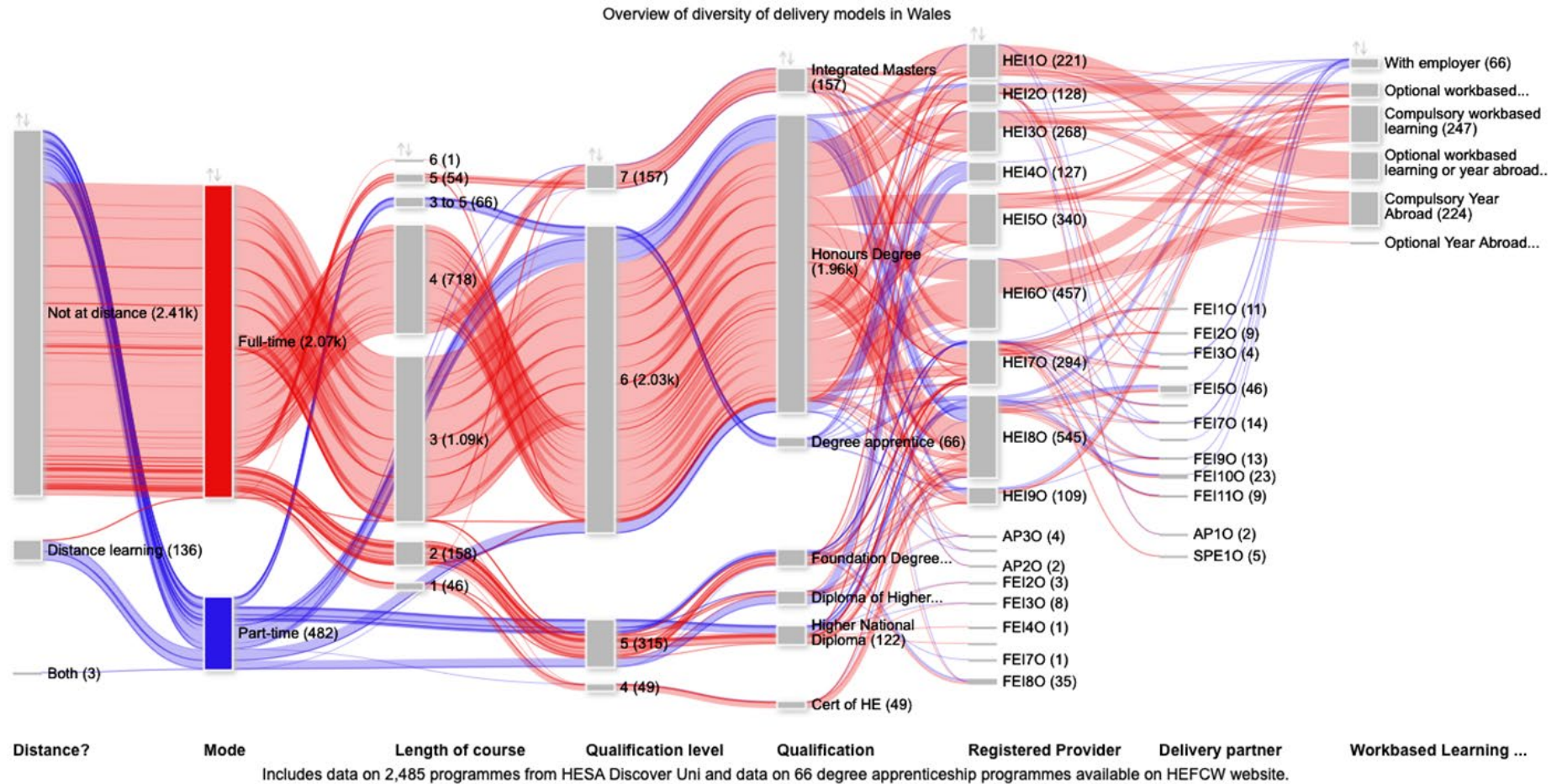
A few interesting observations can be made:

1. Distance learning and part-time delivery models cluster in a small number of HEIs and one particularly.
2. Programmes which take 1 to 2 years are clustered around Levels 4 and 5 and specific HEIs and FEI partners.
3. Collaboration between FE and HE is clustered around three HEIs.
4. Overall there is the sense that there is a “superhighway of higher education”⁸ (shown in red), which is the well-trodden path for many students and HE providers.

⁷ We walk through the Sankey chart in detail in appendix 4.

⁸ Mary McCurnock Cook used this phrase recently to describe the “well paved, well maintained, fast lane from good GCSEs to A levels and then on to University. ... Then there are all the slip roads, the alternative routes – there are loads of them – many still under construction, have diversions and even a few roadblocks in place.” (HEPI, *Tertiary Education for the 21st Century: the who, the what and the how* – Mary McCurnock Cook.)

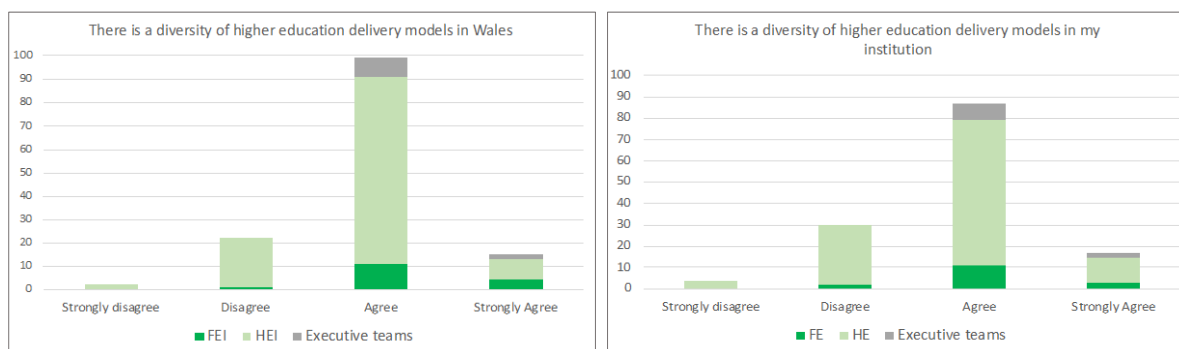
Figure 2: Visualisation of undergraduate provision, by programme characteristics and delivery model component



2.3 Perspectives from study participants

As part of our engagement, we asked people working in HE providers for their perceptions about the diversity of delivery models. Appendix 2 provides details on the engagement we undertook as part of this investigative study. The majority agreed or strongly agreed that there is both diversity of higher education delivery models in Wales, as well as within their own institution.

Table 3: HE providers' staff perceptions of the diversity of delivery models (headcounts)

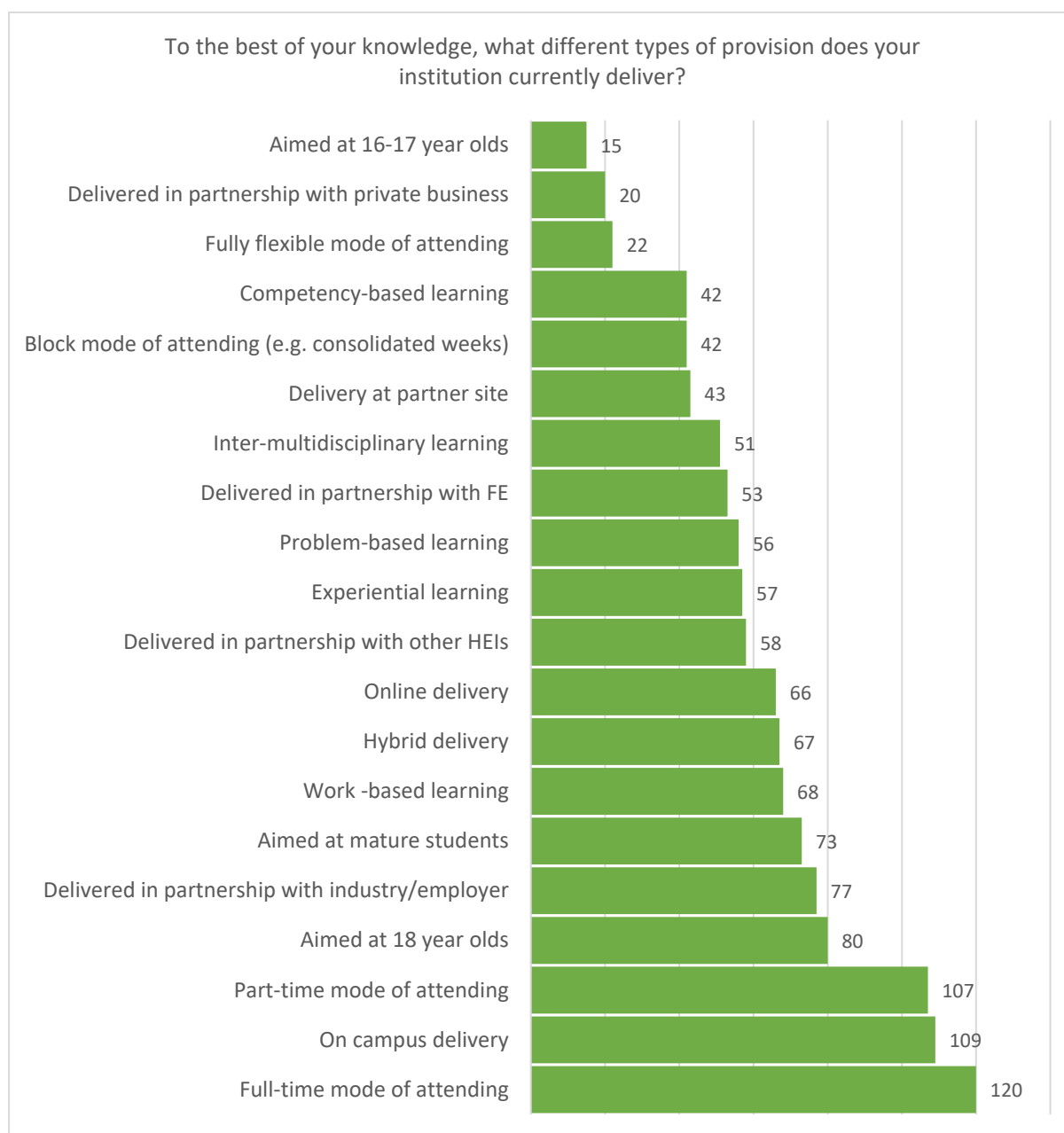


This shared perception of diversity became more nuanced when we looked at respondents' comments. The following significant points were raised:

- While some diversity exists, there is still significant room for growth in flexible, online, part-time, and apprenticeship models to serve **diverse learners and increase access**.
- Online and distance learning options increased due to the pandemic but there is a concern amongst some respondents that default delivery will revert back to face-to-face, while others are concerned that online learning will replace face-to-face. On the whole respondents agree that purposefully designed **blended models are limited**.
- **Traditional models still dominate across most institutions and fields**, though some innovative examples exist, especially in partnerships with employers.
- Progress has been made in expanding flexible options, but there is still significant **room for improvement** to increase accessibility.
- Part-time and distance learning options have increased but are still limited, and **many institutions still cater mainly to traditional full-time students**.
- Access and support for **underrepresented groups**, such as mature, disadvantaged, and neurodiverse students, need improvement.
- **Practical constraints** around timetables, commuting and location **restrict options** for many.
- **Lack of clear information** about what provision exists across institutions is an issue.
- **Employer-focused and work-integrated models** are limited in some fields and should be expanded.
- Support for **neurodiverse, and international students** with additional needs is insufficient at some institutions.

We asked survey respondents to indicate which different types of provision their institutions are currently offering (this is not necessarily a comprehensive list, but shows the extent survey respondents were aware of the diversity in their own institutions):

Table 4: HE providers' staff awareness of own institution's provision



One respondent commented:

“While a number of the boxes are ticked [in my institution] the types of provision beyond the standard full time 18yrs old on campus delivery [are] delivered in very small pockets and not scaled up to deliver large numbers.”

Conclusion: We recognise that there are examples of diverse practice within the sector, but, based on the evidence and observations, we conclude that there is room to increase the diversity of delivery models, and consequently we offer recommendations relating to policy changes and innovative approaches, which expand opportunities. We also recommend that our analysis of diversity of delivery models is further developed to include subject taught.

3. What are the contributing factors driving student choice for students studying at higher education level in Wales?

Summary: Only 1 in 3 young Welsh people chooses to engage with higher education. The community in which a person lives in Wales drives to a great extent whether they choose to engage with higher education provision at all: the higher the levels of multiple deprivation and the lower the educational attainment of the people around them, the less likely a person is to engage with higher education. People living in Wales who have a disability, are carers, come from Roma, Gypsy and Traveller backgrounds, from Bangladeshi and White and Black Caribbean ethnic backgrounds, or are young men, have traditionally been underrepresented in higher education.

Students choosing to study at undergraduate level in Wales and who live elsewhere in the UK or overseas choose full-time, undergraduate degree programmes delivered at a provider. We can see some differences between these and the delivery models students who live in Wales choose, which are more part-time, distant and at partner delivery, and for a wider range of qualifications aims including HNC and HNDs.

Around 27 to 31% of people living in Wales who choose to study at higher education level, choose to study outside of Wales, and the majority of those study for a first degree⁹ or a masters taught degree. An important driver for whether people living in Wales will study in Wales or outside of Wales is age: the younger the person the more likely they are to study outside of Wales. Focusing on full-time undergraduate study only, there are distinct patterns between levels of deprivation, parental education, socio-economic classification and school type, which suggests that privilege is another factor driving whether a person living in Wales who chooses to undertake higher education level study studies in Wales or outside Wales.

Referring to the data, students with a disability typically do not favour specific modes or levels of study at undergraduate level. A higher proportion of students who choose to study at distance have a disability and of the students who choose to study at a distance there is higher proportion of students with two or more conditions and a lower proportion of students with a specific learning difficulty compared with students who choose to study face-to-face at provider or partner. Age is a significant factor driving students to choose specific delivery models. It appears that younger students choose undergraduate degrees, whilst students over 31 choose HNC and Certificates in HE. Younger students choose to study undergraduate degrees full-time, whilst students over 31 choose to study part-time. More students older than 31 tend to choose to study at a distance more so students aged under 20. More female students appear to choose part-time delivery models, distance learning and standalone modules and short courses when compared to male students. Proportionally more white students choose to study for foundation programme, Diploma of HE, HND and standalone modules and short courses. Proportionally more white students choose to study part-time. Proportionally more Black, Asian and ethnic minority students choose to study at a provider rather than partner or via distance learning.

⁹ **First degree** includes all first degrees at level H/6 (including those with eligibility to register to practice with a health or social care or veterinary statutory regulatory body), ordinary (non-honours) first degrees, first degrees with Qualified Teacher Status (QTS)/registration with a General Teaching Council (GTC), postgraduate bachelors degree at level H/6, integrated and enhanced first degrees (including those leading towards obtaining eligibility to register to practice with a health or social care or veterinary statutory regulatory body), first degrees obtained concurrently with a diploma and intercalated first degrees. (HESA)

3.1 Our approach

We established in the previous section that, whilst there is a diversity of delivery models across Welsh higher education providers, there still is a dominant delivery model. In this section we explore what factors drive students to choose between the different delivery models on offer.

We have approached this section by inferring those factors from various sources of data, rather than asking prospective learners for their preferences. Because of limitations with data availability the majority of our analysis is limited to undergraduate level study. We have concentrated the focus of this analysis on people living in Wales (which throughout this section we refer to as “Welsh people” for ease of reading) and their key characteristics.

We are aware that this approach has the following limitations:

1. Whilst there is much data on the kinds of students who are in higher education, data on people not in higher education is less readily available and we are therefore limited in understanding why people choose not to engage in learning at higher education level.
2. We are making a number of assumptions about choice of study based on individual characteristics, which we have not verified with students who make those choices.
3. The analysis is undergraduate focused.

We recommend further data is collected and analysed, which explores:

- the additional factors driving students living in the rest of the UK to study in Wales,
- the factors that drive Welsh students to choose to study outside Wales, including the delivery models they choose,
- the factors driving students from different ethnic minority backgrounds to choose delivery models and programmes, and
- the importance of Welsh medium provision to the choices students make about where and how they study at higher education level.

3.2 Higher Education participation gap in Wales

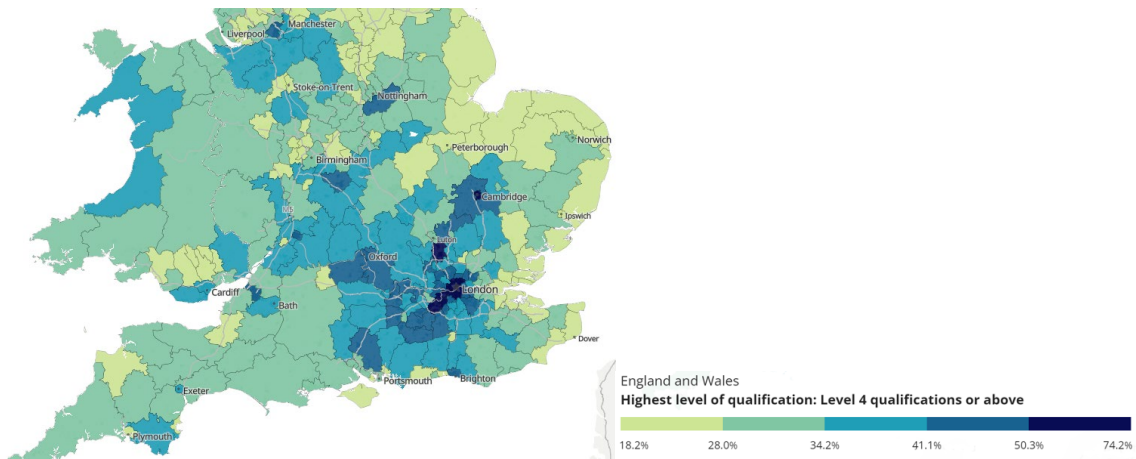
3.2.1 Educational attainment

The total population in Wales aged 16 years and over is 2,559,417, and, of this population, 806,773 individuals (approximately 32%) have attained Level 4 qualifications or above¹⁰. So only 1 in 3 people living in Wales has participated in higher education. The picture across Wales varies significantly, with some significant educational disparities across local authorities as illustrated below in Figure 3¹¹.

¹⁰ The estimates are as at Census Day, 21 March 2021. Note that this is likely to be an over-estimate: the ONS states that comparison with other data sources suggests that the census results over-estimate the number of people with HE qualifications and apprenticeships. This seems partially down to younger respondents reporting that they have already obtained qualifications for which they are still studying. It also seems partially down to holders of older and non-UK qualifications incorrectly identifying their modern UK equivalent qualifications.

¹¹ In Figure 3, local authorities in England and Wales have been sorted into quintiles, with the boundaries for each group indicated in the key. Only part of England is shown, due to space constraints.

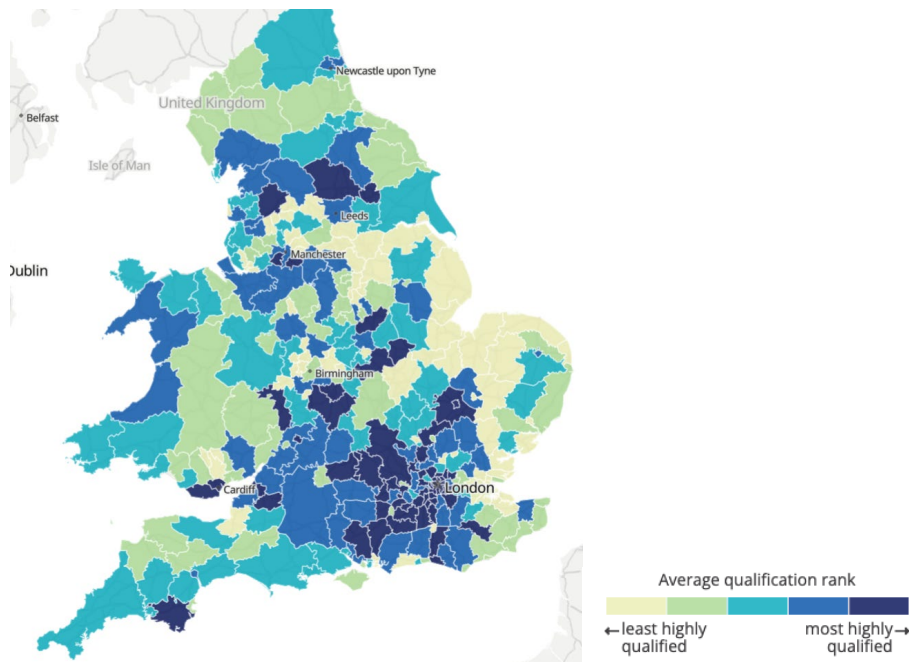
Figure 3: Highest level of qualification by Local Authority: Level 4 qualifications or above (Census 2021)



Source: ONS Census 2021

When we reflect on the educational attainment within the workforce that lives in each local authority area, and include all qualifications, similar patterns emerge. Figure 4 below shows all local authorities in England and Wales, shaded according to a scoring system devised by the ONS, based on the qualification level of the labour force who live in each locality¹².

Figure 4: ONS composite education score by local authority (Census 2021)



Source: ONS Census 2021

¹² The index score assigns every individual aged 16 years and over in the population a rank based on their highest level of qualification, excluding those whose highest level of qualification is unknown. The index score is then the average rank of all individuals in that population.

These existing differences in educational attainment feed into the environment around prospective students. HE is a much easier choice when you have role models and advocates around you.

A study¹³ of students in England who had applied, or intended to apply, to study for an undergraduate degree at an HE institution underscores that students' choices are influenced by their material constraints, cultural and social capital, social perceptions, and class-based distinctions. It highlights how inequalities in participation, the student experience, and social mobility persist due to these material constraints.

This finding is supported by a recent study by dataHE and the Sutton Trust¹⁴. The study considered trends in university applications for undergraduate programmes made via UCAS over the last couple of decades. It is important to note that whilst the majority of applications are made via UCAS, it excludes applications made directly to HE providers. Mature learners are especially more likely to apply to institutions directly. Despite that limitation, the study's analysis of participation¹⁵ is still insightful when we compare the data for Wales with the earlier information on educational attainment and with other nations. Figure 5 below considers learners by their UK region or nation of origin.

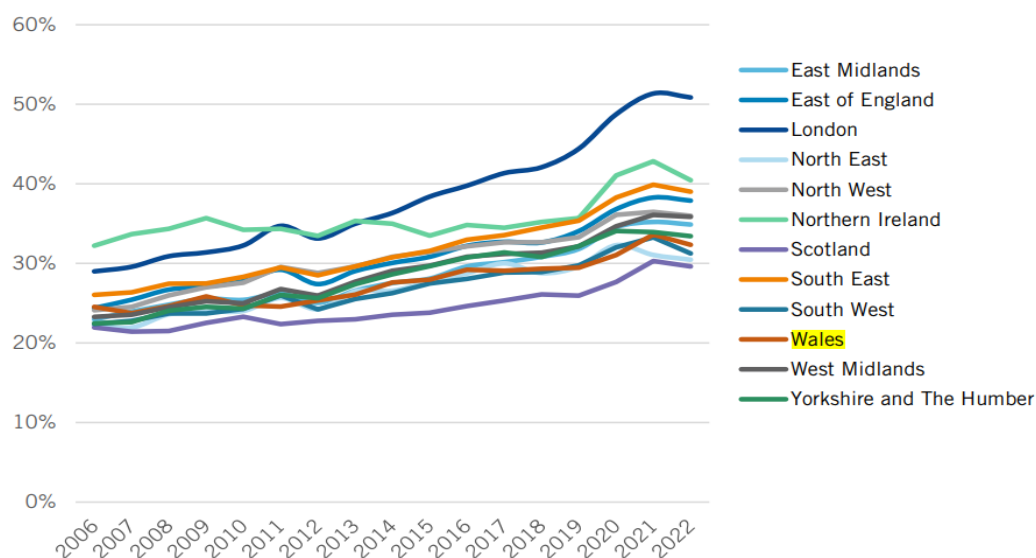
Similar to low levels of educational attainment, the study shows that Wales has one of the lowest entry rates to HE in the UK, at 32% in 2022. This is below the UK average of 38%, and far behind London's 51%. The entry rate for Wales has increased by only 6 percentage points since 2006, compared with 22 points for London. Figures for the 2023 cycle suggest that participation of Welsh domiciled students dipped further, to 29.9%

¹³ Claire Callender & Gabriella Melis (2022) 'The Privilege of Choice: How Prospective College Students' Financial Concerns Influence Their Choice of HE Institution and Subject of Study in England', *The Journal of Higher Education*, 93:3, 477-501.

¹⁴ Montacute, R., Cullinane, C., & Corver, M. (2023). *Access to higher education: Trends since 1997*. The Sutton Trust. (Where data is from UCAS, it covers a period between 2006 and 2021, with 2022 figures estimated from historic trends.)

¹⁵ Using the measure: Entry rate (ER) = UCAS Acceptances/Population

Figure 5: Entry rates to HE via UCAS, by UK nation or English region (2006–2022)

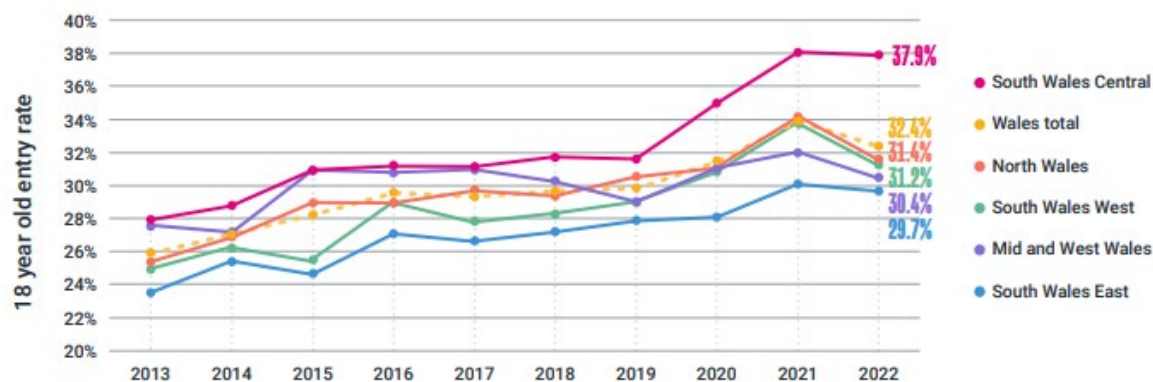


Source: Sutton Trust

A more detailed analysis produced by UCAS, of progression to HE in different areas of Wales using Welsh parliamentary regions as a geography¹⁶, reflects similar patterns to the educational attainment maps above.

Figure 6 below details the different entry rates of 18-year-olds to HE in each of the Senedd regions. The entry rate for South Wales Central is 5.5 percentage points above the Welsh average, and is 8.2 percentage points higher than neighbouring South Wales East.

Figure 6: Entry rate of 18-year-olds to HE by Senedd region



An important driver for whether people living in Wales choose to study at higher education level is the educational attainment of the community they have grown up in. This also closely relates to other environmental factors measured through the Welsh Index of Multiple Deprivation (WIMD).

¹⁶ See: [Unpacking Welsh regional migration: A deep dive into higher education progression across the Welsh parliamentary regions | Undergraduate | UCAS](#)

3.2.2 Levels of deprivation

The Welsh Index of Multiple Deprivation (WIMD) is a measure which identifies small areas of Wales which are the most deprived¹⁷ and, although a lot more granular, shows similar geographical patterns to the maps in Figures 3 and 4 on educational attainment.

Figure 7: The Welsh Index of Multiple Deprivation (WIMD)

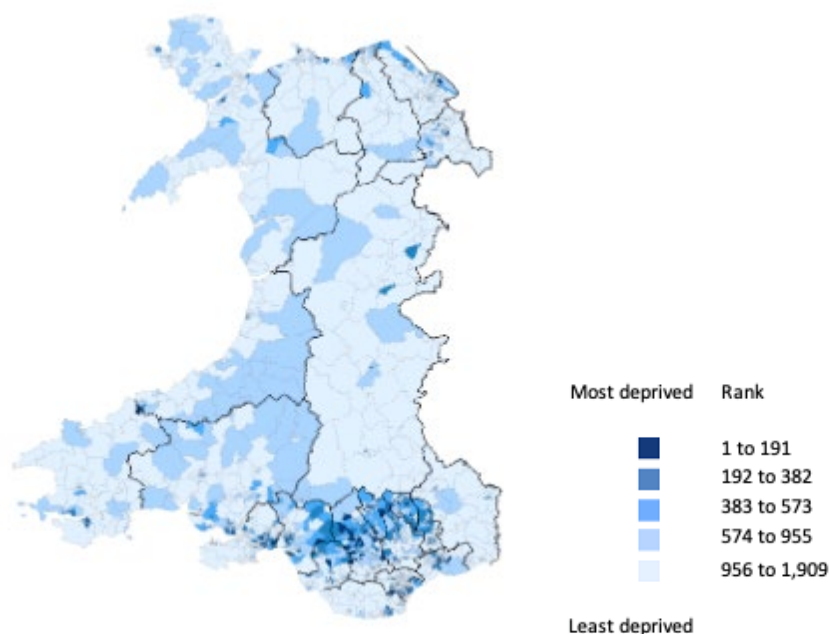


Figure 8 below describes the number of acceptances of University places by Welsh-domiciled young people according to the degree of area of deprivation. Factors which drive whether people from quintiles 1 and 2 choose to study at higher education level in the first place, and where, what and how they chose to study, include: educational attainment, the availability of role models, parental profession, levels of household income and levels of financial support, access to services (such as broadband), and housing conditions.

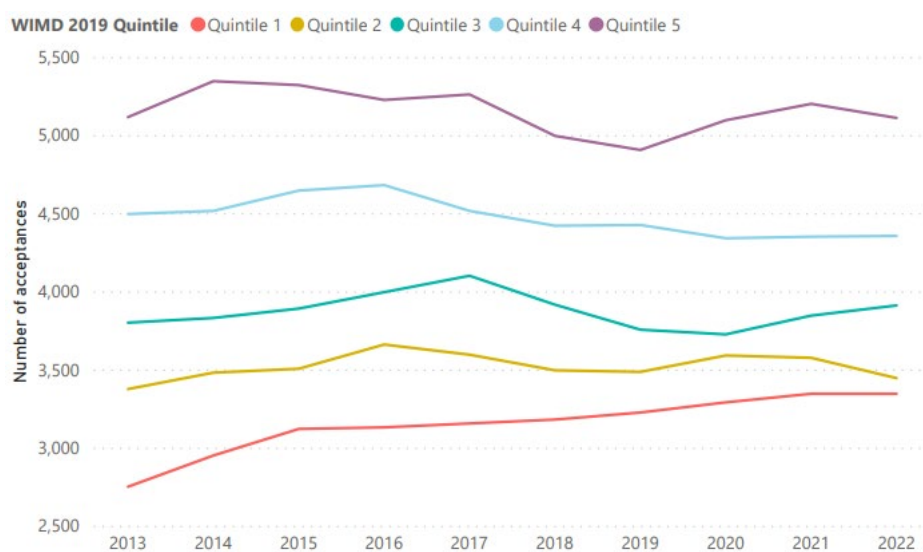
Tackling barriers to access has been a major focus of the HEFCW funded *Reaching Wider*¹⁸ programme and fee and access plans, as have HE provider recruitment teams, and progress has been made by providing additional support, additional routes into HE and adjustments to existing modes of delivery¹⁹.

¹⁷ [Welsh Index of Multiple Deprivation | GOV.WALES](https://gov.wales/welsh-index-of-multiple-deprivation)

¹⁸ [Home - Reaching Wider](#)

¹⁹ [TASO - Transforming Access and Student Outcomes in Higher Education](#) is building a strong evidence base on what changes are most effective.

Figure 8: Welsh-domiciled acceptances by WIMD 2019 Quintile



Source: HEFCW analysis of UCAS 2022 End of Cycle Report

In addition to the educational attainment of the community they have grown up in and other environmental factors measured through the Welsh Index of Multiple Deprivation (WIMD), individual student characteristics will drive whether a person living in Wales chooses to study at higher education level.

3.2.3 Personal characteristics

People living in Wales with the following individual characteristics have traditionally been underrepresented in higher education²⁰: people with a disability, carers, people from Roma, Gypsy and Traveller backgrounds, people from Bangladeshi and White and Black Caribbean ethnic backgrounds, and men.

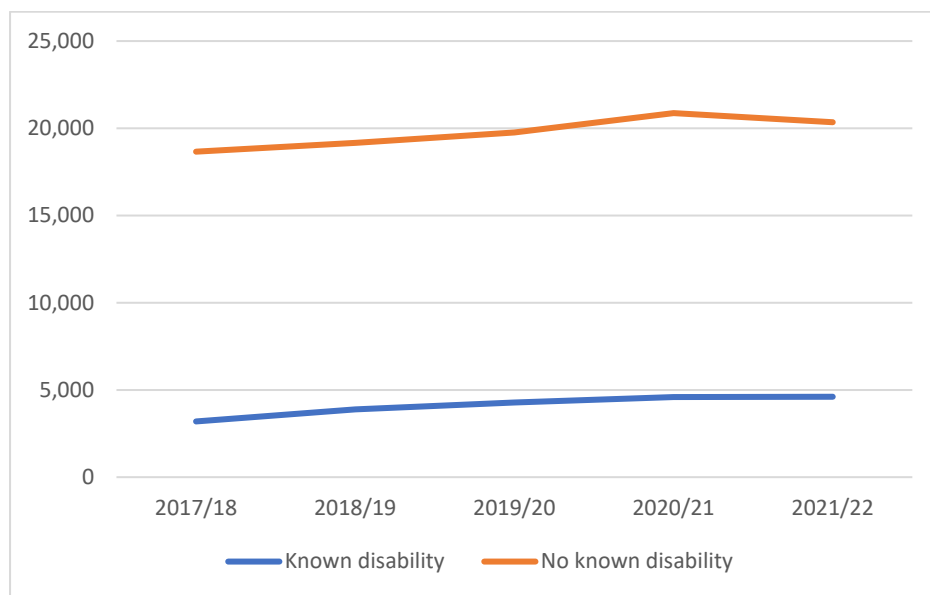
Disability

Compared to people without a disability, people with a disability, and particularly young people with Special Educational Needs (SEN) status, are less likely to choose to undertake HE study²¹: people with a disability remain underrepresented in HE, although numbers have increased in the last five years as shown in Figure 9 below.

²⁰ We draw on both HEFCW's corporate strategy for widening access ([W14-32HE-Strategic-Approach-to-Widening-Access-to-Higher-Education-2013_14-to-2015_16.pdf \(hefcw.ac.uk\)](#)) and the OfS' risk register to Equality of Opportunity ([Equality of Opportunity Risk Register - Office for Students](#))

²¹ *Exploring Transitions to post-compulsory education in Wales*, Kate Huxley and Rhys Davies, May 2023.

Figure 9: Number of Welsh new entrants on undergraduate programmes with and without disabilities, all HE providers



Source: HESA

People with caring responsibilities

There are approximately 6.5 million carers in the UK, of whom 375,000 are young adult carers aged 16–24²². Whilst there is currently no national data on the number of carers in higher education (as not all disclose their caring responsibilities, plus their carer status can change), estimates are that carers make up between 3% and 6% of the student population. **For many young people, caring responsibilities prevent them from entering HE**²³.

Ethnicity

According to the statistics published by the Welsh Government the ethnic groups least likely to hold qualifications at Level 4 or above were ‘Gypsy or Irish Traveller’ (11.5%), ‘Bangladeshi’ (25.0%), ‘Roma’ (26.3%) and ‘Mixed or multiple ethnic groups: White and Black Caribbean’ (26.7%)²⁴.

Gypsies, Roma, and Travellers (GRT) are recognised as ethnic minority groups under the UK Equality Act (2010), and are underrepresented in HE in the UK²⁵. Though statistical data is not easily available, estimates place approximately 200 members of these diverse communities in university in the UK at any one time. Analysis specific to England has identified this group as the ethnic group

²² UCAS (2022). [HE provider good practice briefing for students with care responsibilities](#).

²³ Office for Students (2020). *Carers briefing (July 2020)*.

²⁴ <https://www.gov.wales/ethnic-group-differences-health-housing-education-and-economic-status-wales-census-2021-html#126059>

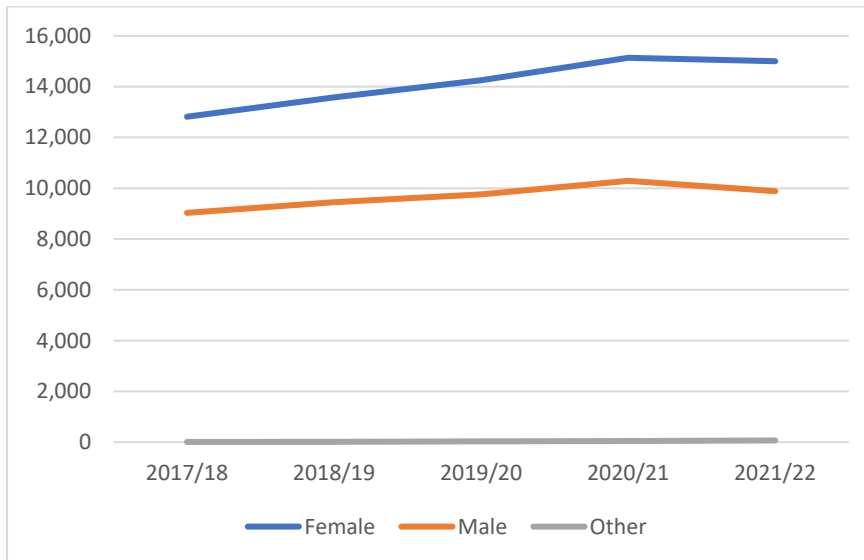
²⁵ In the 2021 Census, 0.12% (71,440) of the usual resident population of England and Wales identified as Gypsy or Irish Traveller. Of these, 5.1% (3,630) lived in Wales. There were also 1,885 persons in Wales who identified as Roma. (Source: Office for National Statistics. (2023). Gypsy or Irish Traveller populations, England and Wales: Census 2021 and Office for National Statistics. (2023). Roma populations by age and sex in England and Wales: Census 2023)

most underrepresented in higher education²⁶. Morgan, McDonagh and Acton identify that Gypsy, Roma, and Traveller people face significant challenges in accessing HE in the UK²⁷.

Sex

Proportionally fewer young Welsh men choose to study at higher education level in Wales. This gender gap has been widening for many years²⁸.

Figure 10: Number of Welsh male and female new entrants on undergraduate programmes, Welsh HE providers



Source: HESA

Intersectionality of characteristics

Some of the individual characteristics discussed in this section will overlap: they are not mutually exclusive, and there will be **intersectional effects** when students possess characteristics of more than one of these student groups. The Oxford Dictionary defines intersectionality as ‘the interconnected nature of social categorisations such as race, class, and gender, regarded as creating overlapping and interdependent systems of discrimination or disadvantage’. Intersectionality is the acknowledgement that everyone has their own unique experiences of discrimination and oppression. The effect of intersectionality on the individual can be to compound disadvantage, when two characteristics are held by that individual and both are associated with a more negative experience.

²⁶ Bolton, P & Lewis, J (2023). ‘Equality of access and outcomes in HE in England’, House of Commons Library Research Briefing.

²⁷ Morgan, J., McDonagh, C., & Acton, T. (2023). ‘Outsider status, and racialised habitus: the experiences of Gypsy, Roma, and Traveller students in higher education.’ *British Journal of Sociology of Education*, 44(3), 485-503.

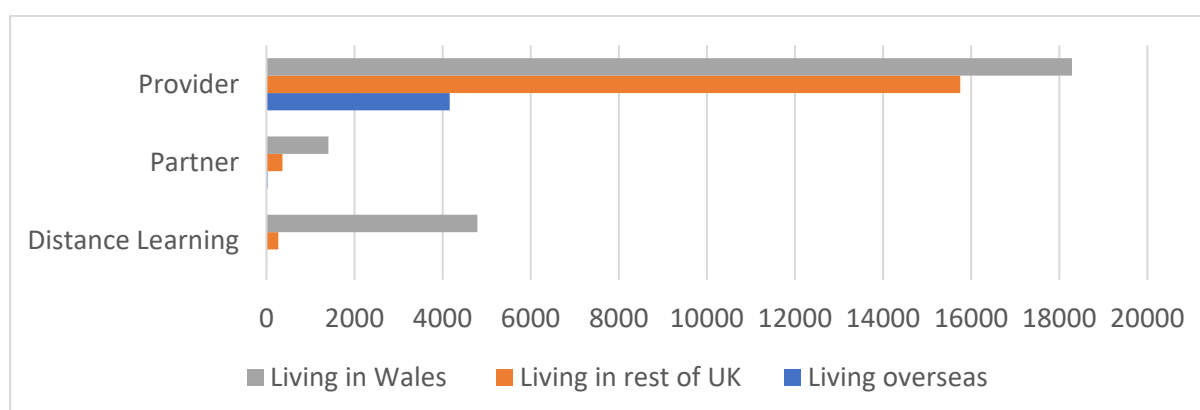
²⁸ This article is now 8 years old: [Gender gap in UK degree subjects doubles in eight years, Ucas study finds | Higher education | The Guardian](#)

3.3 People choosing to study at undergraduate level in Wales

In this section we take a closer look at those people who choose to study at undergraduate level in Wales and what delivery models they favour. This includes people living in Wales, people living in the rest of the UK and people living outside the UK (overseas). The delivery model characteristics included are: mode of attendance, qualification aim and location of delivery.

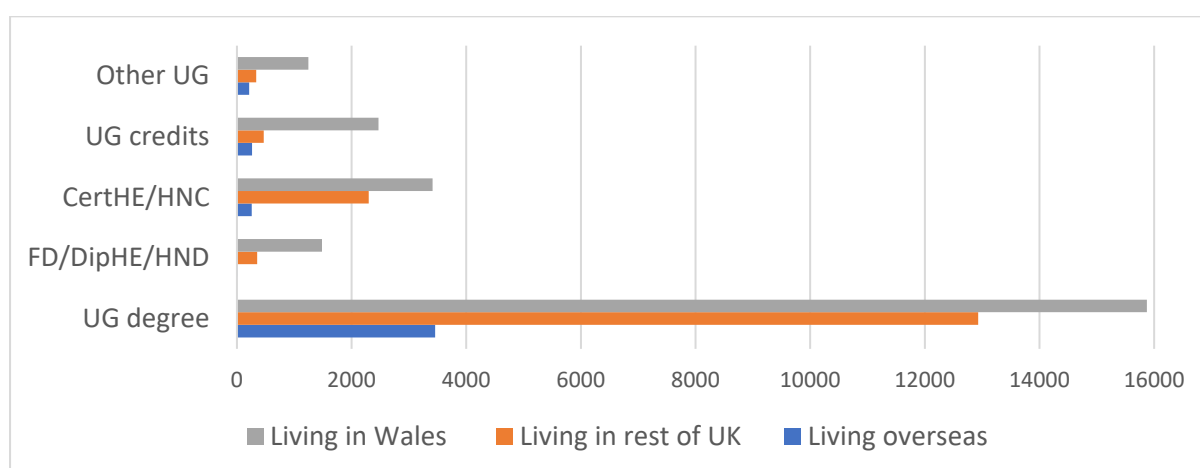
Students choosing to study at undergraduate level in Wales and who live in the rest of the UK and overseas choose full-time, undergraduate degree programmes delivered at a provider. We can see some differences between these and the delivery models students who live in Wales choose, which are more part-time, distant and at partner delivery, and for a wider range of qualifications aims including HNC and HNDs.

Figure 11: Number of students studying at distance, at provider or at partner in Wales and where they live



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

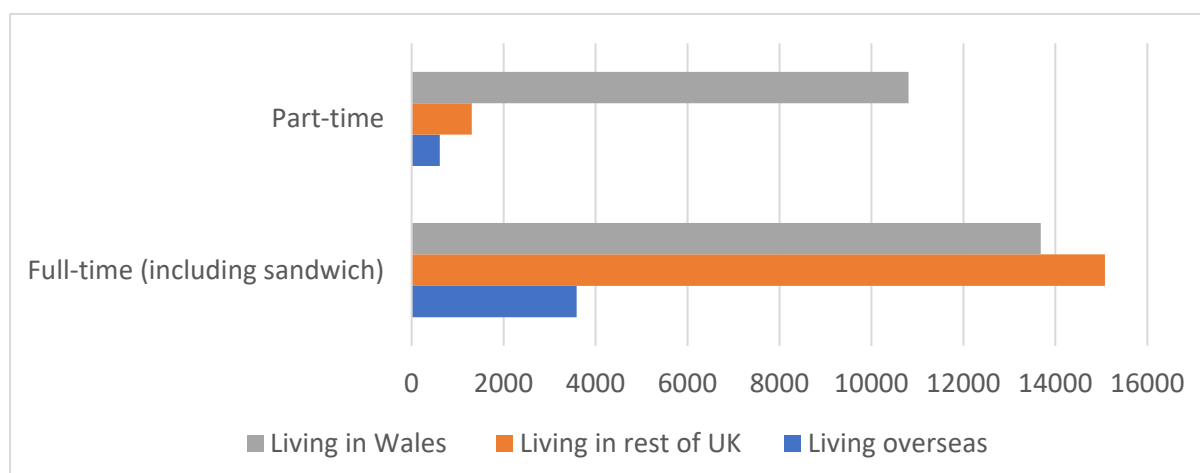
Figure 12: Number of students studying for qualification aim²⁹ in Wales and where they live



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

²⁹ “UG credits” maps to HESA COURSEAIM categories labelled ‘Credits at level X’. These are standalone modules and short courses. “Other UG” is a catch-all category including anything that doesn’t feature in the other four categories

Figure 13: Number of students studying full- or part-time in Wales and where they live



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

We have not looked in further detail at the additional factors driving students living in the rest of the UK to study in Wales. Considering a significant amount of tuition fee funding is received by Welsh HE providers from students living in the rest of the UK, we think there is value in analysing in more detail the factors that drive those students to choose to study in Wales for wider range of programmes (e.g. postgraduate), including the delivery models they choose.

More is known about the factors that drive overseas students to choose to study in Wales³⁰:

- Temporary or more permanent travel restrictions
- Availability of a 'student route' for international students applying for visas to study in the UK and visas for dependants
- Availability of post-study work visa for international students
- Exchange rate fluctuations
- Broader foreign policy changes, and negative perceptions of the UK
- Cost of tuition fees, visas and living expenses
- Safety
- Subject area of study
- Availability of new PhD positions
- Demands on language proficiency and impact of culture shock
- Employment opportunities
- League table ranking

3.4 People living in Wales

People who live in Wales and who choose to study at higher education level can choose from a range of HE providers in the UK and from a range of programmes and delivery models.

³⁰ <https://education-services.britishcouncil.org/insights-blog/social-media-analysis-of-uk%E2%80%99s-prospective-international-students> Many of these factors are unfortunately not under the direct control of the Welsh Government.

3.4.1 People living in Wales choosing to study outside Wales

Around 27 to 31% of people living in Wales who choose to study at higher education level, choose to study outside of Wales.

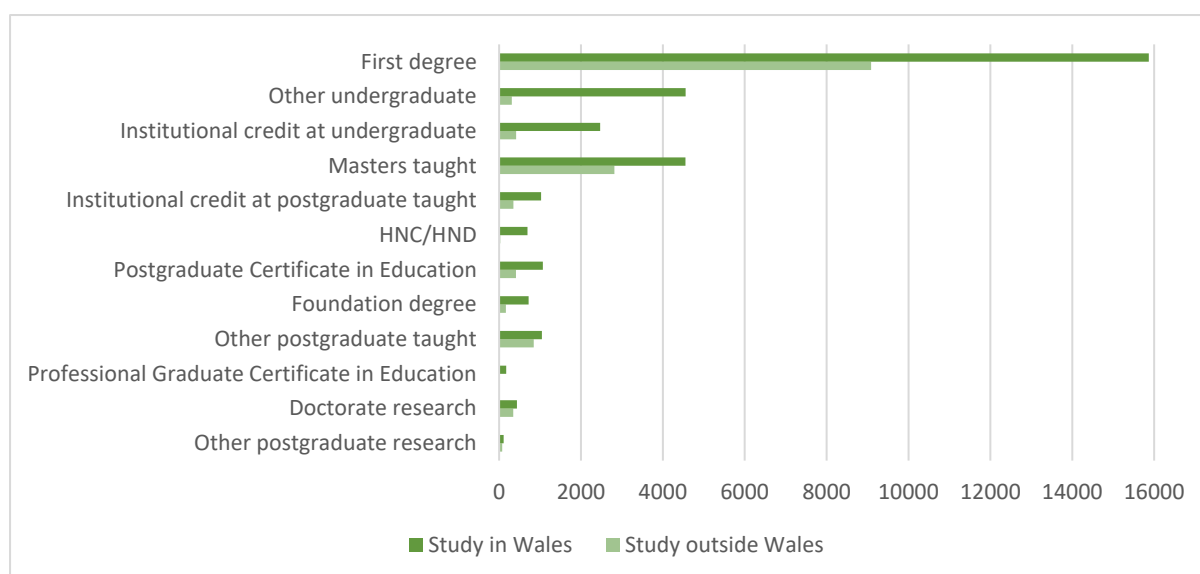
Table 5: Number of people living in Wales studying at HE level and where they study

	Study in Wales	Study in England	Study in NI	Study in Scotland
2017/18	32,205	12,060	65	330
2018/19	33,835	12,095	65	325
2019/20	33,775	12,295	75	330
2020/21	35,225	13,705	65	440
2021/22	32,720	14,302	75	460

Source: HESA, Who is studying in HE, first year entrants, all levels of study and all modes of attendance, accessed 26/02/2024

The majority of those who choose to study outside of Wales, study for a first degree³¹ or a masters taught degree.

Figure 14: Level of study undertaken by people choosing to study at higher education level and where they study



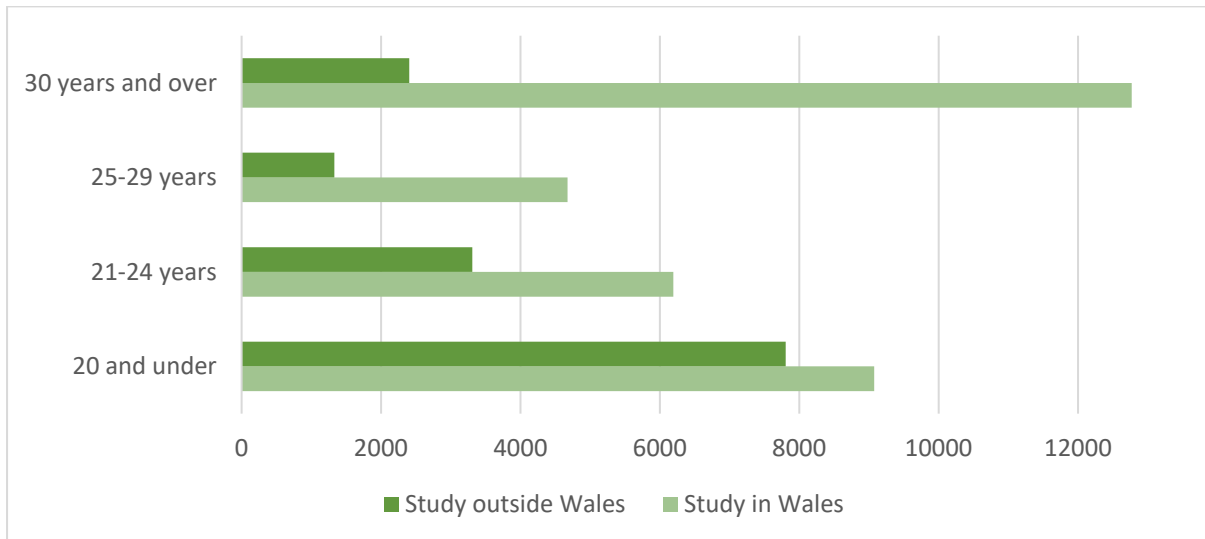
Source: HESA, Who is studying in HE, first year entrants, all levels of study and all modes of attendance, for academic year 2021/22; accessed 26/02/2024

Looking at the personal characteristics of people living in Wales choosing to study at higher education level, the important driver for whether they will study in Wales or outside of Wales is age:

³¹ **First degree** includes all first degrees at level H/6 (including those with eligibility to register to practice with a health or social care or veterinary statutory regulatory body), ordinary (non-honours) first degrees, first degrees with Qualified Teacher Status (QTS)/registration with a General Teaching Council (GTC), postgraduate bachelors degree at level H/6, integrated and enhanced first degrees (including those leading towards obtaining eligibility to register to practice with a health or social care or veterinary statutory regulatory body), first degrees obtained concurrently with a diploma and intercalated first degrees. (HESA)

the younger the person, the more likely they are to study outside of Wales. (We looked at other characteristics such as religion, disability and ethnicity and did not see significant differences.)

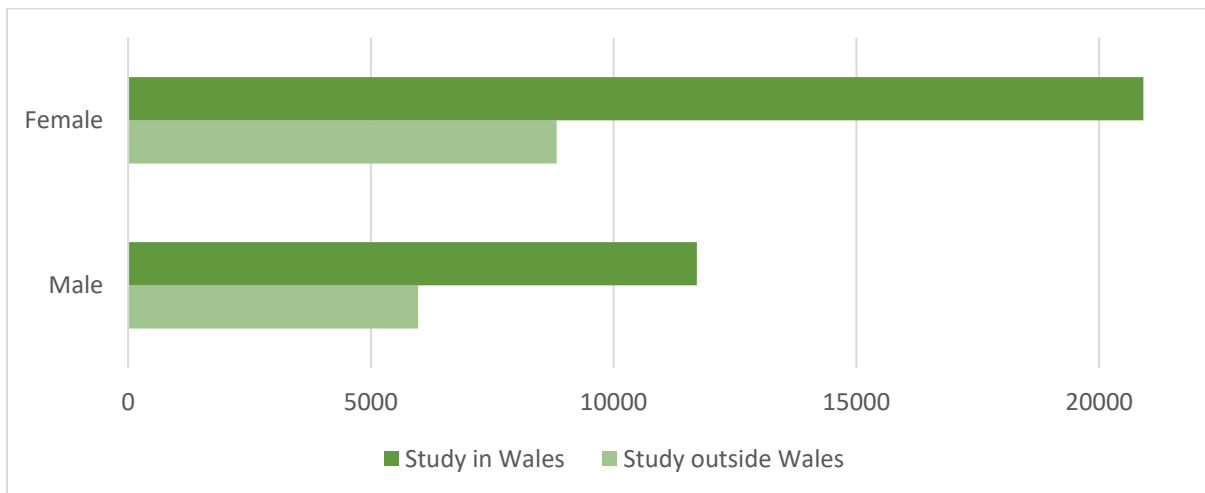
Figure 15: Age of people living in Wales who choose to study at higher education level and where they study



Source: HESA, Who is studying in HE, first year entrants, all levels of study and all modes of attendance, for academic year 2021/22, accessed 26/02/2024

There is a less pronounced difference between male and female: males are more likely to study outside Wales (34%) than females (30%).

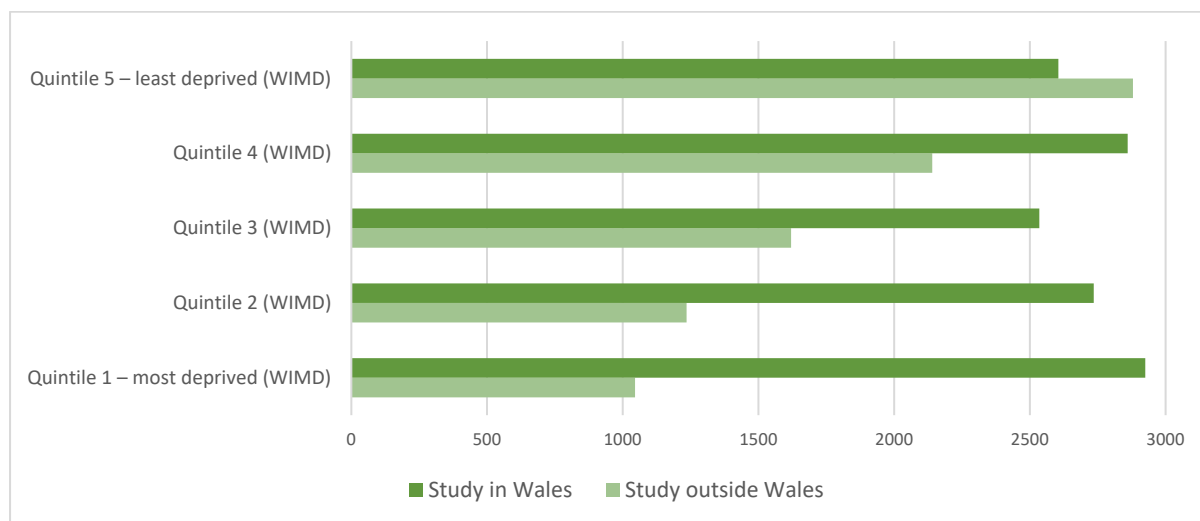
Figure 16: Sex of people living in Wales who choose to study at higher education level and where they study



Source: HESA, Who is studying in HE, first year entrants, all levels of study and all modes of attendance, for academic year 2021/22, accessed 26/02/2024

When we focus on students studying a full-time undergraduate programme, some other interesting patterns emerge: the number of students from the least deprived areas (measured via WIMD) studying outside Wales is larger than those studying in Wales and the converse is true for the most deprived areas.

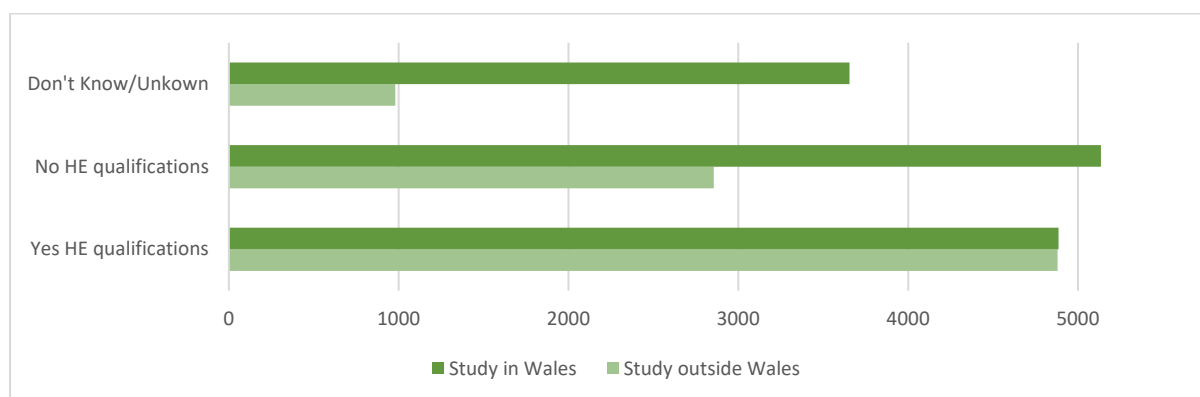
Figure 17: WIMD of people in Wales choosing to study full-time at undergraduate higher education level and where they choose to study



Source: HESA, *Who is studying in HE, first year entrants, undergraduate and full-time, for academic year 2021/22*, accessed 26/02/2024

Another interesting pattern relates to parental education and socio-economic background³²: the number of students whose parents do not have an HE qualification or who don't know the details of their parents education is higher for those students choosing to study in Wales. The number of students who themselves or whose parents are in higher managerial and professional occupations and who choose to study outside Wales is higher than the number of students who themselves or whose parents are in higher managerial and professional occupations and who choose to study in Wales.

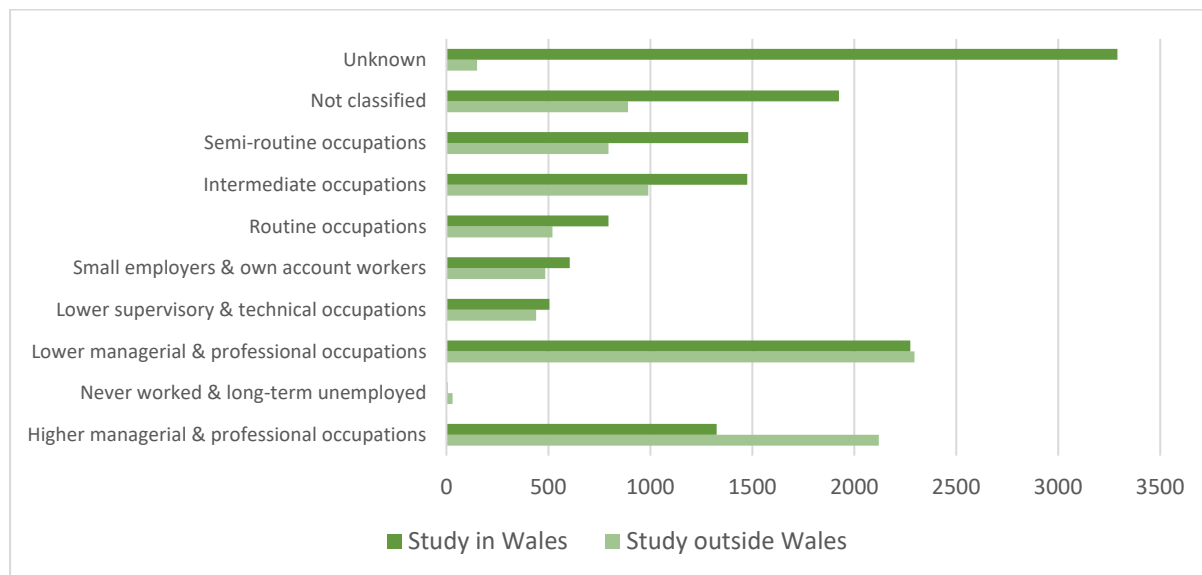
Figure 18: Parental education level of people in Wales choosing to study full-time at undergraduate higher education level and where they choose to study



Source: HESA, *Who is studying in HE, first year entrants, undergraduate and full-time, for academic year 2021/22*, accessed 26/02/2024

³² This collects the socio-economic background of students aged 21 and over at the start of their course, or, for students under 21, the socio-economic background of their parent, step-parent or guardian who earns the most is returned. It is based on occupation, and if the parent or guardian is retired or unemployed, this is based on their most recent occupation.

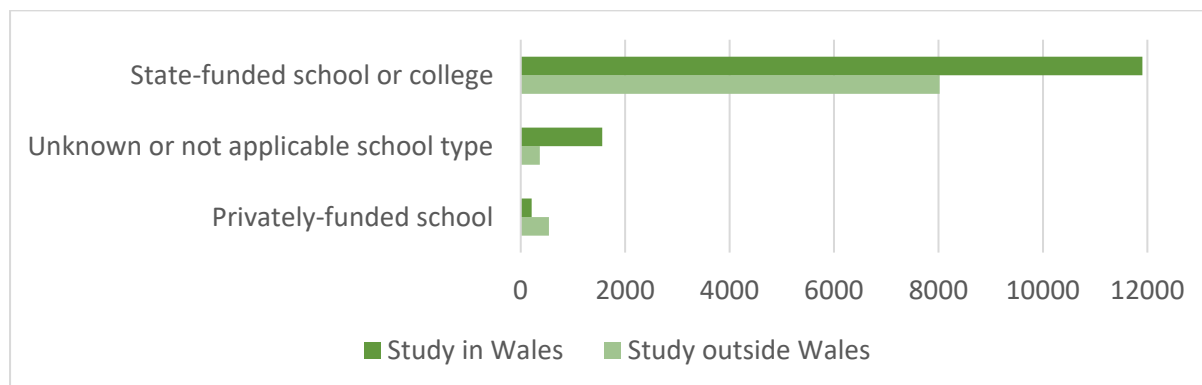
Figure 19: The number of students choosing to study full-time at undergraduate higher education level who themselves or whose parents are in higher managerial and professional occupations and where they choose to study



Source: HESA, Who is studying in HE, first year entrants, undergraduate and full-time, for academic year 2021/22, accessed 26/02/2024

A final pattern relates to school type: the number of students who choose to study in Wales from a state funded school background is higher than the number of students who choose to study outside Wales from a state funded school background.

Figure 20: The number of students choosing to study full-time at undergraduate higher education level in Wales from a state funded school background and where they choose to study



Source: HESA, Who is studying in HE, first year entrants, undergraduate and full-time, for academic year 2021/22, accessed 26/02/2024

Conclusion: Around 27 to 31% of people living in Wales who choose to study at higher education level choose to study outside of Wales and the majority of those study for a first degree³³ or a

³³ **First degree** includes all first degrees at level H/6 (including those with eligibility to register to practice with a health or social care or veterinary statutory regulatory body), ordinary (non-honours) first degrees, first degrees with Qualified Teacher Status (QTS)/registration with a General Teaching Council (GTC), postgraduate bachelors degree at level H/6, integrated and enhanced first degrees (including those leading towards obtaining eligibility to register to practice with a health or social care or veterinary statutory regulatory body), first degrees obtained concurrently with a diploma and intercalated first degrees. (HESA)

masters taught degree. An important driver for whether people living in Wales will study in Wales or outside of Wales is age: the younger the person the more likely they are to study outside of Wales. Focusing on full-time undergraduate study only, there are distinct patterns between levels of deprivation, parental education, socio-economic classification and school type, which suggests that privilege is another factor driving whether a person living in Wales chooses to undertake higher education level study studies in Wales or outside Wales.

We want to offer 2 additional observations:

1. The Welsh regional analysis of higher education progression by UCAS notes that the destinations outside Wales in which Welsh students choose to study are clustered in the North West and the South West of England. Our hypothesis is that students choose HE providers close to home and within easy travelling distance³⁴.

Table 6: Destinations outside Wales in which Welsh students choose to study

		England Providers									Northern Ireland Providers	Scotland Providers
		North East	North West	Yorkshire and Humber	East Midlands	West Midlands	East of England	London	South East	South West		
Placed Applicants	North Wales	2%	37%	6%	3%	3%	1%	3%	3%	3%	<1%	1%
	Mid and West Wales	1%	8%	2%	3%	5%	1%	3%	4%	12%	<1%	1%
	South Wales Central	1%	4%	2%	3%	5%	1%	5%	6%	14%	<1%	1%
	South Wales East	1%	5%	1%	2%	5%	1%	3%	6%	18%	<1%	1%
	South Wales West	1%	3%	1%	1%	2%	1%	3%	4%	11%	<1%	<1%

2. In 2021/22 37% of Welsh students choosing to study at higher education level outside Wales attended HE providers ranked higher in the Good University Guide than the highest ranking Welsh institution. We will avoid what could be an expansive discussion of the merits and demerits of league tables to instead highlight that they drive where students choose to study³⁵ and our hypothesis is that the perceived quality of HE providers may be an important factor driving Welsh students to choose to study outside Wales.

Considering a significant amount of Welsh public funding is invested in supporting Welsh students who choose to study outside of Wales, we think there is value in analysing in more detail the factors that drive Welsh students to choose to study outside Wales, including the delivery models they choose.

Some of the people we engaged with in this study were concerned about what they described as “the trend of many Welsh people leaving Wales to begin undergraduate study”. One noted:

³⁴ [Unpacking Welsh regional migration: A deep dive into higher education progression across the Welsh parliamentary regions | Undergraduate | UCAS](#)

³⁵ One study has examined the intuitive link between league tables that help students select universities, and applications to study at those universities, and found that a one standard deviation increase in the subject-level ranking score of an institution is associated with, on average, a 4.3% increase in application numbers to that subject. Source: Chevalier, A., & Jia, X. (2016). *Subject-Specific league tables and students' application decisions*. The Manchester School, 84(5), 600-620.

‘Since 2010, and especially since the introduction of differential fees in Scotland and Northern Ireland, Wales has seen disengagement between its students and home universities... One may ponder the result of this brain drain. How many students come back to the country that invested ... in their primary and secondary education? There are no readily available statistics on this, but one can assume that a substantial proportion contribute to economic activity elsewhere. And how are other aspects of Welsh life – be it in the health service, national and local government administration, or education – affected by this? One can cite Carmarthenshire education service, where just 20% of the staff speak Welsh, a situation which desperately calls for more Welsh speakers.’

We want to nuance this “brain drain” by pointing to a parallel phenomenon of “brain gain” noting the number of students studying at Welsh HE providers from other countries and their contribution to Welsh life³⁶ as illustrated earlier in this section.

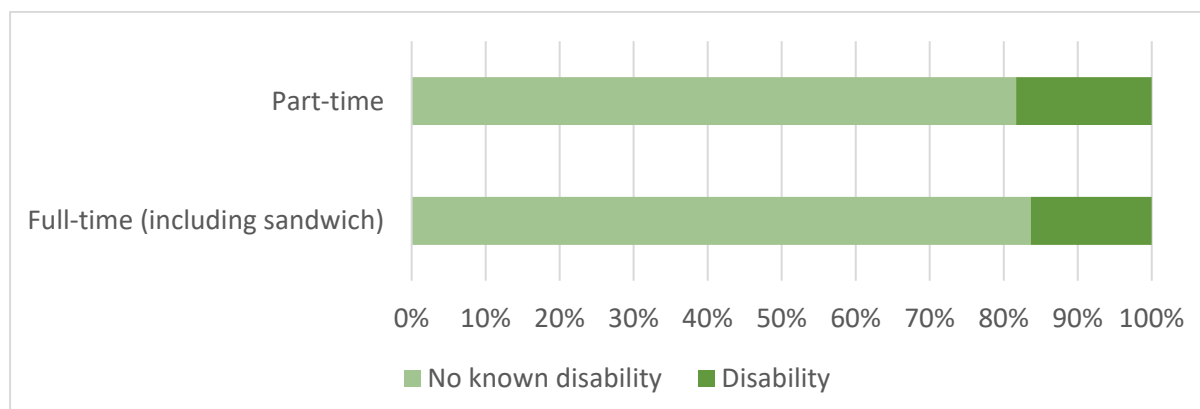
3.4.2 People who live in Wales and who choose to study at undergraduate level in Wales

In this section we look in more detail at the individual characteristics of the people who live in Wales, who have chosen to study at undergraduate level in Wales. We focus on disability, age, sex and ethnicity and on three delivery model characteristics (mode, qualification aim and study location). We add some additional insights we have come across as part of our literature review, where appropriate, and we make it clear what population or focus those insights relate to.

Disability

Students with a disability typically do not favour specific modes of study or specific levels of study at undergraduate level.

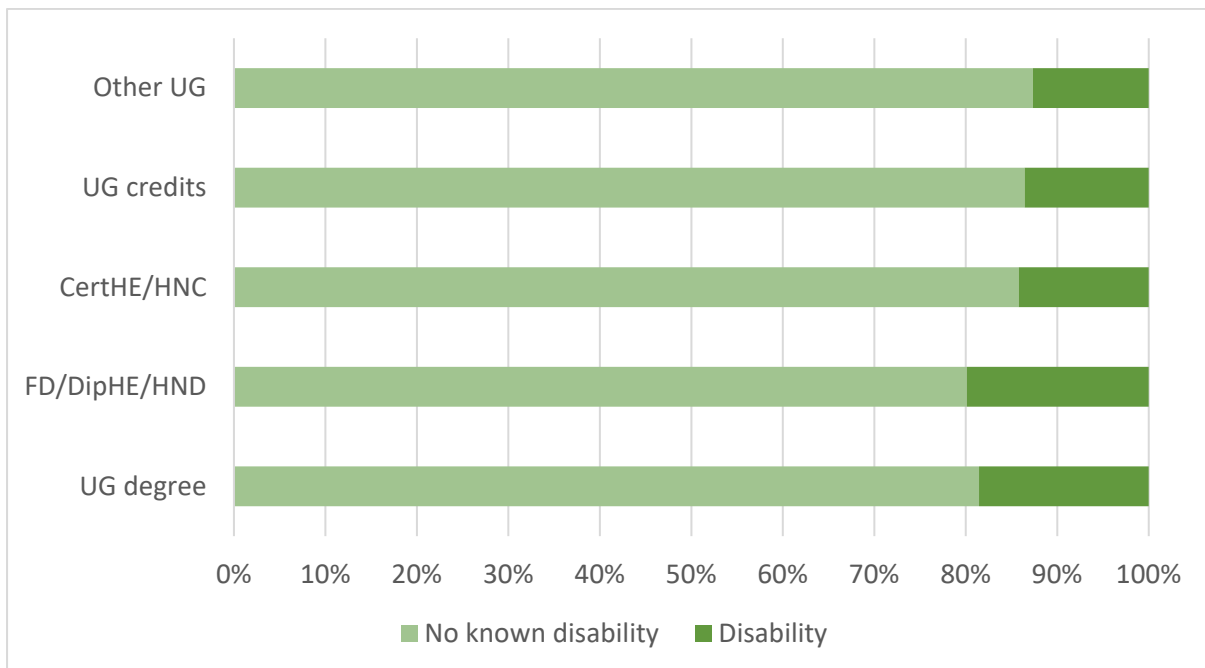
Figure 21: Proportion of students with disability and no known disability by mode of study



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

³⁶ The 2023 London Economics report ‘Costs and benefits of international higher education students to the UK economy’ report, a follow-up to a 2021 study, highlights the increasing importance of international students to local economies across the UK.

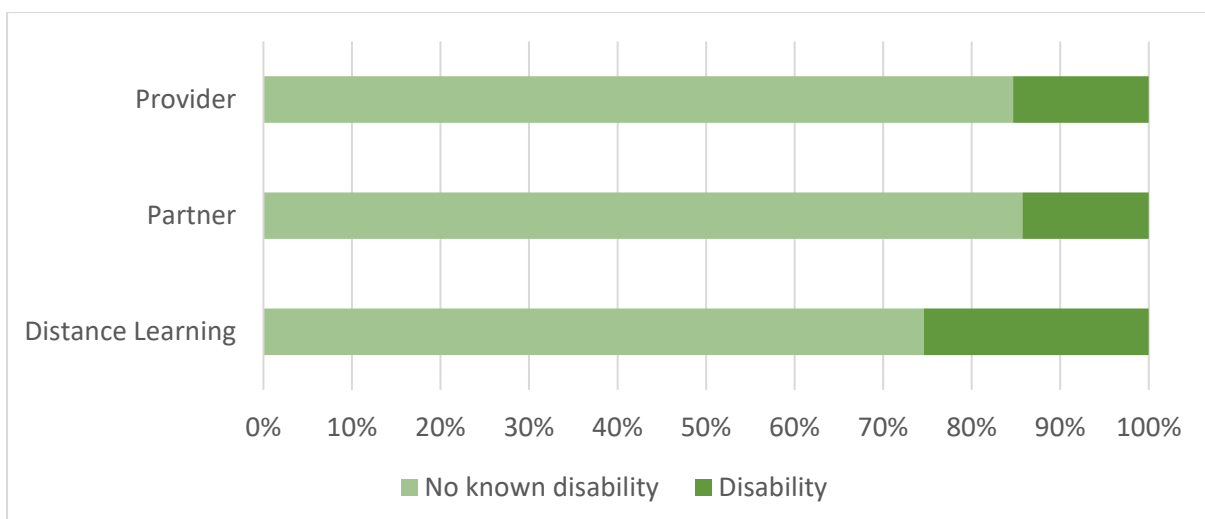
Figure 22: Proportion of students with disability and no known disability by qualification aim



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

There are some interesting patterns which emerge when we look at disability and study location: a higher proportion of students who chose to study at distance have a disability.

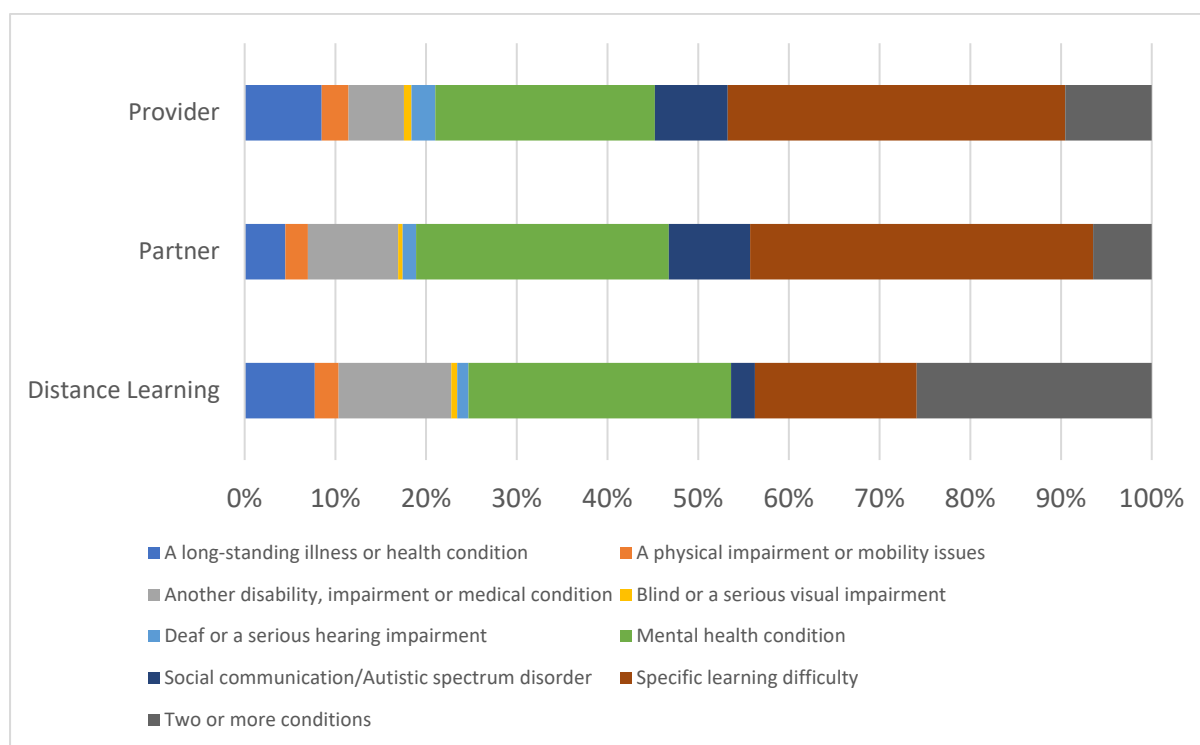
Figure 23: Proportion of students with disability and no known disability by study location



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

When we break down the data further, of the students who choose to study at a distance there is higher proportion of students with two or more conditions and a lower proportion of students with specific learning difficulty compared to students who choose to study face-to-face at provider or partner.

Figure 24: Proportion of students with disability by study location, by disability type



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Additional insights

The proportions of students entering HE in Wales with a known disability is fairly consistently split two-thirds full-time to one-third part-time, and around a quarter PG versus three-quarters UG; the same as for the student population as a whole.

Table 7: First Year UK-domiciled students with a disability by level of study, HE providers in Wales

	2017/18	2018/19	2019/20	2020/21	2021/22
	100.0%	100.0%	100.0%	100.0%	100.0%
Known disability	14.0%	15.7%	16.3%	16.3%	16.7%
All PG	19.8%	20.1%	21.0%	23.6%	22.6%
All UG	80.2%	79.9%	79.0%	76.4%	77.4%
No known disability	86.0%	84.3%	83.7%	83.7%	83.3%
All PG	21.0%	22.2%	21.6%	24.2%	23.9%
All UG	79.0%	77.8%	78.4%	75.8%	76.1%

Students with a disability typically favour certain subject choices when applying via UCAS³⁷. The UCAS End of Cycle data resources 2022 includes a breakdown of subject choices of new full-time undergraduates who have applied via UCAS³⁸. This is broken down to detailed subject level and for different types of disability. Some key patterns at a broad subject level are summarised below. This data covers all home (UK) entrants entering UK higher education via UCAS.

³⁷ We should add here that typically it is younger students applying via UCAS.

³⁸ Quoted in Bolton, P & Lewis, J (2023). '[Equality of access and outcomes in HE in England](#).' House of Commons Library Research Briefing.

Table 8: What subjects are UK undergraduate full-time students with a disability starting courses in 2022 more or less likely to study?

Disability	More likely to study	Less likely to study
Autistic disorder	Computing, design/arts, maths, physical sciences	Medicine and dentistry, business/management, subjects allied to medicine
Blind/partial sight	History/philosophy/religion, agriculture/food studies, computing	Veterinary science, architecture/planning, medicine and dentistry
Deaf/partial hearing	Veterinary science, history/philosophy/religion, geography/environment	Medicine and dentistry, business/management, architecture/planning
Learning difficulty	Agriculture/food studies, design/arts	Maths, law, business/management
Long standing illness	Subjects allied to medicine, agriculture/food studies, education	Architecture/planning, business/management
Mental health	Languages, psychology, combined/general studies, design/arts	Business/management, architecture/planning, engineering/technology
Multiple disabilities	Design/arts, agriculture/food studies, languages	Business/management, architecture/planning, medicine and dentistry
Wheelchair/mobility	Agriculture/ food studies, combined/general studies, media/journalism/communication	Veterinary science, architecture/planning, medicine and dentistry

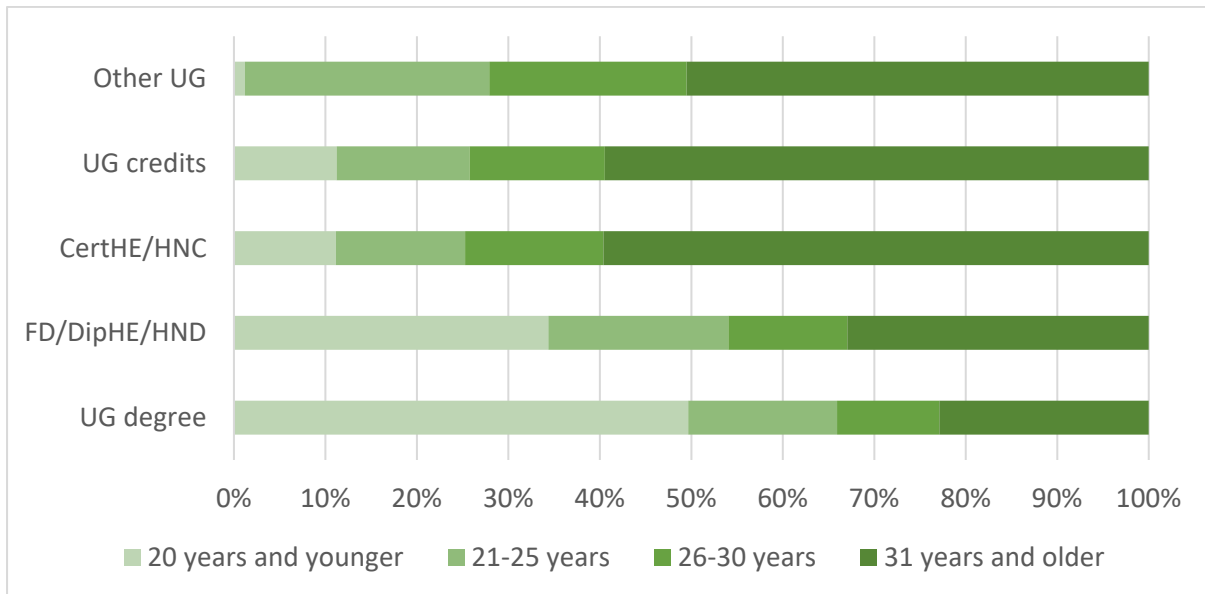
Source: UCAS End Of Cycle Resources 2022

Age

Age is a significant factor in driving students to choose specific delivery models.

Younger students choose undergraduate degrees, whilst students over 31 choose HNC and Certificates in HE.

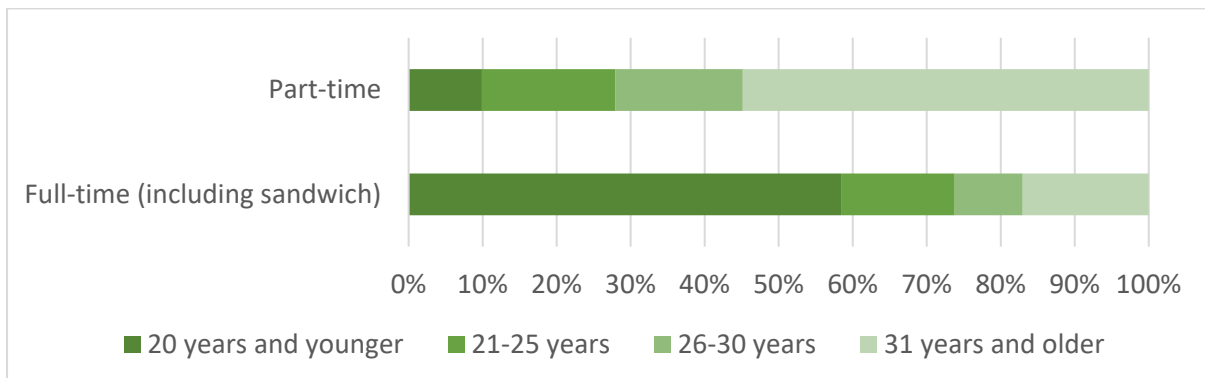
Figure 25: Proportion of students of a certain age by qualification aim



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Younger students choose to study undergraduate degrees full-time, whilst students over 31 choose to study part-time.

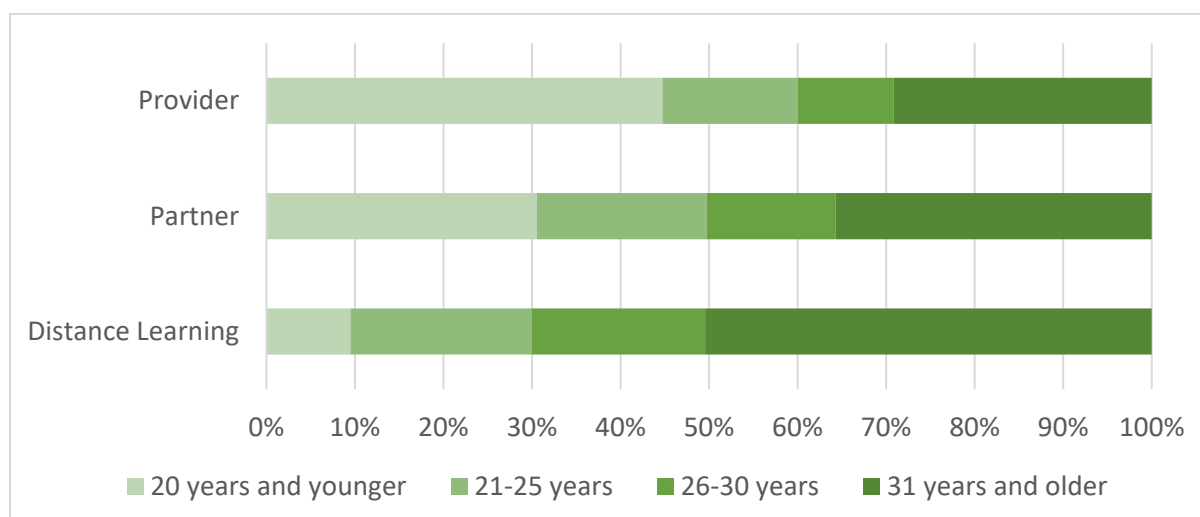
Figure 26: Proportion of students of a certain age by mode



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

More students older than 31 choose to study at a distance than students aged under 20.

Figure 27: Proportion of students of a certain age by study location



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Additional insights – mature students

The term ‘mature student’ is usually used when referring to anyone going to university or college after a period of time out of full-time education³⁹. Higher education can be a second chance to learn, an avenue to a new career and an opportunity to earn more⁴⁰.

The total number of mature students in Wales in their first year of study has shown a steady increase over the last five years, with the largest category being the 30-years-and-over age group. The 21–24 years age group has experienced a slight decline in the most recent year’s available data, while the 25–29 years age group has seen a continuous increase.

Table 9: HE first year student enrolments in Wales by age category

	2017/18	2018/19	2019/20	2020/21	2021/22
Wales total mature students	36630	40170	42290	45740	46100
21–24 years	13630	14720	15735	15865	15370
25–29 years	6990	7795	8605	9765	10155
30 years and over	16010	17655	17950	20110	20575

³⁹ HESA and UCAS use the term ‘mature’ to identify UG students aged 21 and over when they enter higher education, with PG students identified as mature if they are aged 25 or over.

⁴⁰ McCune, V, Hounsell, J, Christie, H, Cree, VE & Tett, L (2010). ‘Mature and younger students’ reasons for making the transition from further education into higher education’, *Teaching in Higher Education*, 15(6), pp. 691–702.

The following factors drive the choices mature students make⁴¹:

Students over 30 are most likely to **live at home** while they study and will choose HE providers within **commutable distance**. They are more likely to apply to one specific HE provider. Because of this, their experiences of HE are often different⁴².

Mature students in England are typically drawn to a smaller range of courses, predominantly **subjects allied to medicine (including nursing) and education**⁴³.

Mature students hold different qualifications on entering higher education and will be limited by delivery modes and programmes they can be admitted to with those **qualifications**. Older students tend to favour **lower tariff providers** and the Access to HE Diploma becomes a more prominent entry qualification for older students⁴⁴.

Currently, mature students entering HE in Wales are split half and half between UG and PG study. This is a change from the 58:42 split in favour of UG study five years ago. The current even split in Wales compares to a roughly 1/3 to 2/3 split in England and Scotland in favour of PG study.

Table 10: HE first year mature students by level of study, by provider nation, % shares within UK nations

	2017/18	2018/19	2019/20	2020/21	2021/22
England	100.00%	100.00%	100.00%	100.00%	100.00%
All UG	39.8%	39.2%	37.9%	38.0%	35.7%
All PG	60.2%	60.8%	62.1%	62.0%	64.3%
Northern Ireland	100.0%	100.0%	100.0%	100.0%	100.0%
All UG	53.2%	50.3%	53.8%	48.7%	46.4%
All PG	46.8%	49.7%	46.2%	51.3%	53.6%
Scotland	100.0%	100.0%	100.0%	100.0%	100.0%
All UG	42.3%	41.6%	39.5%	37.0%	33.1%
All PG	57.7%	58.4%	60.5%	63.0%	66.9%
Wales	100.0%	100.0%	100.0%	100.0%	100.0%
All UG	58.4%	58.7%	56.9%	55.0%	49.5%
All PG	41.6%	41.3%	43.1%	45.0%	50.5%

Mature students often have more complex needs. They are more likely to have a disability, come from deprived areas, or have family and/or caring responsibilities⁴⁵. Mature students are also more likely to be impacted by negative financial pressures.

⁴¹ [Mature students – local, focused, and female | Undergraduate | UCAS](#)

⁴² Holton, M & Finn, K (2018). 'Being-in-motion: The everyday (gendered and classed) embodied mobilities for UK university students who commute', *Mobilities*, 13(3), pp. 426–40.

⁴³ 'Mature higher education students in England' House of Commons Library Briefing Paper 8809, February 2021

⁴⁴ 'Mature higher education students in England' House of Commons Library Briefing Paper 8809, February 2021

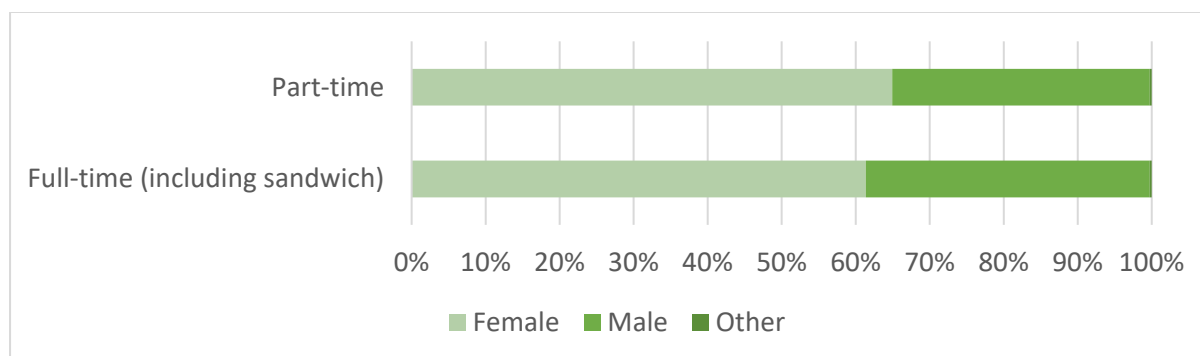
⁴⁵ Million Plus and National Union of Students (2012). *Never too late to learn: Mature students in higher education*.

Sex

Sex is a contributor in driving what delivery models a student chooses at undergraduate level and becomes more significant when combined with other forms of disadvantage.

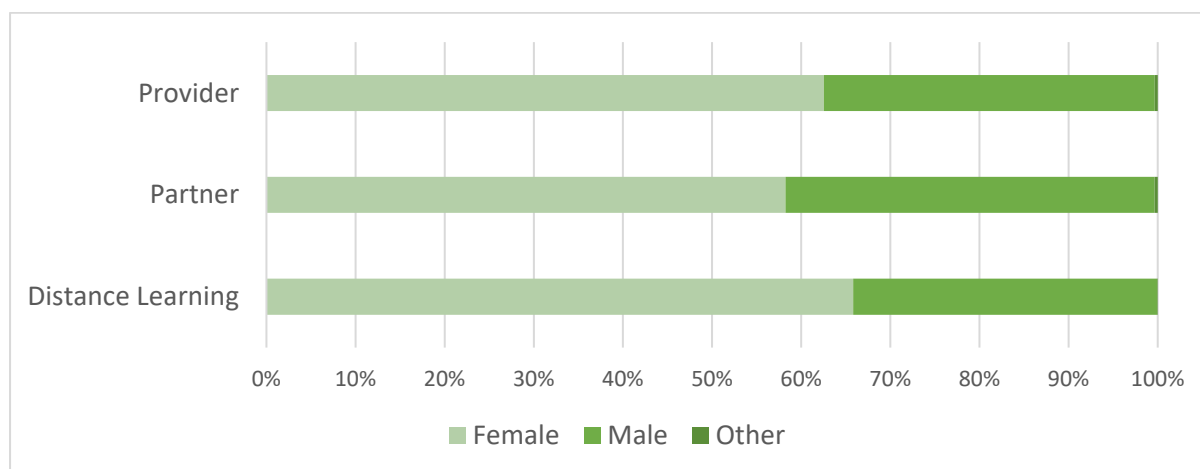
More female students chose part-time delivery models, distance learning and standalone modules and short courses when compared to male students.

Figure 28: Proportion of students by sex and mode of attendance



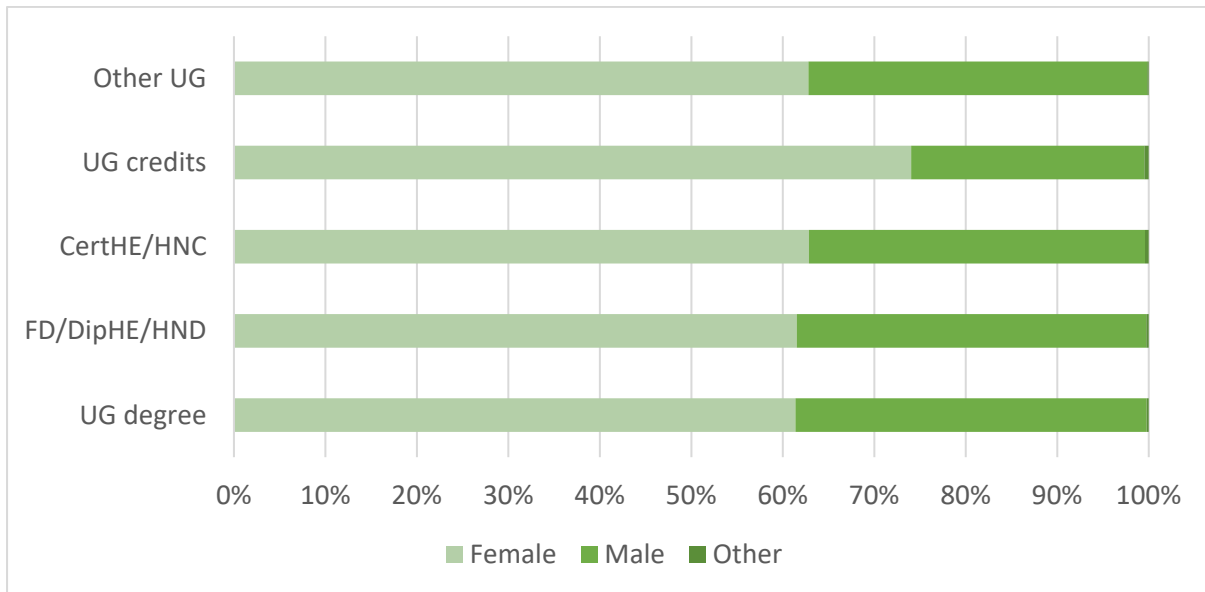
Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Figure 29: Proportion of students by sex and location of study



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Figure 30: Proportion of students by sex and level of qualification



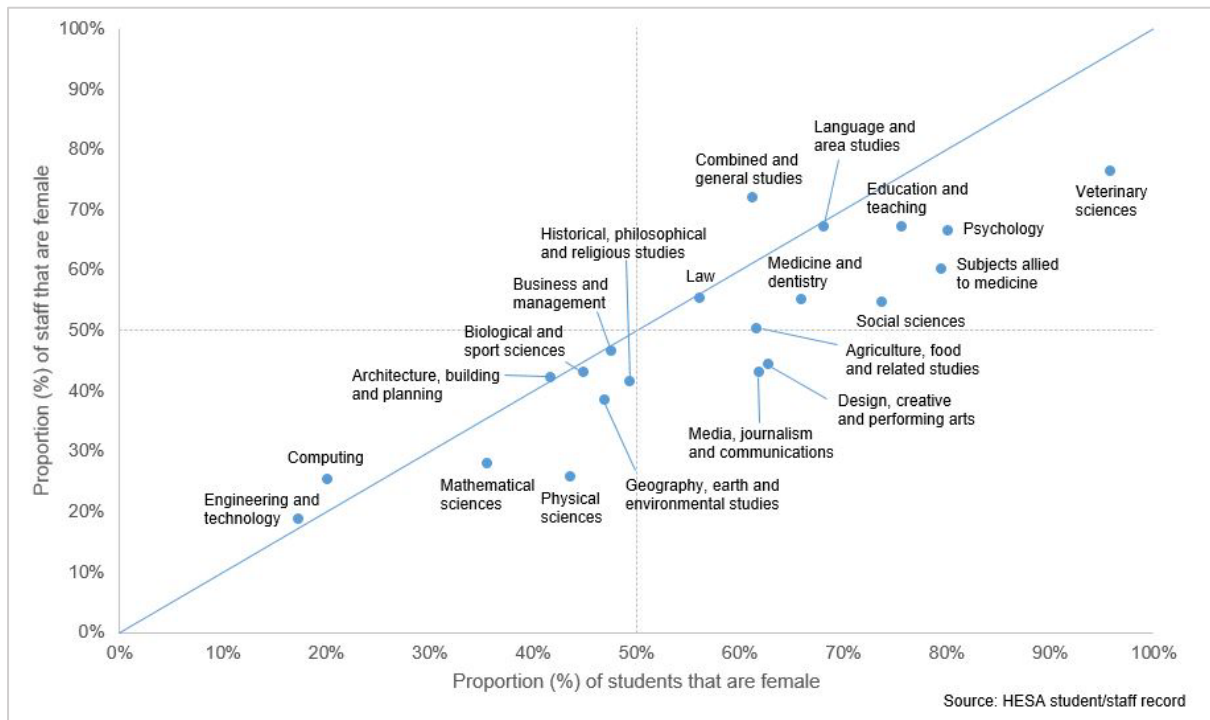
Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Additional insights

We highlighted above the gender gap in access. In addition to this, there are some large differences in the subjects studied at university by male and female students and this is influenced amongst other things by whether role models are available.

Figure 31 below illustrates the correlation between the subjects female students choose to study and the extent to which female staff are employed in those subjects.

Figure 31: Correlation between the subjects which female students choose to study in Wales and the extent to which female staff are employed in those subjects

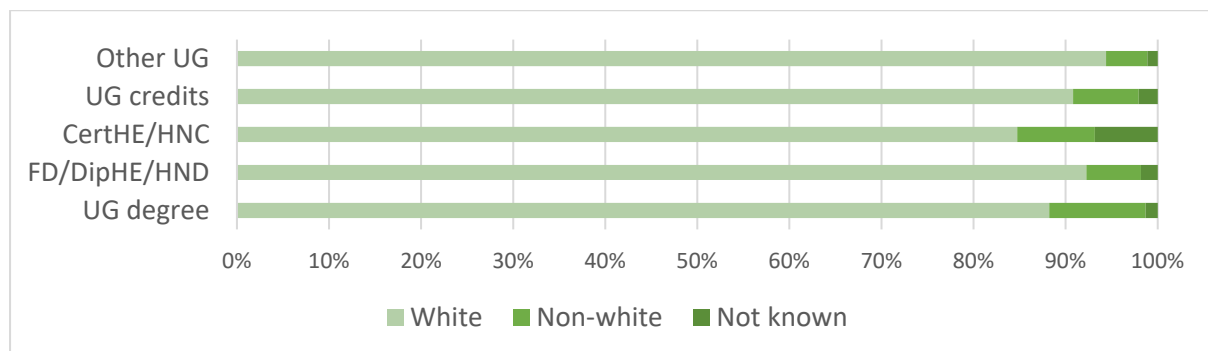


Ethnicity

Increased demand for HE has been observed in recent years in Wales from people with minority ethnic backgrounds.

Proportionally more white students choose to study for foundation programme, Diploma of HE, HND and standalone modules and short courses.

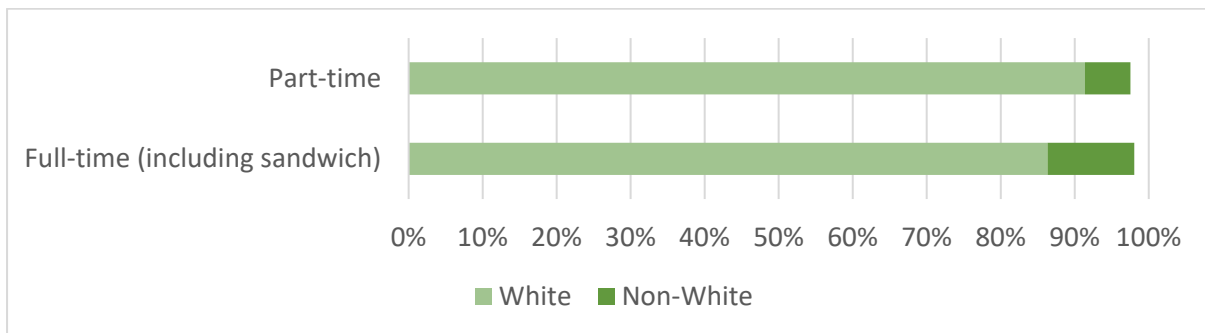
Figure 32: Proportion of students by ethnicity (with a focus on Black, Asian, ethnic minority and White) and level of qualification



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Proportionally more white students choose to study part-time.

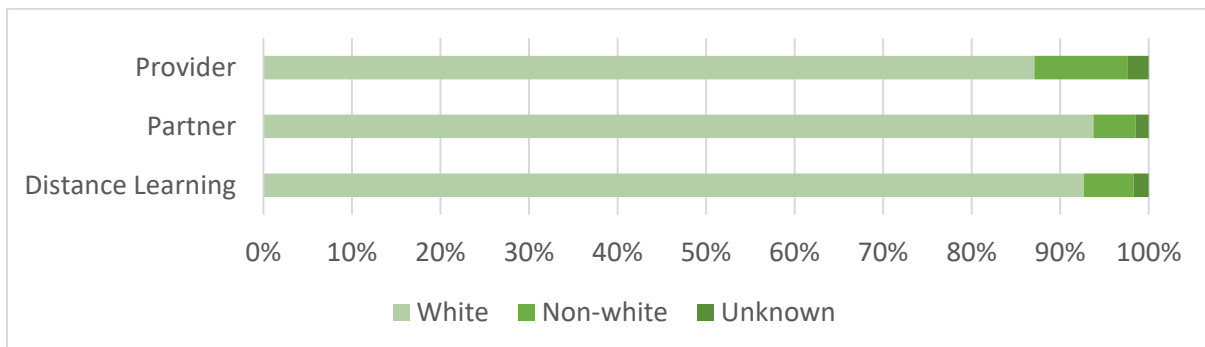
Figure 33: Proportion of students by ethnicity (with a focus on Black, Asian, ethnic minority and White) and mode of attendance



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Proportionally more Black, Asian and ethnic minority students choose to study at a provider.

Figure 34: Proportion of students by ethnicity (with a focus on Black, Asian, ethnic minority and White) and location of study

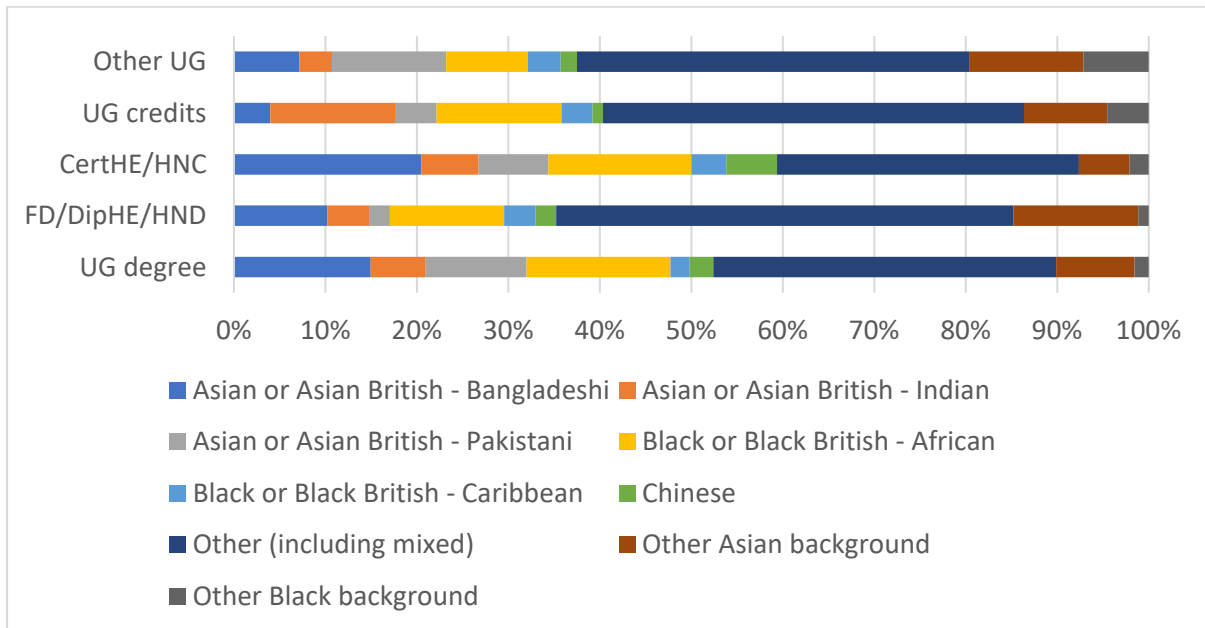


Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

The factors which drive the choices that people from different ethnic minority backgrounds make from the delivery models and programmes available vary significantly, intersect with the forms of underrepresentation discussed so far, and are beyond this study’s resources to examine in detail⁴⁶. We include the information here, so it can be further investigated.

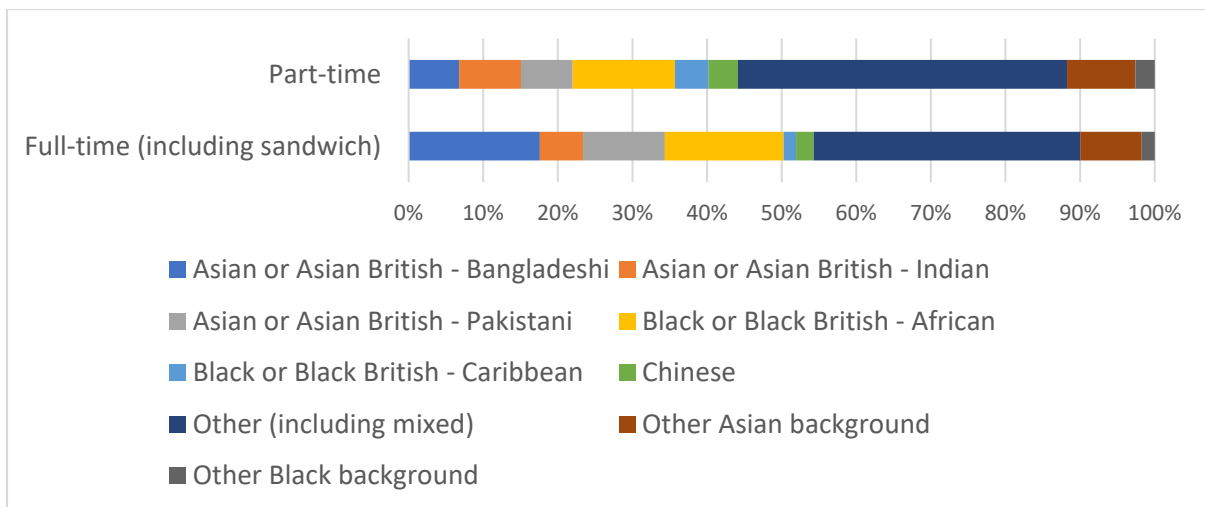
⁴⁶ HEFCW have recently issued a tender for a Survey which will examine the lived experiences of Black, Asian and ethnic minority staff and students in HE in Wales in more detail.

Figure 35: Proportion of Black, Asian and ethnic minority students by more detailed ethnicity and level of qualification



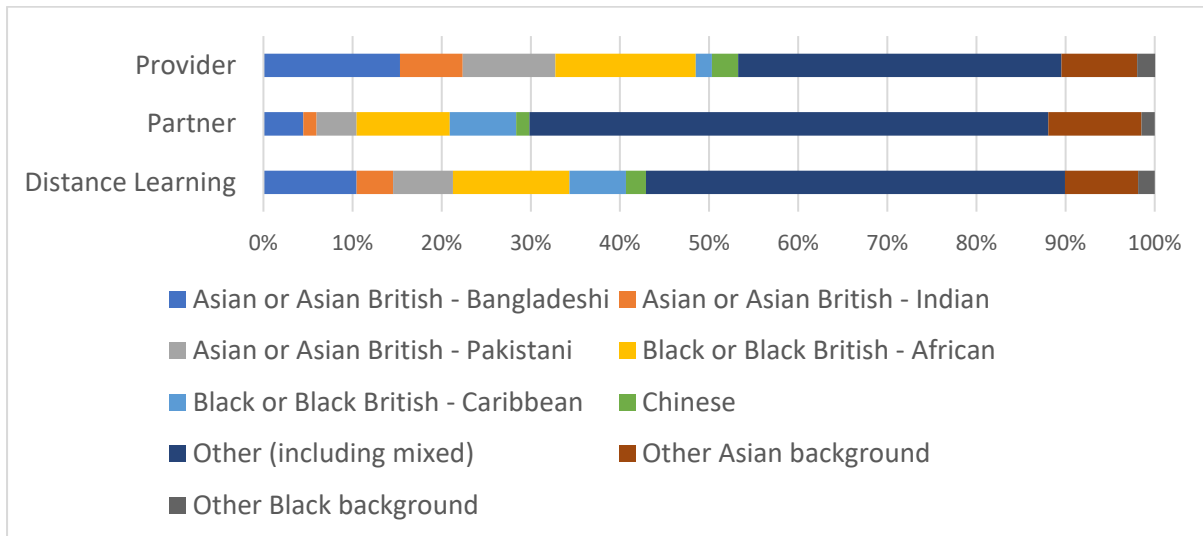
Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Figure 36: Proportion of Black, Asian and ethnic minority students by more detailed ethnicity and mode of study



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Figure 37: Proportion of Black, Asian and ethnic minority students by more detailed ethnicity and location of study



Source: Wales UG instance level data produced by HEFCW for study. 2021/22 academic year, new entrants, undergraduates

Student carers

We previously discussed intersectionality. Intersectionality is particularly prevalent with carers, each of the disadvantaged groups experiencing similar challenges but with differing degrees of impact. The majority of student carers are women, and mature students are more likely to be student carers⁴⁷. Carers UK⁴⁸ has identified, within the UK population, that:

- Black, Asian and other ethnic minority carers are more likely to be struggling financially. At the beginning of the pandemic, over half (58%) of unpaid carers from Black, Asian and minority ethnic groups said they were worried about their finances, compared to 37% of White carers.
- LGBTQ+ carers are more likely to feel lonely. A total of 48% of bisexual carers and 45% of lesbian and gay carers often or always feel lonely, compared to 33% of heterosexual carers.
- A total of 27% of carers who completed the State of Caring survey in 2022 said they had a disability.

Carers may require more support when they enrol on a higher education level programme⁴⁹. Some young adult carers will continue to care at a distance or return home regularly to help family members and, consequently, their overall experiences of university life can be very different from those of their peers. Additionally, their responsibilities may restrict their choice of HE provider or course requiring them to stay closer to home, again resulting in a different experience.

Issues with lateness or absence, difficulty balancing caring responsibilities alongside academic commitments and a high prevalence of self-reported mental health problems are some of the challenges that many young carers face in HE.

⁴⁷ <https://www.hostuk.org/>

⁴⁸ <https://www.carersuk.org/policy-and-research/key-facts-and-figures/>

⁴⁹ Office for Students (2020). *Carers briefing (July 2020)*.

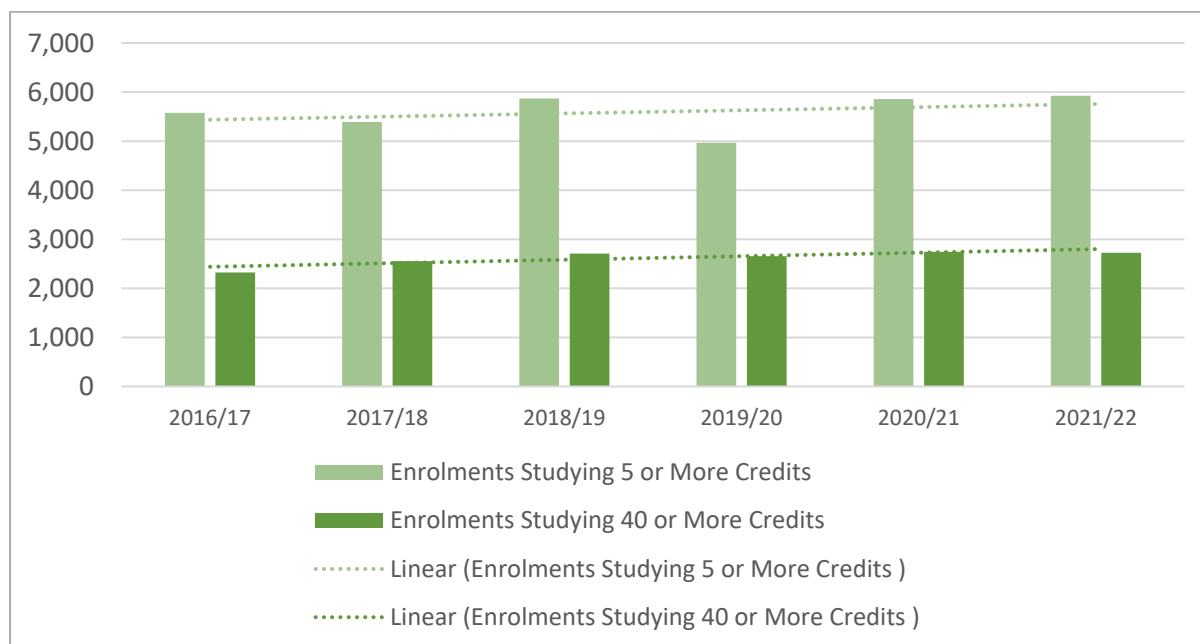
The Carers Trust recommends that providers should develop policies, procedures and training to identify and support young carers throughout their studies. Many student carers often do not disclose caring responsibilities until there has been an impact on their studies. When they do need to disclose, they often do not know how to identify themselves to get support at university, and experience varying degrees of support from their institutions. In all cases, there was a lack of coordinated systematic support⁵⁰.

To support the identification of students with individual support needs, UCAS has introduced a series of questions into the application for 2023 entry, enabling students with caring responsibilities to self-declare their circumstances. Furthermore, UCAS, working with the Carers Trust, has developed a good practice briefing⁵¹ for HE institutions to support these students throughout the student lifecycle. Universities are expected to contact the student directly to discuss their support needs in more detail and to check eligibility for any bursaries or support packages.

3.4.3 Students choosing to study through Welsh

One factor which may contribute to the delivery models students choose, is the availability of Welsh medium modules. Data collected on the number of Welsh medium module enrolments by HEFCW shows modest increases in the number of enrolments on Welsh medium modules over the last 6 years.

Figure 38: Number of Welsh medium enrolments overall (5 credits or more) and at high intensity (40 credits or more)



Source: HEFCW National Measures

Considering the Welsh Government strategy to increase the number of Welsh Language speakers, we would recommend further research into the importance of Welsh medium provision to the choices students make about where and how they study at higher education level.

⁵⁰ McGrory, J & Fernandez, C (2022). *Universities, Ignore Silver Students at your Peril*.

⁵¹ United Nations, Department of Economic and Social Affairs (2019). [World Population Ageing 2019 Highlights](#).

4. How effectively do the different delivery models meet the needs of students?

Summary: One of the key answers this study sought to find was the extent to which the existing higher education delivery models on offer in Wales are meeting the needs of its learners. Our conclusion is that a growth in 'non-dominant' delivery models is needed to address the needs of people living in Wales and to close the participation gap, and that a need to develop even more alternative delivery models has become even more acute as the cost of living crisis is impacting more students. We argue for innovation in delivery models, but our discussion of higher level and degree apprenticeships also leads us to caution against a focus on diversity of delivery models without considering student outcomes. We attempt to take a look at student outcomes for each of the delivery models. The information we have looked at suggests that different delivery models do not produce consistent patterns of differences in student experiences or of likelihood of entering work or further study; there is a mixture of positive and negative student experiences and the same is true for the proportion of students being in work or further study. There looks to be, however, a pattern in continuation rates between delivery models: HND or diploma qualifications have lower continuation rates. What is more striking is that particular student groups have less positive educational experiences, not necessarily because of the delivery model itself, but because of their broader educational experience. Whilst diverse delivery models may be helpful in addressing the needs of some learner groups, improvements in educational outcomes of particular learner groups should equally be the policy focus.

4.1 Can people living in Wales access higher education provision in a way that works for them?

To address the question as to how effectively different delivery models meet the needs of students we first take a look at access and specifically to what extent the current programme offering from Welsh HE providers meets the needs of people living in Wales who choose to study in Wales.

The analysis in the previous section highlighted groups of people in Wales who have been underrepresented in higher education and also highlighted that more students who live in Wales choose delivery models which are part-time, provided at a distance or a partner and aimed at different qualifications when compared to students who study in Wales but live in the rest of the UK or overseas.

Tables 11 and 12 and figure 39 illustrate the range of delivery models Welsh students are actually choosing to study. We use HESA data on 24,484 new entrant student choices relating to 2021 and, because of available data, have reduced the number of components to indicate where teaching is provided (at distance, at provider, or at partner institution), whether the programme is full- or part-time, the qualification study and the type of provider.

Table 11: Overview of the number of and proportion of Welsh new entrants choosing to study at Welsh HE providers classified against delivery components

	Proportion of Welsh students studying via distance learning	Number of Welsh students studying via distance learning
Not at distance	80.4%	19,694
Distance learning	19.6%	4,790
	Proportion of Welsh students by mode of attendance	Number of Welsh students by mode of attendance
Full-time	55.9%	13,678
Part-time	44.1%	10,806
	Proportion of Welsh students by qualification	Number of Welsh students by qualification
UG Degree (Honours/Integrated Masters and Degree apprenticeships)	64.8%	15,873
Foundation degree, DipHE and HND	6.1%	1,484
Certificate of Higher Education	13.9%	3,414
UG credits	10.1%	2,469
Other UG	5.1%	1,247
	Proportion of Welsh students by provider type	Number of Welsh students by provider type
Predominantly HE institution or "University"	97.0%	23,703
Predominantly FE institution or "College"	3.0%	781
	Proportion of Welsh students studying with ...	Number of Welsh students studying with ...
Single institution: HEI	91.0%	22,295
Single institution: FEI	3.0%	7,81
Collaboration HEI with FE	6.0%	1,408

Source: HESA new entrant data for Welsh students studying in 2021/22

When we compare the delivery models Welsh new entrants choose from programmes on offer by Welsh HE providers, we see that proportionally more Welsh new entrants choose to study via distance learning (19.6%) compared to the proportion of programmes which are delivered online (5.3%). Even more pronounced is the difference between the proportion of programmes on offer via part-time study (18.9%) and the proportion of Welsh entrants who choose to study part-time (44.1%).

Table 12: Proportion of higher education programmes on offer in Wales, classified by delivery components, compared with proportions of Welsh new entrants choosing to study at Welsh HE providers classified by delivery components

	Proportion of programmes available via distance learning	Proportion of Welsh students studying via distance learning
Not at distance	94.6%	80.4%
Distance learning	5.3%	19.6%
	Proportion of programmes by mode of attendance	Proportion of Welsh students by mode of attendance
Full-time	81.1%	55.9%
Part-time	18.9%	44.1%
	Proportion of programmes by qualification	Proportion of Welsh students by qualification*
UG Degree (Honours/Integrated Masters and Degree apprenticeships)	85.8%	76.4%
Foundation degree, DipHE and HND	12.3%	7.1%
Certificate of Higher Education	1.9%	16.4%
	Proportion of programmes by provider type	Proportion of Welsh students by provider type
Predominantly HE institution or "University"	97.6%	97.0%
Predominantly FE institution or "College"	2.1%	3.0%
	Proportion of programmes delivered by institutions collaborating	Proportion of Welsh students studying with ...
Single institution: HEI	93.7%	91.0%
Single institution: FEI	2.1%	3.0%
Collaboration HEI with FE	3.8%	6.0%

* Excludes short course and standalone modules and other UG.

Source: HESA DiscoverUni dataset including 2485 programmes, and 66 degree apprenticeship programmes available via HEFCW website and HESA new entrant data for Welsh students studying in 2021/22

Figure 39 presents a Sankey chart to visualise how each of the different delivery components are combined in the programmes Welsh new entrants choose to study. At the bottom of the figure we show four delivery components (from distance learning and collaborative provision on the left to registered provider on the right).

Each line represents one Welsh new entrant; the wider the flows, the more students choose to study via that particular delivery model component.

A few interesting observations can be made:

1. New entrants who choose to study part-time are clustered in particular providers (compare HEI90 with HEI10 for example).
2. New entrants who choose to study distance learning are clustered in one particular provider (HEI40).
3. Overall, the “superhighway of higher education”⁵² which we saw in figure 2 is less clear when we consider what Welsh new entrants choose to study.

Based on our analysis we suggest that a growth in ‘non-dominant’ delivery models is needed to address the needs of people living in Wales and to close the participation gap, and that a need to develop even more alternative delivery models has become even more acute as the cost of living crisis is impacting more students.

The dominant delivery models often assume a student will live away from home and study full-time. A recent analysis by PwC and StudentCrowd concludes that the demand and rising rental costs for student accommodation are creating barriers for accessing HE, particularly for those from underrepresented backgrounds⁵³. The study indicates that these challenges may impact the student experience, as students face difficulties in securing affordable accommodation.

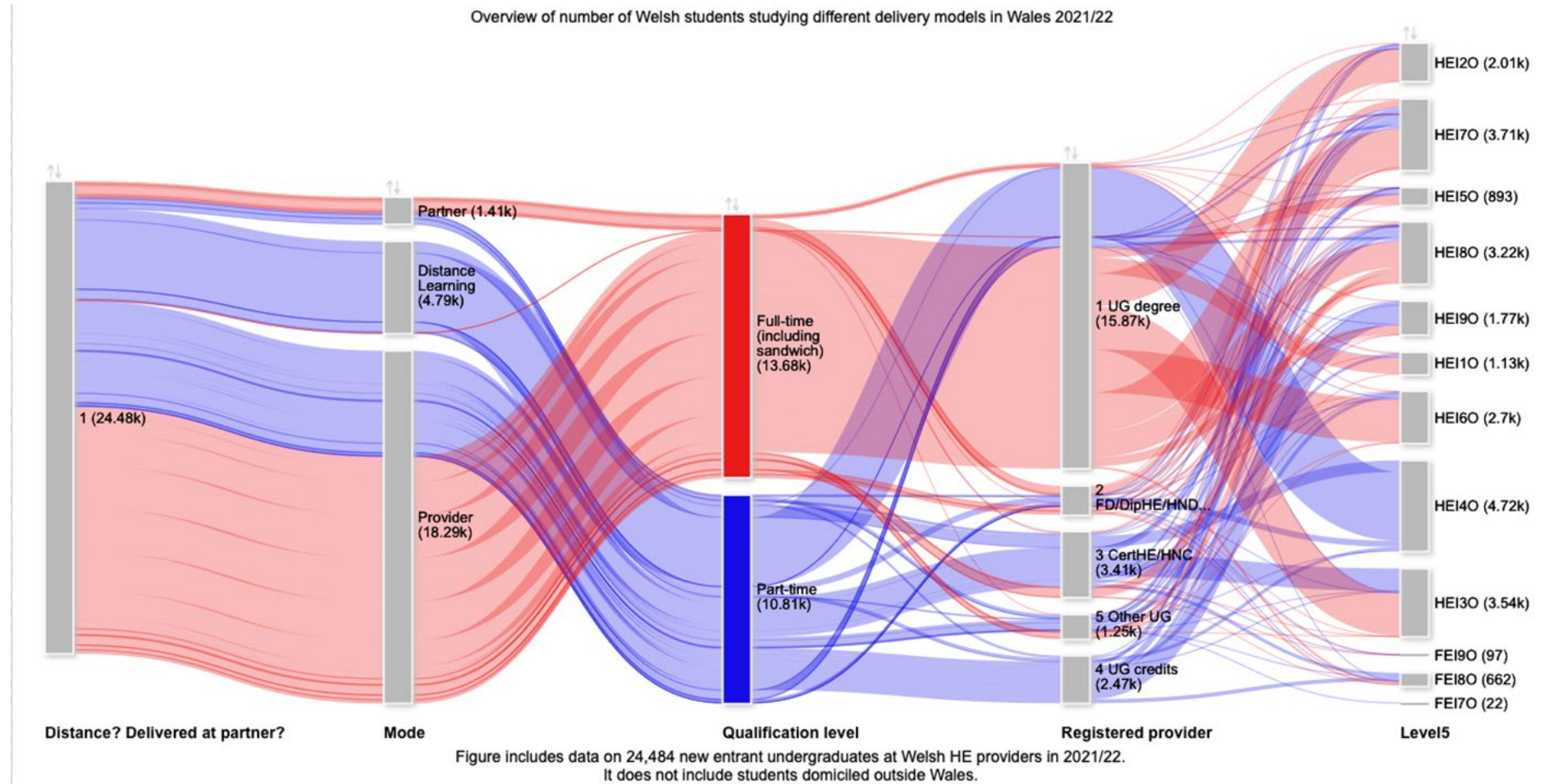
The authors contend that this situation is forcing an increasing number of students to seek additional part-time work, potentially affecting their academic performance. Multiple interviewees for this study referred to this.

The rising cost of living, coupled with limited increases in maintenance loan levels, poses a significant financial barrier for students accessing HE if delivery models are based on students living away from home.

⁵² Mary McCurnock Cook used this phrase recently to describe the “well paved, well maintained, fast lane from good GCSEs to A levels and then on to University. ... Then there are all the slip roads, the alternative routes – there are loads of them – many still under construction, have diversions and even a few roadblocks in place.” (HEPI, *Tertiary Education for the 21st Century: the who, the what and the how* – Mary McCurnock Cook.)

⁵³ <https://www.pwc.co.uk/press-room/press-releases/increasing-demand-and-rental-costs-for-student-accommodation-create-barriers-to-higher-education.html>

Figure 39: The range of delivery models chosen by Welsh new entrant students



4.2 Growing popularity of alternative delivery models

Another factor driving student choice pertains to innovation in delivery models which are offered.

In their recent analysis to gauge potential disruptions to reaching one million HE applicants, UCAS recognised the **growing popularity of alternative routes** such as Higher Technical Qualifications and Degree Apprenticeships. These options may entice more students, both young and mature, away from traditional three-year UG degrees, resulting in a different pattern of provision.

Higher apprenticeships allow apprentices to earn Level 4 or 5 qualifications, which are equivalent to a HND, HNC, or foundation degree. Degree apprenticeships offer Level 6 or 7 credentials, equivalent to a bachelor's or master's degree. Higher apprenticeships usually last 1 to 4 years, whereas degree apprenticeships typically span 3 to 5 years.

Online offerings such as massive open online courses (MOOCs) are seen as a solution to some of the barriers that mature students face, allowing them to pick and choose modules from a wide variety of providers and complete them at their own pace. While take-up has been high, completion rates are often below 10%⁵⁴.

Interest in Degree Apprenticeships

Degree apprenticeships in Wales provide the opportunity to combine working with part-time study at a university, with the employer covering the apprentice's wages and the Welsh Government fully funding the tuition fees.

In terms of the type of HE provision which students are considering, there is considerable interest in degree apprenticeships, with a third of Welsh UCAS registrants (individuals who have initiated the application process) showing an interest in degree apprenticeships in 2022. There is some variation by their region of domicile when starting the application process, with applicants from South Wales East most likely to express an interest.

Higher and degree apprenticeship starts

In 2022/23 quarter three (1st Feb–30th April), there were 1,155 higher apprenticeships⁵⁵ commenced in Wales, compared with 880 in the same quarter one year earlier⁵⁶. These were predominantly focused in business and management, and healthcare. Female learners were 69% of the starters of higher apprenticeships. The distribution of learners was widely spread through the age groups.

⁵⁴ O'Donnell, M & Schulz, L (2020). 'Learning design meets service design for innovation in online learning at scale', in McKenzie, S, Mundy, M, Garivaldis, F & Dyer, K (eds), *The Tertiary Online Teaching and Learning (TOTAL) Guide*.

⁵⁵ Higher apprenticeships allow apprentices to earn Level 4 or 5 qualifications, which are equivalent to a HND, HNC, or foundation degree.

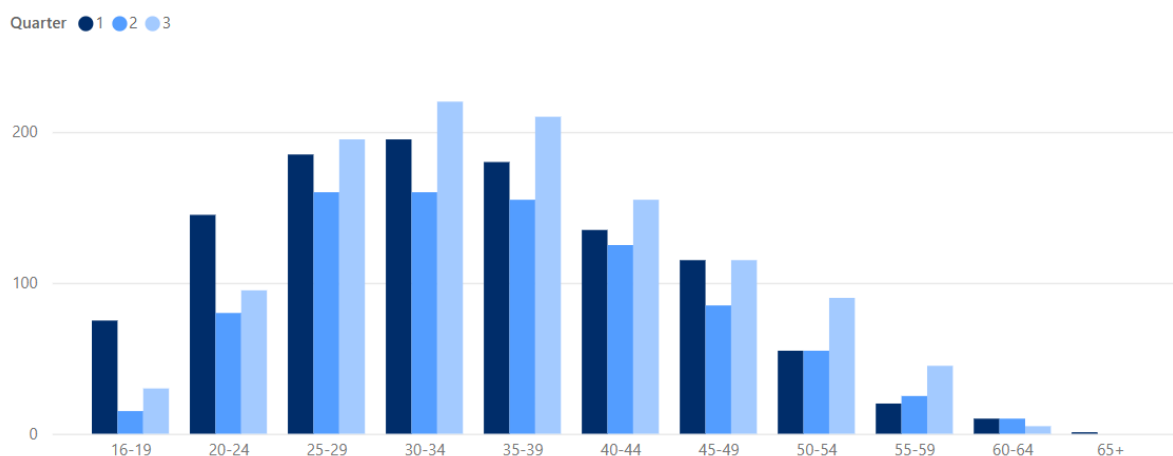
⁵⁶ <https://www.gov.wales/apprenticeship-learning-programmes-started-interactive-dashboard>

Figure 40: Proportion of UCAS registrants interested in degree apprenticeships in 2022



Source: UCAS

Figure 41: Higher apprenticeship starters by age band, 2022/23



Source: <https://www.gov.wales/apprenticeship-learning-programmes-started-interactive-dashboard>

The most recent degree apprenticeship data available (2021/22) identified 300 starters in that academic year, predominantly at Level 4. Eight-five per cent of those were aged 21 and over. Only 16% of degree apprenticeship students were female, and the population was less diverse than the rest of the higher education population. Degree apprenticeships in Wales are only available in computing and engineering subjects which will explain some of the lack of diversity. Retention rates are a concern; for example, in this year only 62% of those leaving the course did so having successfully obtained a qualification. There is clearly an opportunity to increase the amount of delivery through Welsh. Twenty-six per cent of participants were Welsh speakers but none were undertaking more than 5 credits through the medium of Welsh.

In his report to Welsh Government on transitions to employment, Hefin David observed that “Degree apprenticeships however remain limited in scope and there is some uncertainty about provision, particularly with regard to funding.”⁵⁷ His report highlights two main challenges: funding and a lack of “vertical integration” in apprenticeships, where lower-level programmes’ sectors don’t align well with those at Levels 6 and 7, hindering learner progression. David suggests empowering CTER to develop frameworks connecting further and higher education.

⁵⁷ David, H. (2023). *Transitions To Employment: A Report For The Welsh Government*

A broader issue concerns funding, with the Welsh Government previously stating that the degree apprenticeship costs it supports should match full-time undergraduate tuition fees. David's report considers employer contributions (proposing either a 50-50 split with government financing or a 25-25 split, with apprentices covering the rest through student loans), a proposition opposed by NUS Wales. The report also notes complexities in how the Welsh system interacts with the UK Government's apprenticeship levy. It highlights the risk of resistance from UK-wide employers asked to contribute again to Welsh apprenticeships. The report refrains from suggesting a solution, urging the Government to evaluate further and consult on costing and funding models, considering the long-term value in distributing the financial burden among the public sector, employees, and employers.

4.3 An attempt to analyse student outcomes by delivery model

To address the question as to how effectively different delivery models meet the needs of students, we felt it was important to look beyond access and focus on student outcomes. In this section of the report we have attempted to bring together our approach to defining delivery models with the outcomes of students who have chosen those delivery models. We have examined student experience, continuation and further study and employment and offer it as a rough methodology in need of further testing, development and debate.

4.3.1 Student experience

To address the question of whether the student experience significantly varies between different delivery models, we have made use of the National Student Survey (**NSS**) data from 2023 plus other sources and research for specific sub-groups of students.

Most undergraduate students studying in Wales are satisfied with their higher education experience; yet, with overall satisfaction levels at 75.2%, Wales lags behind Scotland (77.1%) and Northern Ireland (79.7%).

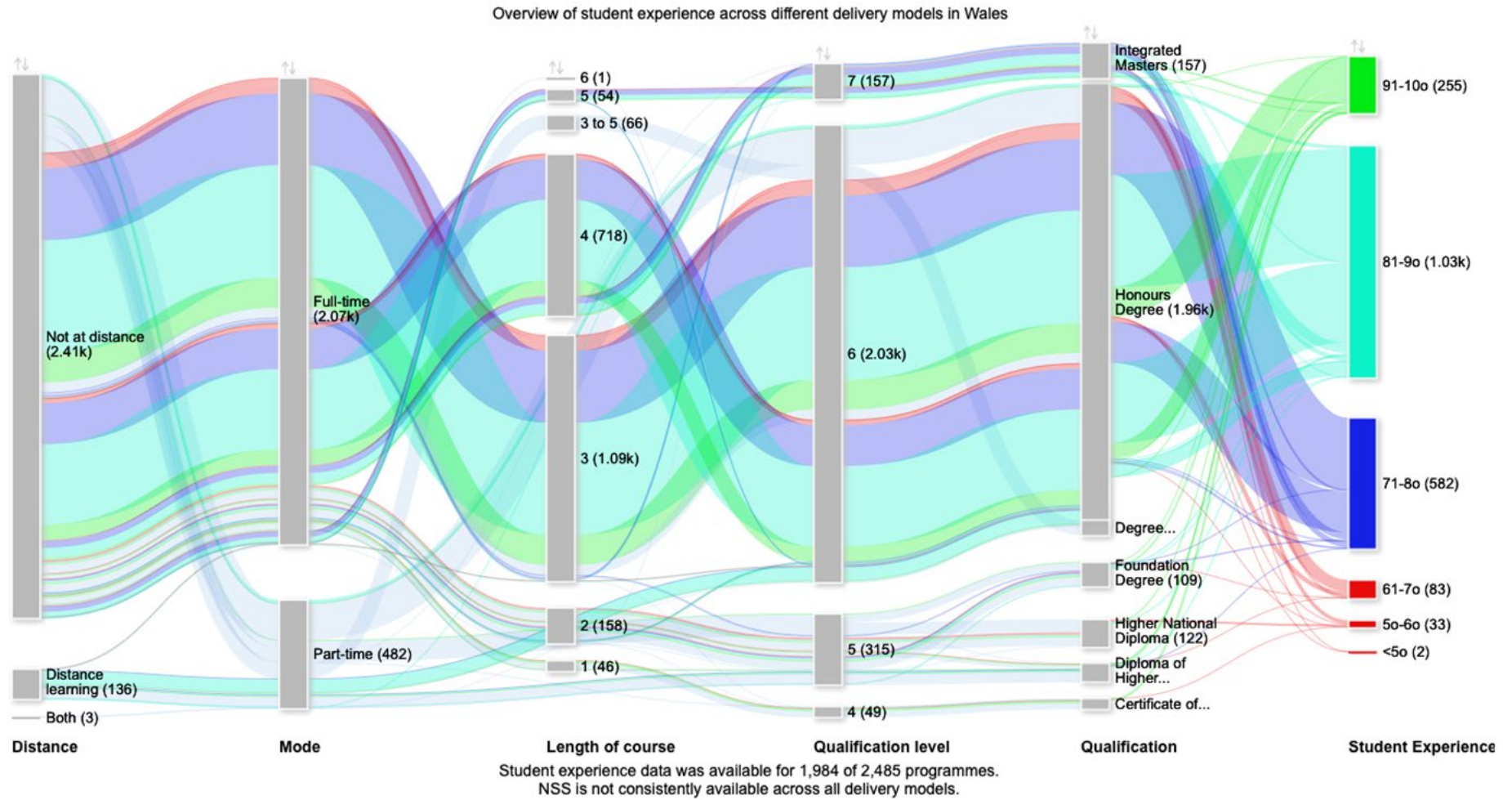
The Discover Uni dataset⁵⁸ includes NSS data for 1,984 of the programmes offered in Wales. We have taken an average NSS score⁵⁹ per programme and have mapped this against the key delivery model components. Whilst providing the most comprehensive overview of the sector experience in the sector, we acknowledge that this approach is limited by the fact that the coverage of the NSS is not equal across all delivery models.

Figure 42 shows that the student experience isn't significantly different for different delivery models; there is a mixture of positive and negative experiences across the board. At the bottom of the figure we show five delivery components (from left: distance learning, mode, length of course, qualification level and qualification on second from right). The final column is the programme's NSS score. Each line represents one programme; the wider the flows the more programmes there are with that delivery model component. The colours correspond to NSS scores: from good (green), to not so good (red). The colours are not clustered around a specific delivery component, which means there is a range of good and bad student experiences across the different delivery models.

⁵⁸ Discover Uni ([Discover Uni Home](#) | [Discover Uni](#)) is the official, authoritative source of information and guidance on higher education in the UK.

⁵⁹ An average across all 7 NSS themes (Teaching on my course, Learning Opportunities, Assessment and Feedback, Academic Support, Organisation and Management, Learning and Resources and Student Voice).

Figure 42: Impact of delivery model on undergraduate student experience



Having said that, we know from other research and from more granular analysis of the NSS that some groups of students have consistently less positive experiences:

- students with a reported disability are consistently less happy with their higher education provision than those without a reported disability⁶⁰; proportionally fewer students who were aged between 21 and 25 at entry were satisfied with their course than ‘young’ students (defined as under 21). The pattern was similar, but slightly better, for students who were aged between 26 and 30 at entry;
- students with an ethnicity other than White face a significant level of challenge when studying in higher education. It is a common experience for them to face racism in their accommodation, from peers and from staff, resulting in difficulties fitting in and belonging that make it harder to succeed academically⁶¹;
- a majority of student carers reported that they were struggling with their studies because of their caring responsibilities. Courses requiring off-site learning or work placements may present difficulties to students who need to make arrangements around their caring responsibilities⁶²;
- recent studies have found that, while some LGBTQ+ students view university as a supportive environment for identity exploration, others feel the need to hide their LGBTQ+ identity. This can be due to the fear of negative reactions, stigmatising attitudes, or consequences due to culture or religion. However, hiding one’s identity can lead to negative outcomes such as increased feelings of rejection, impaired intimacy, and poor mental health⁶³;
- whilst a similar proportion of on-campus students who studied at an institution local to their home address were as satisfied with their experience as those who travelled to study, the experience of distance learners was considerably less favourable as is shown in table 13 below

Table 13: 2023 NSS: All subjects students at providers in Wales – Overall satisfaction

Split	Positivity measure (%)	Benchmark value (%)	Responses	Response rate (%)	Positivity measure (%)						
					50	55	60	65	70	75	80
Distance learner	63.4	71.3	131	68.4							
Studying at an HE institution local to home address	74.8	74.3	3,124	74.4							
Studying at an HE institution not local to home address	75.4	75.5	11,836	74.1							

Source: National Student Survey 2023

Belonging serves as an important motivator and protective factor for student engagement, retention and success, and is a common theme across the student groups we have investigated. Belonging can come through shared religious, cultural or ethnic backgrounds, political or intellectual views, aspirations and goals, or through being able to identify with others coming through non-traditional

⁶⁰ Policy Connect & HE Commission (2020). [Arriving at Thriving, Learning from Disabled Students to Ensure Access for All](#)

⁶¹ EHRC (2019). [Tackling racial harassment: universities challenged](#)

⁶² Carers Trust & NUS (2014). *Time to be Heard: a call for recognition and support for young adult carers*. Runacres, J & Herron, D (2022). *Students with caring responsibilities face significant challenges but universities are hindering rather than helping them*. The Conversation. Carers Trust (2018). [Supporting Students with Caring Responsibilities: Ideas and Practice for Universities to Help Student Carers Access and Succeed in Higher Education](#)

⁶³ Sanders, M (2022). *The Wellbeing of LGBTQ+ Students*.

routes into higher education. Whilst we have focused on groups of students as distinct entities to understand better the challenges those students face, this is a construct to help with analysis and discussion, and **many of the interventions to support students will involve bringing a diverse group of students together.**

4.3.2 Continuation

To address the question of whether the rates at which students continue significantly varies in between different delivery models, we have made use of continuation rates calculated by HESA.

The Discover Uni dataset⁶⁴ includes continuation data for 1,495 of the programmes offered in Wales⁶⁵ and we have mapped those on a Sankey chart. At the bottom of figure 43 we show five delivery components (from left: distance learning, mode, length of course, qualification level and qualification on second from right). The final column is the programme's continuation rate. Each line represents one programme; the wider the flows the more programmes there are with that delivery model component. Continuation rates are only available for 1,485 of 2,485 programmes, which is a significant gap in information.

The colours on the right correspond to continuation rates: from good (green), to not so good (red).

There is more clustering of colours around certain delivery models which suggests that delivery models that lead to HND or diploma qualifications⁶⁶ have lower continuation rates when compared with honours and integrated masters degrees.

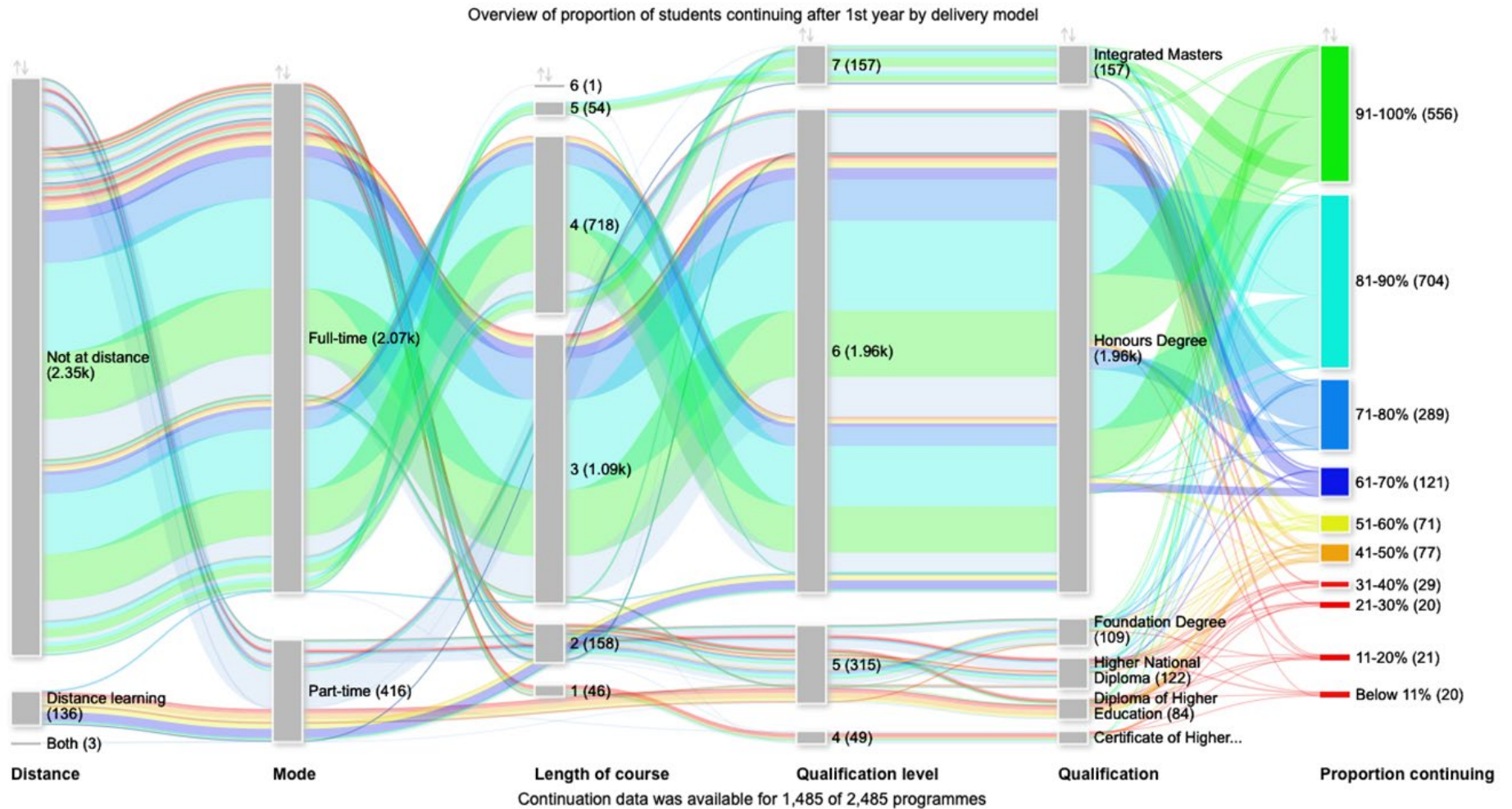
These are very early findings which need further testing.

⁶⁴ Discover Uni ([Discover Uni Home | Discover Uni](#)) is the official, authoritative source of information and guidance on higher education in the UK.

⁶⁵ Continuation data measure whether the students is in attendance in the following year of study, measured 15 months after the commencement date of the programme and is not available for one year programmes.

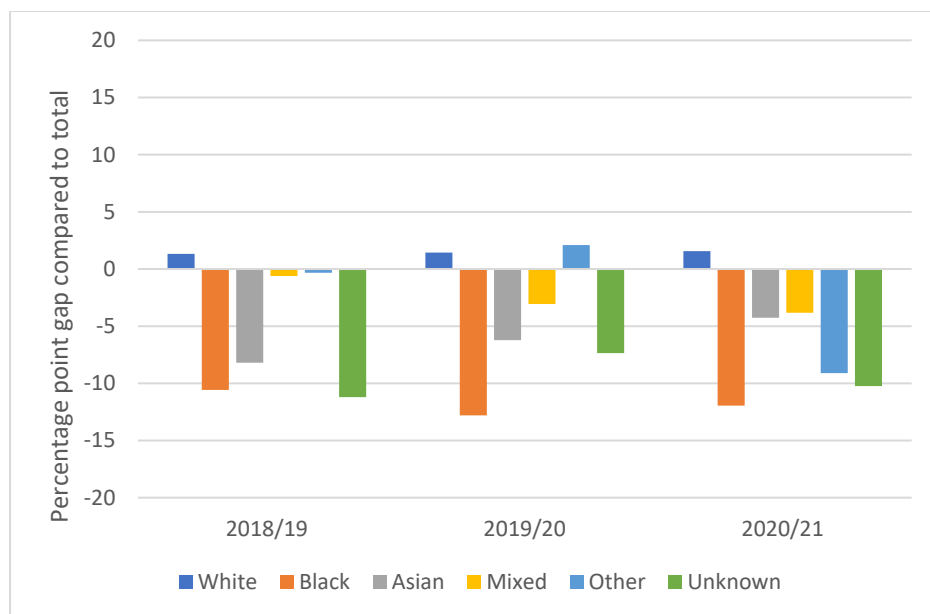
⁶⁶ This pattern can also be seen in the OfS data for England: [Student outcomes: Data dashboard - Office for Students](#)

Figure 43: Impact of delivery model on continuation



Within the same delivery models, we see that there are marked differences between ethnic groups in the rates of continuation of study following year of entry for full-time undergraduate UK-domiciled students. In general the retention of White students is higher than all other ethnic groups, with some considerably large gaps that are consistent over the last three years for which data is available.

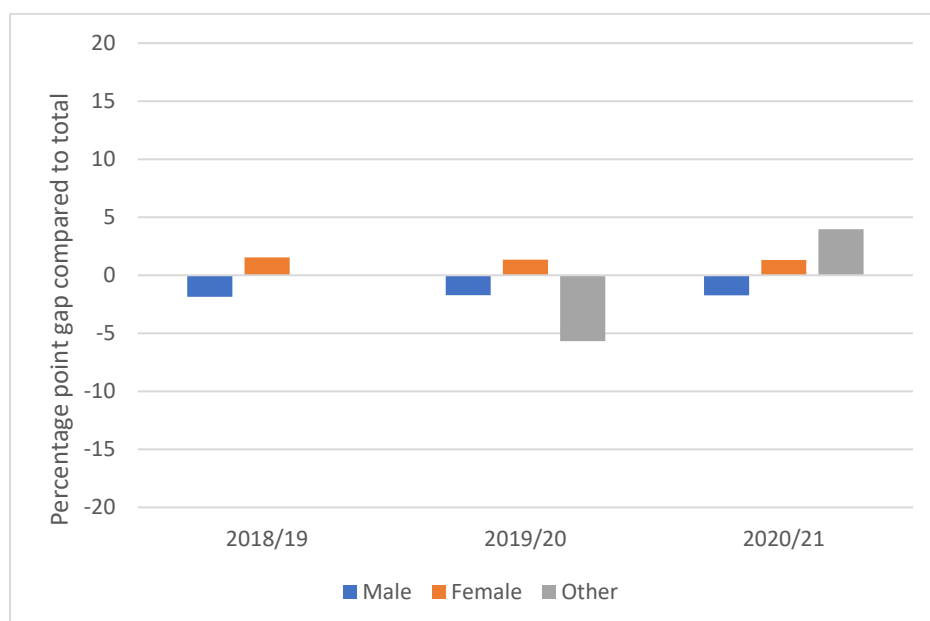
Table 14: Difference in retention for FT UG UK-domiciled students by ethnic background



Source: HEFCW (from HESA)

In general, female students are more likely to stay in higher education than males, but the differences are slight. Figures relating to students with other sexual identities are based on very small numbers and should be treated with caution when seeking to identify trends.

Table 15: Difference in retention for FT UG UK-domiciled students by sex



Source: HEFCW (from HESA)

Students who are carers are four times more likely to drop out of their studies and are three times more likely to take on high levels of debt from high interest sources. It is more likely than not that they will report they are struggling to balance the conflicting priorities of study, caring and work, while 45% of young adult carers report a mental health problem – almost double the national average.

Disabled students are still likely to take longer to complete a degree programme, and in Wales, when studying part-time, demonstrate higher levels of withdrawal rates than students with no declared disability⁶⁷.

4.3.3 Further study and employment

To address the question of whether students' further study or employment outcomes significantly vary between different delivery models, we have made use of proportion in work or study metrics available at programme level and have mapped those on a Sankey chart.

The Discover Uni dataset⁶⁸ includes data on further study and employment for 1,757 of the programmes offered in Wales: it describes the percentage of graduates employed within the UK, 15 months after graduation.

At the bottom of figure 44 we show five delivery components (from left: distance learning, mode, length of course, qualification level and qualification on second from right). The final column is the programme's proportion in work or study rate. Each line represents one programme; the wider the flows the more programmes there are with that delivery model component. Proportion in work or study rates are only available for 1,757 of 2,485 programmes and some programmes will be grouped together, which are significant gaps in information.

The colours on the right correspond to proportion in work or study rates: from good (green), to not so good (red).

There is less clustering of colours around certain delivery models in Figure 44 which suggests that delivery models lead to both high and low rates of employment and further study, with no significant differences between the various models.

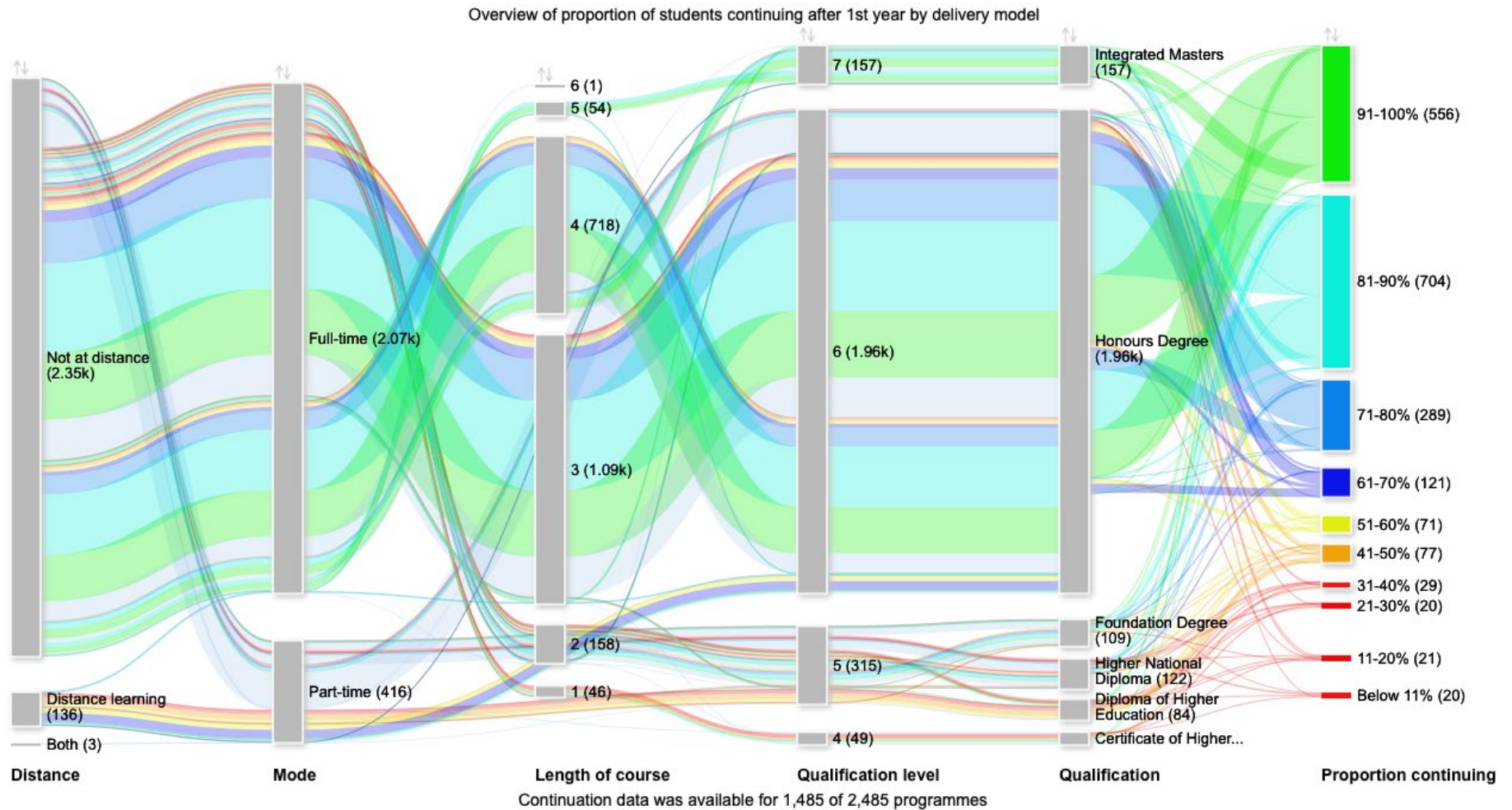
These are very early findings which need further testing.

The Graduate Outcomes data reveals differences in the outcomes for students with and without known disabilities. Whilst a higher percentage of graduates without disabilities secured full-time employment, those with disabilities exhibited a slightly elevated engagement in part-time employment and faced a higher unemployment rate. These distinctions underscore the importance of considering disability status in understanding post-graduation outcomes, and tailoring support mechanisms to ensure inclusive and equitable career pathways for all graduates.

⁶⁷ HE Policy Institute (2023). [It's time to make English HE institutions accessible: Disabled students' representatives lead the way to change.](#)

⁶⁸ Discover Uni ([Discover Uni Home](#) | [Discover Uni](#)) is the official, authoritative source of information and guidance on higher education in the UK.

Figure 44: Impact of delivery model on study and employment



4.5 Is it the delivery models?

Having analysed the data, we would argue that whilst diverse delivery models may be helpful in addressing the needs of some learner groups (e.g. part-time provision for an older learner group), increasing the diversity of models is not in and of itself the answer to meeting the needs of all students who choose those delivery models. More flexible, inclusive and supportive educational practices (including timetabling), improved support services (including for mental health⁶⁹), the development of strong communities, which foster belonging⁷⁰, and taking concrete steps to eliminate racism from the student experience, including in student housing⁷¹, can all have a positive impact on specific learner groups.

This is especially pertinent after the pandemic. As classes have returned to the face-to-face format, hybrid teaching and learning have scaled back and the enhanced flexibility provided during the pandemic – vital to improve accessibility for many different groups of students – is being diminished. This is confirmed by the Office for Students (OfS), who states that the flexibility offered by digital teaching and learning enables particular student groups to access higher education which they might not otherwise be able to⁷². Additionally, the implementation of a more flexible and compassionate approach during the pandemic has provided evidence that such approaches do not have to be in competition with academic rigour⁷³.

We have previously suggested that more diversity in delivery models is needed to meet the needs of people living in Wales. What we want to add here is that the detail of how those delivery models are designed, developed and improved is also important, as is the responsiveness of HE providers to individual student needs.

4.6 Findings from our engagement

As part of our engagement we asked people working in HE providers whether they agreed that current delivery models meet the needs of those people who want to undertake higher education in Wales. The majority was of the view that this was the case:

⁶⁹ Lent, RW (2004). 'Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment', *Journal of Counselling Psychology*, 51(4), pp. 482–63.

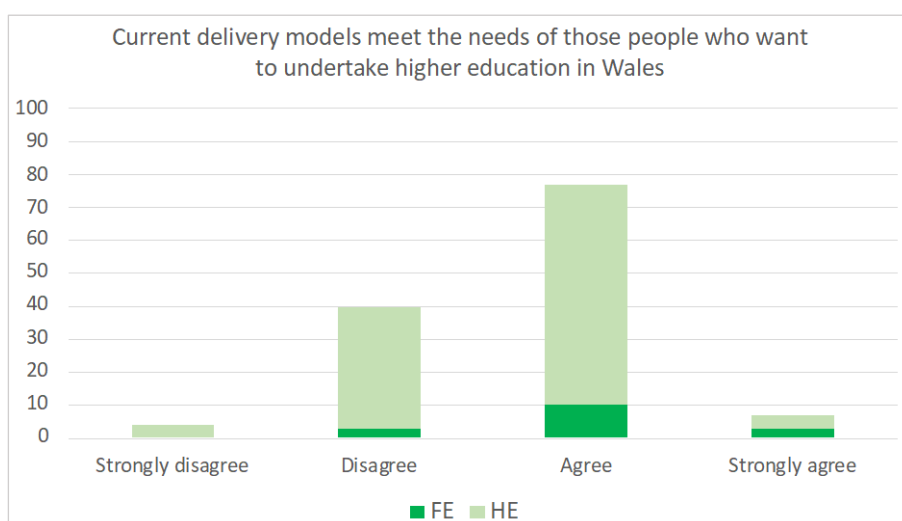
⁷⁰ "Sisterhood 'We'll pull each other through.' The lived experience of mature female students on a Bachelor of Nursing (Adult) programme: an interpretative phenomenological analysis," Owena Simpson

⁷¹ Unite Students (2022). [Living Black at University](#)

⁷² Office for Students (2021). [Gravity assist, Propelling HE towards a brighter future.](#)

⁷³ Disabled Students UK (2022). [Going Back is Not a Choice](#)

Table 16: HE providers' staff perceptions of whether current delivery models meet HE needs in Wales



The additional comments below echo some of the points presented in this report:

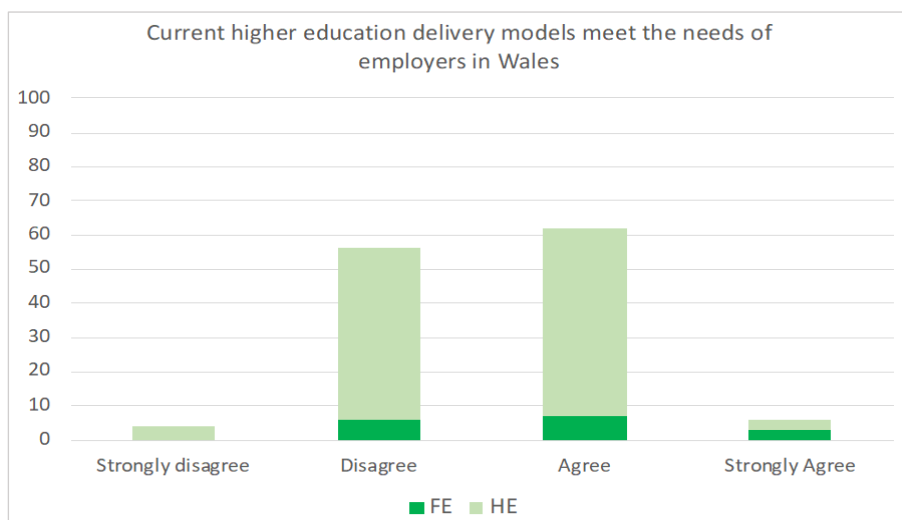
- Progress has been made in expanding flexible options, but there is still significant **room for improvement** to increase accessibility.
- **Funding and student finance structures often limit flexibility**, as many are optimised for full-time study.
- Online delivery increased due to the pandemic but needs further expansion. **Blended models are limited.**
- Access and support for **underrepresented groups**, such as mature, disadvantaged, and neurodiverse students, needs improvement.
- **Practical constraints** around timetables, commuting and location **restrict options** for many.
- **Lack of clear information** about what provision exists across institutions is an issue.
- **Employer-focused and work-integrated models** are limited in some fields and should be expanded.
- Support for **neurodiverse, and international students** with additional needs is insufficient at some institutions.
- Students tend to **prefer in-person options** when available, but remote options need further development.

One respondent said:

“It is hard to access higher education if you are not in the 16–19 age bracket. This is particularly the case for vocational qualifications. There are disproportionate number of students with ALN channelled into segregated life skills courses and excluded from vocational courses that could address the disability employment gap. According to our research this is often because entry requirements (5 GCSE's, English, maths) are not met but are not necessarily needed for the course the individual wants to do. The special school system releases students at 19. Many of these students have not had the opportunity to study for GCSE's and the higher education system significantly disadvantages them.”

We also asked people working in HE providers whether they agreed that current delivery models meet the needs of employers in Wales. A small majority was of the view that this was the case:

Table 17: HE providers' staff perceptions of whether current delivery models meet employer needs in Wales



We pick up on some of the additional points made here in the remainder of this report:

- There is insufficient alignment between higher education and employer needs. Closer **collaboration** is required to identify skills gaps.
- Traditional academic degrees do not always provide the skills employers want. More vocational, modular, and apprenticeship **options** are needed. **Accreditation requirements** don't always match those needs.
- Employer involvement in curriculum design is often **tokenistic** rather than substantive. Deeper engagement is required.
- Responsiveness to changing industry needs is a challenge, with curriculum often **lagging behind**.
- Part-time and flexible learning models help serve employers' needs for upskilling existing workers, but **awareness and availability** needs improvement.
- **Funding constraints** limit the ability of institutions to tailor offerings to employers' needs.
- Developing **broader transferable skills**, not just subject training, is important but not always prioritised.
- Inflexible structures and **practical barriers** like location, differences in England vs Wales, and **lack of coordination and incentives** inhibit employer engagement.
- Employers have some misconceptions about higher education's role. Their **own training investment** is also important.

Conclusion: One of the key answers this study sought to find was the extent to which the existing higher education delivery models on offer in Wales are meeting the needs of its learners. Our conclusion is that a growth in 'non-dominant' delivery models is needed to address the needs of people living in Wales and to close the participation gap, and that a need to develop even more alternative delivery models has become even more acute as the cost of living crisis is impacting more students. We argue for innovation in delivery models, but we caution against a pursuit of increased diversity in delivery models as an end goal and note that educational opportunities currently on offer do not meet the needs of particular student groups. Whilst our recommendations focus on expanding the range of opportunities available, they also focus on the importance of measuring outcomes for students. We augmented our recommendations with some reflections on whether the current delivery models meet employer needs, as they merit consideration.

5. What are the drivers for institutional behaviour with regard to different delivery models?

Summary: We identified six financial barriers which reduce or slow the diversity of delivery models being developed and offered by HE providers:

- As an ecosystem, the student finance system and teaching funding allocated to HE providers favour the dominant delivery model.
- The long-term impacts of student debt on a student's future finances and life opportunities are not well understood by students and parents.
- Significant levels of investment are made into funding student loans for Welsh students studying outside the Welsh HE sector. This reduces the amount of funding available to Welsh Government for investment in other priorities, which could include the expansion of alternative delivery models in Welsh HE providers.
- The continued fall in levels of public funding are causing concern about the sector's ability to sustain its current business models. It has driven HE providers to grow income associated with delivery models with proportionally high margins, which has led to increased competition for international and some UG and PG students. It has also driven a number of HE providers to chase small pots of additional public funding for the development of new delivery models, which compete for resources with their existing delivery models and which at times unnecessarily duplicate delivery across Wales;
- HE providers' mix of business models not only makes it difficult for the HE sector to calculate the real cost of its delivery models and to clearly articulate the size of the gap in funding, it also generates overhead costs and makes cost control harder.
- The way some FEIs, alternative providers and their students currently access teaching funding or student loans leads to additional costs associated with the contractual and regulatory arrangements that allows them to do that. Processes around accreditation and validation add costs to delivery.

In addition, we identified seven non-financial barriers to developing innovative delivery models or delivering good educational outcomes for all student groups:

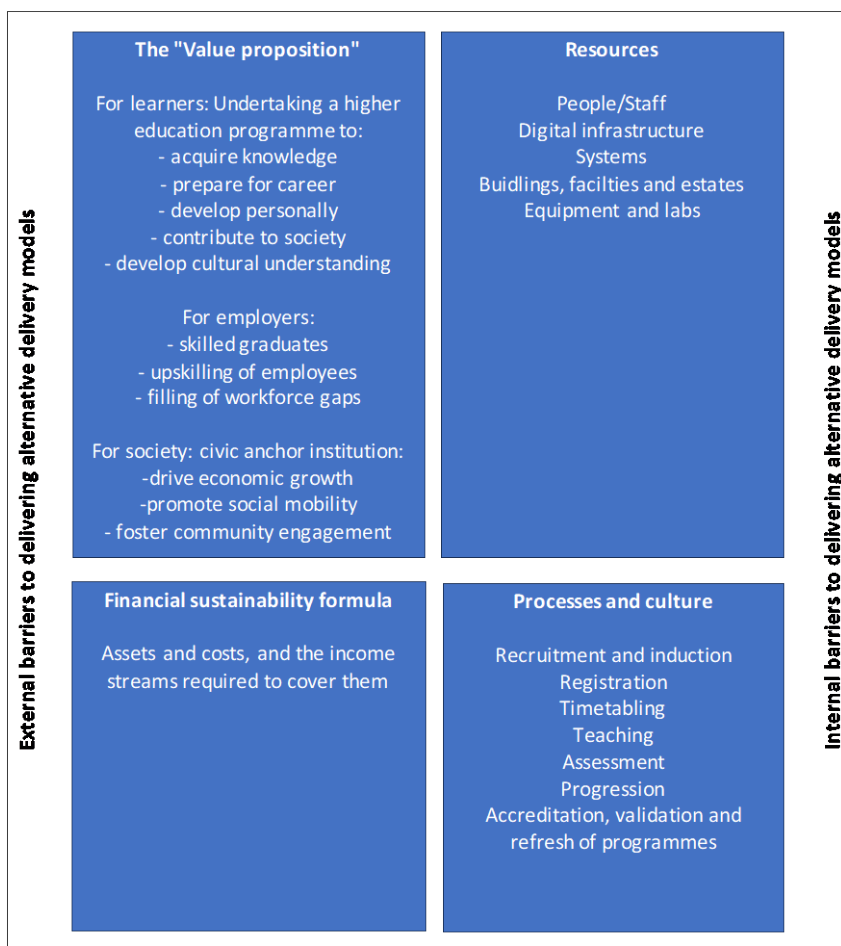
- Current HE funding arrangements and quality assurance frameworks make it harder for providers to innovate and collaborate.
- There is a gap between analysis and plans developed through the Regional Skills Partnerships and the delivery and implementation of Wales-wide changes to higher education provision. Change is often fragmented in local initiatives, limited to existing partnerships with costly overheads associated with bespoke, time-limited arrangements and an ad-hoc infrastructure. Strategic collaborations have worked well when a shared infrastructure has been put in place, but this requires effort and resources.
- Developing alternative delivery models could free up costs relating to buildings, energy and infrastructure.
- HE providers' current digital infrastructure is outdated; at best it works for the dominant delivery model and makes supporting non-dominant delivery models difficult and costly.
- Data definitions describing delivery models are too narrow and too focused on the dominant model, and data relating to non-dominant models often does not exist, or is of poor quality and returned in multiple external returns.
- Many providers are improving their core education processes to improve outcomes for students and there is an opportunity for the sector to collaborate and develop an evidence base for what works.

- **Some higher education organisational cultures struggle to support their staff to innovate or promote healthy risk taking.**

We have asserted that there is a dominant HE delivery model in Wales and that the broader educational offering does not necessarily meet the needs of significant groups of Wales’s diverse body of learners. In this section we want to understand better what drives institutional behaviours with regard to developing different delivery models; what helps and what hinders? We draw on survey responses, informal conversations, one-to-one semi-structured interviews, focus groups and roundtables conducted as part of our study as well as our own experiences.

The structure of this section has been informed by Lloyd Armstrong’s article on Barriers to Innovation and Change in Higher Education, in which he uses the business model framework⁷⁴ to discuss barriers to innovation and change.

Figure 45: Drivers for institutional behaviours with regard to delivery models



⁷⁴ "Any organisation that produces something that potential users will value basically has four broad areas of concern: 1) What are the attributes of the product customers will value?; 2) What resources are needed to produce that product?; 3) What procedures turn resources into the product? and 4) How can the costs of resources and procedures be managed so that the resulting revenues will cover the costs?" Armstrong, Lloyd, *Barriers to Innovation and Change in Higher Education*

5.1 Value proposition to individual learners

Higher education provides value to individual learners, employers and wider society.

The value proposition higher education offers **learners** usually contains at least one of the following: knowledge acquisition, career preparation, personal development, engagement in research and innovation, societal contribution and/or improved cultural understanding, and leads to benefits for the individual learner as well as society⁷⁵. It is the recognition that education delivers a mix of private and societal benefit that has led governments to adopt higher education funding models which share the cost of higher education between the learner (who will receive a private benefit) and the general tax payer (who will receive wider societal benefit). From an institutional perspective, learner contributions are made in the form of tuition fee payments, whilst the general taxpayer contribution is made in the form of teaching funding distributed mainly by HEFCW.

Student finance system

The student finance system drives HE providers to recruit students who have the means to pay the cost of study; that is, those students who either have the private means (which includes many international students), those who receive parental support, or those can access loans and/or grants. The design of the student finance system also determines indirectly the levels of funding available to HEFCW to support HE providers: the Welsh Government balances its investment in higher education between support for the student finance system and the funding it allocates to HEFCW⁷⁶.

The student finance reforms implemented from September 2018 following the *Diamond Review* made two significant changes:

- An increased tuition fee loan of up to £9,250⁷⁷ replaced the previous student finance support which included a combination of tuition fee grants and loans;
- A package of maintenance grants and loans was made available to students to support them in their studies.

These changes have enabled the Welsh Government to position itself as ‘the provider of the most progressive student finance system in the UK’. Welsh UG students, benefiting from a comprehensive living costs package comprising grants and loans, face lower average repayment burdens than their English counterparts⁷⁸. The system prioritises the highest level of grant support for students with the

⁷⁵ Robbins, L. (1963). *Higher Education: Report of the Committee Appointed by the Prime Minister Under the Chairmanship of Lord Robbins*, and Dearing, R. (1997). *HE in the Learning Society: Report of the National Committee of Inquiry into Higher Education*.

Brennan, J., Durazzi, N., & Sene, T. (2013). *Things we know and don't know about the Wider Benefits of Higher Education: A review of the recent literature*.

Chris Taylor, Stuart Fox, Ceryn Evans & Gareth Rees (2020) ‘The ‘civic premium’ of university graduates: the impact of massification on associational membership’, *Studies in Higher Education*, 45:7, 1351-1366

⁷⁶ Both budgets are part of the ‘Education and the Welsh Language’ ‘Main Expenditure Group’ in the WG Budget. (<https://www.gov.wales/draft-budget-2024-2025>)

⁷⁷ This amount applies to Welsh-domiciled students studying in England. Welsh-domiciled students studying in Wales typically receive a loan for £9,000. Whilst tuition fees are not paid directly by the public sector tuition fee loans are subsidised by the Welsh Government for Welsh-domiciled learners.

⁷⁸ Welsh Government. (2023). Written Statement: Student support for HE students in the 2023/24 academic year. Notably, the Welsh Government has chosen to tie the rate of support for students to the National Living

greatest financial need and provides additional support for student parents, students with financially dependent adults, and disabled students⁷⁹. The system also seeks to provide support for students studying programmes where there is a significant workforce shortage⁸⁰ and supports students with some of the additional costs relating to living away from home⁸¹.

We would argue, however, that the current student support system still favours the dominant delivery model. Table 18 below shows that student support is not equally available for all delivery models. This table is illustrative of the complexity of available funding and not necessarily comprehensive.

Wage. Maintenance support for full and part-time HE students from Wales increased by 9.4% for the 2023/24 academic year. This stands in contrast to the UK Government's announcement of a 2.8% increase for students ordinarily residing in England.

⁷⁹ Specialised support is provided for student parents, including a Childcare Grant and assistance through Parents' Learning Allowance. Additionally, there is an Adult Dependents' Grant for UG students with financially dependent adults. The Welsh Government also offers a Disabled Students' Grant to cover extra study-related costs resulting from disabilities or health conditions, with the amount determined by individual needs. A Travel Grant is available to cover additional travel costs for students studying abroad or those on healthcare placements in the UK.

⁸⁰ NHS and social care bursaries are provided for students pursuing qualifications in medicine, dentistry, healthcare, and social work.

⁸¹ Additionally, students in Wales benefit from Council Tax exemptions if they live alone, with other students, or in halls of residence. Students living with non-students are not counted towards the Council Tax bill for the property.

Table 18: Student finance support, per delivery model

				Student Finance support		
		Subject	Mode	Tuition fee loans	Maintenance grant	Maintenance loan
	Degree Apprenticeship (Levels 4 to 6)	Digital Degree Apprenticeship, Engineering and Advanced Manufacturing Degree Apprenticeship, Construction Degree Apprenticeship (due to be published in summer 2024)	FT & PT	Funded directly by Welsh Government through HEFCW (and CTER in due course) (Tuition fees for degree apprenticeships are not eligible for a student loan)	Undergraduate student support regulations do not prevent a degree apprenticeship student from being able to access means-tested maintenance grant (and loan) for living costs	Undergraduate student support regulations do not prevent a degree apprenticeship student from being able to access means-tested maintenance grant (and loan) for living costs
		UK pathways delivered by Welsh HEIs and supported by non-devolved funding streams	FT	Welsh HEIs can access funding directly via the HMRC		
	Level 4,5,6 taught provision	Majority of subjects except HEIW-funded	FT	Access to tuition fee loan: £9,000 if studying in Wales, £9,250 if studying in England*	Disabled Students' Grants up to £33,146 Unrestricted travel grants for students with disability Disabled Students' Allowance (DSA)	

		High-costs subjects except HEIW- funded	FT	Access to tuition fee loan: £9,000 if studying in Wales, £9,250 if studying in England*	Disabled Students' Grants up to £33,146 Unrestricted travel grants for students with disability Disabled Students' Allowance (DSA)	
		HEIW-funded Healthcare and Medical, or ITE (teacher education)	FT	HEIW pays the fees for most commissioned post-registration healthcare and medical education For the Scientist Training Programme (STP) in Wales, trainees are employed by an NHS Wales organisation on a 3-year contract with salary during their training. Fees are funded, and students can access a bursary of up to £2,000 for additional training Eligible postgraduate ITE students receive incentive grants to gain Qualified Teacher Status (QTS) in specified subjects		

		Majority of subjects except HEIW-funded	PT (intensity less than 25%)			
			PT (0-100% intensity)	Access to tuition fee loan, capped at £2,625		
		HEIW-funded Healthcare and Medical	PT			
	Level 7	Majority of subjects except HEIW-funded	FT & PT		<p>Non-means tested Postgraduate Masters grant of £1,000 (this is being removed as of 24/25)</p> <p>Disabled Students' Grants up to £33,146</p> <p>Unrestricted travel grants for students with disability</p>	Postgraduate Masters loan capped at £6,885
		HEIW-funded Healthcare and Medical	FT & PT			
	Level 8	All	FT & PT			Postgraduate doctoral loans capped at £11,570

* Tuition fee loans are capped at £6,165 if students is studying in HEI which is a registered provider with OfS (as opposed to registered (fee cap) provider).

For full-time UG students not studying at a distance, maintenance grants and loans are available to assist with living costs, the amount of which is dependent on household income.

Whilst UG students wishing to study part-time also have access to maintenance grants and loans, the maximum fee amount a student can borrow for part-time study – £2,625 – is significantly lower than for full-time study. Whilst a fee waiver is currently available for students wishing to study at under 25% intensity funded by HEFCW, this is conditional on students working towards a qualification (or undertaking standalone credits which could be combined to contribute to a qualification, such as microcredentials).

Undergraduate students wishing to study full-time at a distance with the Open University do not have access to the same level of maintenance grants and loans.

PG master's students can apply for grants and loans contributing to study costs, while doctoral students can access a doctoral loan without consideration of household income. Recent budget considerations have meant there are some changes to these arrangements.

FINDING 2: As an ecosystem, the student finance system and teaching funding allocated to HE providers favour the dominant delivery model.

Recommendation 2 responds to this with a proposed redesign of the student finance system in Wales so that it releases the latent demand for more diverse forms of HE.

In addition to the student support system favouring study through dominant delivery modes, there is a more general point that was raised during our engagement: how tuition fees are described and understood needs more attention. Tuition fees are very much discussed as a debt rather than graduate tax, and the socially progressive nature of tuition fees is badly understood. A final point we would add here is that the administration around applying for and receiving student support is often complicated to navigate for students who already find themselves in challenging circumstances. We support previous recommendations to provide more comprehensive and accessible information, advice and guidance to prospective full-time and part-time students, covering the range of provision, costs, and financial support options.

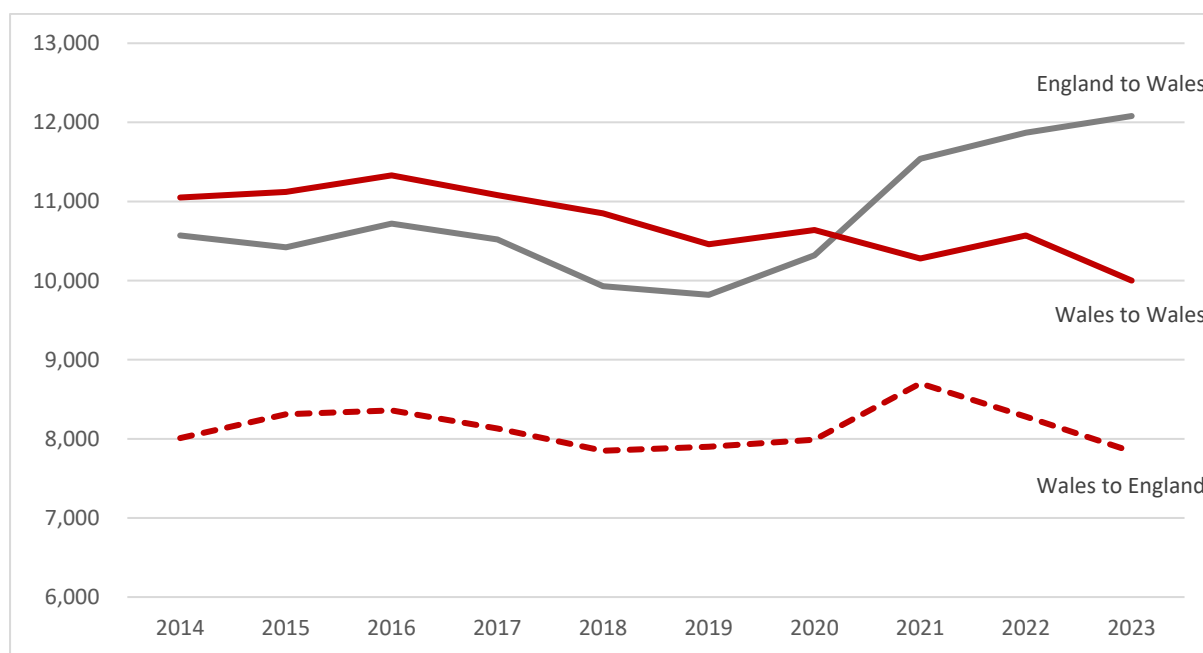
FINDING 3: The long-term impacts of student debt on a student's future finances and life opportunities are not well understood by students and parents.

Recommendation 2 responds to this with a clear communications strategy for all stakeholders on a redesigned student finance system in Wales.

A final point which we already touched on in chapter 3 links to many Welsh students choosing to study outside Wales.

Figure 46 provides a specific focus on three flows of students within the UK as they apply to HE through the UCAS system. Flows between Wales and Scotland and Northern Ireland are very small and so have been omitted from this chart. The data shows a 10-year time series, that includes the changes to student support in Wales following the *Diamond Review* in 2018, and the increase in the maximum UG FT fee from £9,000 to £9,250 in England in 2017. A significant number of Welsh students choose to study in England.

Figure 46: Accepted applicants via UCAS – selected flows within the UK



Source: UCAS

FINDING 4: Significant levels of investment are made into funding student loans for Welsh students studying outside the Welsh HE sector. This reduces the amount of funding available to Welsh Government for investment in other priorities, which could include the expansion of alternative delivery models in Welsh HE providers.

Recommendation 1 responds to this with the creation of an investment strategy that sustains a thriving HE sector in Wales, and a financial strategy that will continue to raise standards and quality of Welsh HE provision and use policy levers such as fees and support. *Recommendation 12* proposes a ‘study in Wales’ offering to attract Welsh-domiciled students who choose to study outside Wales back to Wales to study Welsh-medium modules, thus enhancing their bilingual skills.

The issues discussed in this section were raised by many study participants:

- **Restrictions on income** sources like tuition fee caps.
- **Student finance restrictions** that limit flexible options.
- **Lack of parity in funding for full-time vs part-time study.**
- **Sustained funding and affordable options** are crucial for supporting diverse students.

Teaching funding allocation to HE providers

Table 19 illustrates the different public funding streams available for HE providers in Wales. It does not cover funding streams which come directly via students or employers.

The public funding streams depend upon the subject, mode, and the status of the provider in terms of management and governance. HE delivered by Welsh further education providers, for example, will be part of a collaborative relationship with varying levels of engagement by a HE provider, and varying levels of fees charged by the HE provider to the further education provider for support

given⁸². The table brings together the details on what delivery models are funded, by whom, by type of provider, and include delivery models where no public funding is available (in red). This table is illustrative of the complexity rather than comprehensive.

⁸² Support can include registering students and their learning journey, regulatory data returns, collecting fees, and quality assurance oversight.

Table 19: Public funding streams for Welsh providers for different types of HE delivery models (to UK students)

				Provider Type		
		Subject	Mode	Predominantly a FE deliverer	Predominantly an HE deliverer	Other
	Degree Apprenticeship (Levels 4 to 6)	Digital Degree Apprenticeship, Engineering and Advanced Manufacturing Degree Apprenticeship, Construction Degree Apprenticeship (due to be published in summer 2024)	FT	HEFCW funds tuition	HEFCW funds tuition	
		Other subjects (not funded)	FT			
			PT			
	Level 4,5,6 taught provision	Majority of subjects except HEIW-funded	FT	HEFCW funding minus service fees to HE partner	HEFCW funding	X, unless it has a specific course designation
		High cost subjects except HEIW-funded	FT	HEFCW funding minus service fees to HE partner*	HEFCW high cost subject premium funding*	
		HEIW-funded Healthcare and Medical, or ITE (teacher education)	FT		HEIW contract, or ITE funding (for university-school partnerships)	

		Majority of subjects except HEIW-funded	PT (intensity less than 25%)	HEFCW microcred. funding Fee waiver also available	HEFCW microcred. funding Fee waiver also available	
		Majority of subjects except HEIW-funded	PT (intensity less than 25%)	HEFCW microcred. funding	HEFCW microcred. funding	
			PT (0-100% intensity)	HEFCW PT credit and premium funding minus service fees to HE partner **	HEFCW PT credit and premium funding **	
			PT (0-100% intensity)	HEFCW PT credit and premium funding minus service fees to HE partner **	HEFCW PT credit and premium funding **	
		HEIW-funded Healthcare and Medical	PT		HEIW contract	
	Level 7	HEIW-funded Healthcare and Medical	FT & PT		HEIW contract	
			Majority of subjects except HEIW-funded	FT & PT	Fees plus HEFCW PGT per capita and disability premium funding	Fees plus HEFCW PGT per capita and disability premium funding
	Level 8	All	FT & PT		HEFCW PGR funding and disability premium	

** Bespoke part-time provision is argued to be more expensive to design and deliver than accommodating part-time students via full-time provision and has implications in terms of funding requirements. Further work is required to understand the actual costs associated with part-time delivery. (See Appendix 9 for a summary of the OB3 review of part-time provision and <https://www.hefcw.ac.uk/wp-content/uploads/2021/03/W21-07HE-Annex-Aii-Review-of-PT-HE-provision-Executive-Summary.pdf>.)

Notes: See appendix 5 for accompanying notes.

Looking at the complexity of table 19, we would argue that CTER has an opportunity to simplify the system for funding HE teaching. The time and energy spent managing this mosaic of individual pockets of public funding could be reallocated to support the HE system to meet the policy requirements of the Welsh Government. This is challenging for providers and learners to navigate and fails the public interest test of transparency.

The issues discussed in this section were raised by many study participants:

- The current funding system is strongly driving behaviours.
- Funding arrangements – which institutions get funded, for which students, undertaking what activities, through what funding sources, at what levels, and the extent to which students have access to loans and grants – are seen as contributing to a status quo and a barrier to innovation.
- Current funding drives competitive rather than collaborative behaviours between institutions. New funding approaches could incentivise collaboration.
- Franchise and validation fees vary and can significantly impact course viability and income for colleges running HE courses. More consistency may help collaboration.
- Short-term project funding for innovation isn't sustainable. Longer-term flexible funding is important.

FINDING 5: Only registered providers can receive HE funding. HE is funded through multiple streams in Wales making it harder and more costly for HE providers to collaborate and innovate. The way some FEIs, alternative providers and their students currently access teaching funding or student loans leads to additional costs associated with the contractual and regulatory arrangements that allows them to do that. Teaching funding allocated to HE providers favours the dominant delivery model.

Recommendation 1 responds to this with the creation of a financial strategy that will reduce the costs associated with administering and regulating the system by removing duplication of services, and *Recommendation 5* suggests a simplification of how teaching funding is allocated and administered. Meanwhile, *Recommendation 3* proposes the expansion of the regulatory framework to enable HE providers, who are delivering innovative models addressing learner needs, to become registered and funded.

5.2 Value proposition to the Welsh economy and employers

HE providers also deliver direct and indirect value to employers: employers benefit indirectly from skilled graduates, whose increased productivity drives economic growth. Employers also benefit from the research conducted at HE providers. There are scores of examples of close engagement between HE providers and employers within Wales⁸³ which leads to mutual benefits which were recognised as part of our engagement during the study:

- **Aligning curricula to market needs:** By consulting in designing curricula, universities can develop programmes that are responsive to employers' needs and priority hiring skills. This can help reduce the skills gap and youth unemployment and increase graduates' employability and career prospects.
- **Enhancing teaching and learning methods:** By collaborating with charities, the public sector and/or industry, HE providers can adopt more learner-centred and active teaching methods, such as problem-based learning, case studies, student presentations, and group exercises.

⁸³ Every HE provider has a 'how we work with employers and industry' webpage.

These methods can help students to develop technical and soft skills, such as critical thinking, communication, teamwork, and creativity.

- **Providing workplace-based learning opportunities:** By partnering with employers, providers can offer students internships, apprenticeships, shadowing, sandwich years or field visits that expose them to real-world scenarios and challenges. These opportunities can help students gain practical experience, network with professionals, and apply their theoretical knowledge to practice.
- **Updating faculty knowledge and skills:** By engaging with employers, academic staff who teach can benefit from short-term research stints, industry-based sabbaticals, or consulting opportunities that update their knowledge and experience in their fields. This can help faculties advance their research agendas, bring new insights to their teaching, and strengthen their ties with industry.

Our study engagement highlighted the following barriers to developing delivery models which more effectively deliver value to employers:

- There is insufficient alignment between higher education and employer needs. Closer **collaboration** is required to identify skills gaps.
- Traditional academic degrees do not always provide the skills employers want. More vocational, modular, and apprenticeship **options** are needed. **Accreditation requirements** don't always match those needs.
- Employer involvement in curriculum design is often tokenistic rather than substantive. **Deeper engagement** is required.
- Responsiveness to changing industry needs is a challenge, with curriculum often **lagging behind**.
- Part-time and flexible learning models help serve employers' needs for upskilling existing workers, but **awareness and availability** needs improvement.
- Developing **broader transferable skills**, not just subject training, is important but not always prioritised.
- A **lack of coordination and incentives** inhibit employer engagement.
- Employers have some misconceptions about higher education's role. Their **own training investment** is also important.
- The **structure of the local economy, geography and transport links** influence the opportunity for collaboration⁸⁴.
- Employers often struggle to articulate their skills needs clearly and think 1 to 2 years ahead. Better dialogue and partnerships between employers, FE and HE are needed to understand requirements and **balance general transferable skills with employer specific expertise**
- There is excessive focus on STEM skills for economic growth, at the expense of supporting arts/humanities which also provide value. **A more holistic view of skills is required.**
- Innovation in delivery models is often driven by economic motives, but personal enrichment of learners must also be supported.

⁸⁴ "When university partners are spatially proximate, firms are able to observe their actions more closely, assessing their effectiveness. Consequently, co-location promotes the formation of university-business links through minimising search costs. In addition, localised linkages encourage higher levels of interaction among agents increasing the intensity of collaborative links, and higher levels of interaction promote both collective learning and communication externalities. Therefore, spatial proximity allows the transfer of tacit knowledge, which is often contextual in nature, permitting the richness of information to be passed from actor to actor." Morgan, K., Healy, A., Huggins, R., & Thomas, M. (2017). *Growing the value of university-business interactions in Wales: Main report*. National Centre for Universities and Business.

- A significant numbers of employers in Wales are **SMEs**. We need to hear their voices and make sure they are included in our higher education provision planning to ensure that their requirements are supported.
- There are some practical **barriers** to employer engagement like location, travelling distances and differences in funding between England vs Wales

We were fortunate to spend significant time talking with and reading about the work of the Regional Skills Partnerships during our study. They are a significant resource and means for HE providers to collaborate and engage more closely with employers. We have included a high-level summary of the priorities identified by each of the Regional Skills Partnerships and an overview of the shortage occupations at UK level in appendix 7.

FINDING 6: The Regional Skills Partnerships successfully brings together employers, a long-term view of Wales’s economic development and HE providers to map skills shortages and develop regional strategies, but there is a gap between analysis and plans on the one hand and delivery of change and implementation on the other hand.

Recommendation 10 responds to this by proposing the collaborative creation and delivery of a Wales-wide vehicle through which employer-facing provision can be made, irrespective of the place of employment.

5.3 Value proposition to wider society

In addition to the wider societal benefits HE providers deliver through their education activities⁸⁵, most HE providers also take on the role of civic anchor institution, and help to reduce regional inequalities⁸⁶.

Welsh HE providers actively engage with and benefit their communities through activities like opening up their facilities, sharing expertise, and involving people in research as part of their civic mission. HE providers contribute to the local economy by employing a significant workforce and attracting students to the area.

There are many excellent existing examples of effective collaboration between Wales’s universities and both public and private bodies across Wales.

We mention this here, as the expectations on HE providers to be civic anchor institutions plays a part in our discussion of financial sustainability.

⁸⁵ Brennan, Durazzi and Séné list amongst others: greater social cohesion, higher level of tolerance, lower propensity to commit crime, political stability, greater social mobility, increased tax revenues, faster economic growth, greater labour market flexibility, increased productivity of co-workers.

⁸⁶ A recent Harvard Kennedy School paper identified that ‘For most of the 20th century, inequality in GDP per capita between UK regions – while not insignificant – was relatively low by European standards. In the 1980s and 1990s, however, regional economic inequality began to rise in most industrialised economies. The UK stands out for how far this has developed: by the 2010s the UK had become one of the most regionally unequal of the world’s industrialised economies in terms of GDP per capita, productivity, and disposable income’.

5.4 Financial sustainability

Whilst this study is concerned with the delivery of higher education in Wales and limited in scope to taught provision, it is impossible to discuss drivers of institutional behaviour in isolation from the larger question of the financial sustainability of HE providers.

Most higher education providers in Wales have charitable status and aim to generate financial surpluses to sustain, develop, and enhance their activities, ensuring resilience amid financial uncertainties and changes. Their financial sustainability formula brings together the costs associated with their value proposition (who, what and how they deliver their education, and also their research/knowledge transfer and civic missions), their resources (which include the cost of staff and facilities) and their operations (which include costs of higher education administration) on the one hand and the revenues they receive for those activities (tuition fee income, teaching funding, research/knowledge transfer funding, commercial income and grants) on the other.

Higher education providers in Wales have a high degree of financial autonomy⁸⁷: they can freely allocate most of teaching funding internally⁸⁸, have the ability to keep surplus on public funding, have the ability to borrow money, and can own and sell their real estate without any restrictions⁸⁹. In terms of income, HE providers can determine the level of tuition fee for Master level programmes, but the level of tuition fees for UK-domiciled students for qualifications up to Bachelor level programmes (including integrated masters) is capped by government.

To consider levels of government funding for HE providers, we have looked at comparative data available for universities across European nations for a time series between 2008 and 2019⁹⁰. In Figure 47, top investors appear in dark green. Countries with the biggest decrease in funding in 2019 compared to the base year appear in black. Wales was in this category along with Estonia, Lithuania and Spain and Ireland.

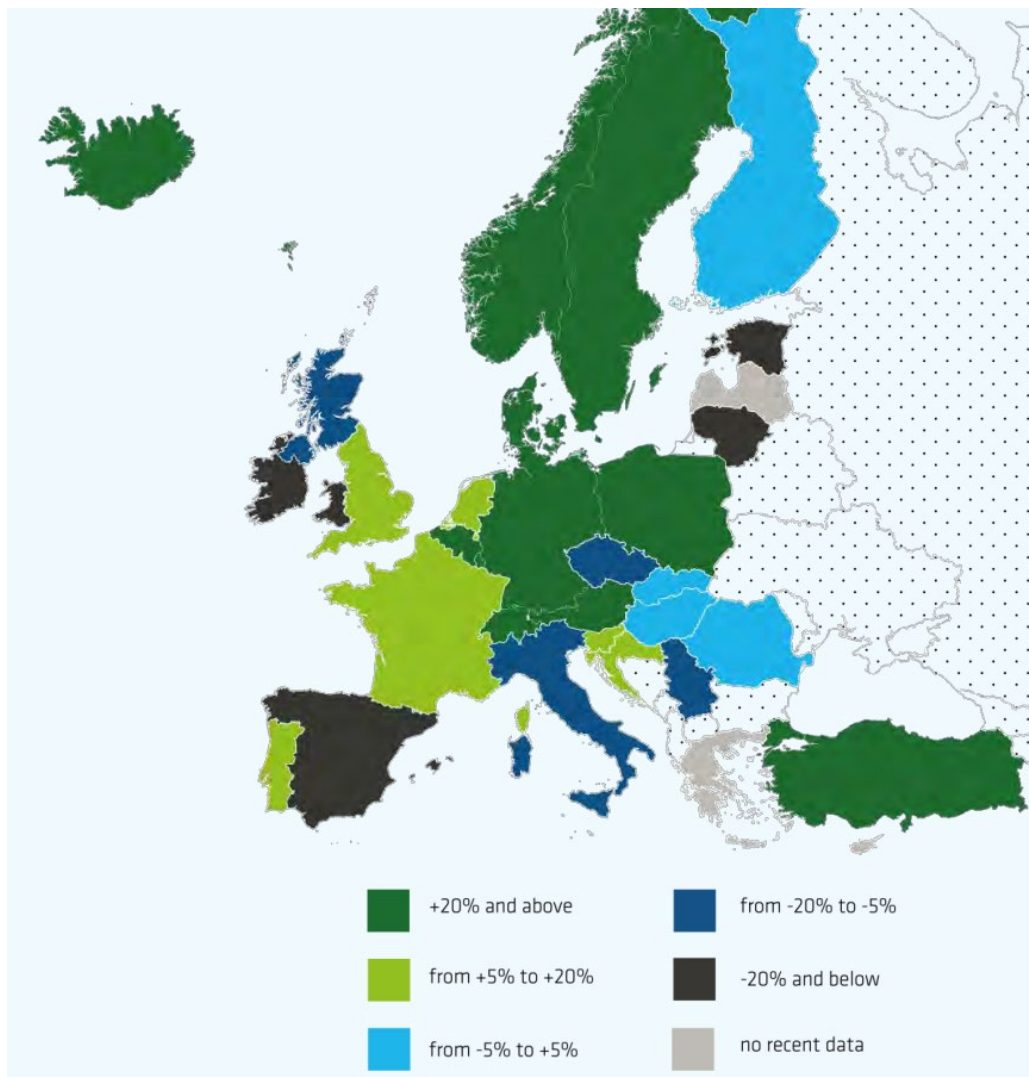
⁸⁷ For a comparison across Europe see 'University Autonomy in Europe IV': The Scorecard 2023. European University Association.

⁸⁸ HEFCW identifies that the teaching funding formula does not have to be replicated within institutions, but some funds are restricted to certain activities.

⁸⁹ Although there are some limitations imposed for HE providers with charitable status through Charities legislation.

⁹⁰ The value of the funding was adjusted for inflation, and public subsidies to student loans are included for England, Northern Ireland and Wales.

Figure 47: Evolution of public funding to universities, European nations 2008–2019



Source: Pruvot, Estermann, and Stoyanova. (2021). *Public Funding Observatory Report 2020/2021 Part 2*

Figure 48 provides more detail on the public funding received by Welsh HE institutions. Each year after 2010 is referenced back to 2010 as the base year⁹¹.

In terms of the detail of the chart:

- “UK-Wales DIRECT” refers to direct public funding to Welsh HE institutions.
- “UK-Wales TOTAL” shows direct public funding combined with public subsidies for student loans received by Welsh HE institutions.

In 2018 we see the beginning of the ‘post Diamond’ funding system with larger tuition fee loans for students, but no tuition fee grant thereon, which led to some increases in the public funding provided to Welsh HE institutions.

The EUA estimates that public funding received by Welsh HE institutions was 20% down on 2010 levels in real terms by 2019. In the short term this can be accommodated to some degree through achieving efficiencies, releasing capital and spending reserves through deficit budgets, but it is extremely challenging in the medium term, when efficiencies have already been realised and with

⁹¹ So, for example, by 2019, funding to the system in real terms was over 20% lower than in 2010.

limited reserves, and when HE providers are asked to deliver a number of missions and for a wide range of students.

FINDING 7: Levels of public funding for higher education providers in Wales have been falling and we have heard concern throughout our engagement that they are unlikely to sustain the sector's current business models.

Recommendation 1 responds to this with the creation of an investment strategy that sustains a thriving HE sector in Wales and the creation of a financial strategy that will make more strategic use of existing funding by reviewing size, scale and effectiveness of current budgets.

Figure 48: Public funding received by Welsh HE institutions 2010–2019



Source: Pruvot, Estermann, and Stoyanova. (2021). Public Funding Observatory Report 2020/2021 Part 2

Study participants raised the following issues:

- **Declining government funding** and **restrictions on income** sources like tuition fee caps.
- **Competition** between providers driven by student recruitment goals.
- Too many providers and **unsustainable cost bases** given income constraints.
- **Lack of collaboration** between institutions.

People we spoke with also emphasised that it is now simply impossible for one provider to do everything and urged CTER to continue offering providers a great degree of autonomy, perhaps within a stronger national framework.

FINDING 8: This continued fall in levels of public funding⁹² has driven institutional behaviour to the extent that providers now seek to grow income associated with surplus, generating delivery with proportionally high margins, and in many cases this has led to increased competition for international and some UG and PG students. From our focus groups we have heard that it has also driven a number of HE providers to chase small pots of additional public funding for the development of new delivery models, which compete for resources with their existing delivery models, at times unnecessarily duplicating delivery across Welsh HE providers; a position which is not sustainable without ongoing dedicated funding.

Recommendation 1 responds to this with the creation of an investment strategy that sustains a thriving HE sector in Wales whilst driving institutions to innovate, invest, operate with financial prudence and perform to high standards, and a financial strategy that will remove nugatory competition and foster agile and effective competition, make more strategic use of existing funding by reviewing size, scale and effectiveness of current budgets, and potentially couple the level of student tuition fees with changes in costs and inflation.

5.5 Mix of business models

All HE providers in Wales have, because of their intertwined teaching, research/knowledge transfer and civic missions, a mixture of multiple generic business models⁹³. Because of the existence of multiple generic business models, HE provider operations are very complicated.

Christensen et al. argue that the high overall cost of higher education arises in significant degree from the high overhead created when multiple business models are working simultaneously. In addition, trying to optimise three business models within the constraints of one organisation means that none of the models is truly optimised with respect to either costs or outcomes. Thus, not only are resulting costs higher than they need to be, the outcomes are not as good as they could be. Finally, when multiple models are running simultaneously, considerable cost shifting and cost sharing typically occur⁹⁴, making it almost impossible to calculate the real cost of any activity, further hampering efforts of cost control. A number of HEPI publications have argued for a greater financial transparency in the sector⁹⁵.

⁹² The Welsh Government FY 2024/25 budget is worth £1.3 billion less in real terms than when it was set in 2021. The Welsh Government has prioritised the NHS and local government. These areas have been protected with more funding to ensure the continuation of essential public services. Higher education is one area that has been hit hard by budget cuts. This will be managed through reductions in funding for undergraduate student support, postgraduate loans and grants, incentive bursaries, and student mobility programmes.

⁹³ According to Christensen, Horn, Caldera, & Soares (2011, p. 33) and Stabell & Fjeldstad (1998): there are only three generic classes of business models: *Solution shops* describe organisations that focus on diagnosing and solving unstructured problems. Value depends on intuitive and analytic expertise of employees, and the revenue model is typically fee-for-service; *Value-adding process businesses* have as inputs things that are incomplete or broken, and change them into outputs of higher value, typically using rather repetitive processes. Because of the relatively repetitive nature of the model, value tends to be driven by process and equipment, and the revenue model typically is based on charges for an output rather than on the cost of inputs. *Facilitated user networks* facilitate the ability of participants to exchange things with each other. Value comes from linking participants and mediating the process. The revenue model in these networks is typically based on fees for membership or for use. In his article 'Barriers to Innovation and Change in Higher Education' Lloyd Armstrong categorises HE providers' teaching as a value adding process, whilst research and knowledge transfer are solution shops.

⁹⁴ Most HE provider cross subsidise between disciplines and between student categories (usually international to home).

⁹⁵ [Following-the-pound-1.pdf \(hepi.ac.uk\)](#) and [From T to R revisited FINAL.pdf \(hepi.ac.uk\)](#).

Some very good analysis on identifying the costs of delivery in Wales is now available. We include here in Figure 49, as an example, the work Universities Wales produced on the comparison of the costs associated with delivering different subjects with the levels of income received.

HEFCW also recently commissioned London Economics to review the additional costs of Welsh medium provision which concluded that the median cost per student per credit of Welsh-medium (WM) modules was considerably higher, at £19, compared to £9 for English-medium (EM).

The report also identified a number of reasons for this cost being higher, which included cohort size (Welsh-medium cohorts tend to be smaller in size compared to English-medium cohorts), whether modules were new; the mode of study and the subject area of study, all of which pointed to the complexities of understanding costs, and – crucially – articulated what level of funding is required to cover them.

HEFCW conducted a three-stage review of teaching funding, to design and develop a new credit-based funding model which aimed to simplify the model and look at whether it was funding different modes, subjects and types fairly. HEFCW decided not to implement the new credit-based teaching funding method in 2023/24 due to its likely impact on budgetary priorities, and will instead provide the proposed credit-based funding method and the consultation outcomes to CTER as evidence for its future funding and regulatory processes.

We would argue that, without a shared and agreed understanding of the HE sector’s cost structures by its providers, regulators and key stakeholders (we include students in this) any future review of teaching funding (and also of the student support system) will be contested and problematic to implement.

Throughout our engagement the people we spoke with raised issues relating to the medium-term financial sustainability of the sector and the lack of financial transparency, making it hard for the sector to argue its case for increased funding.

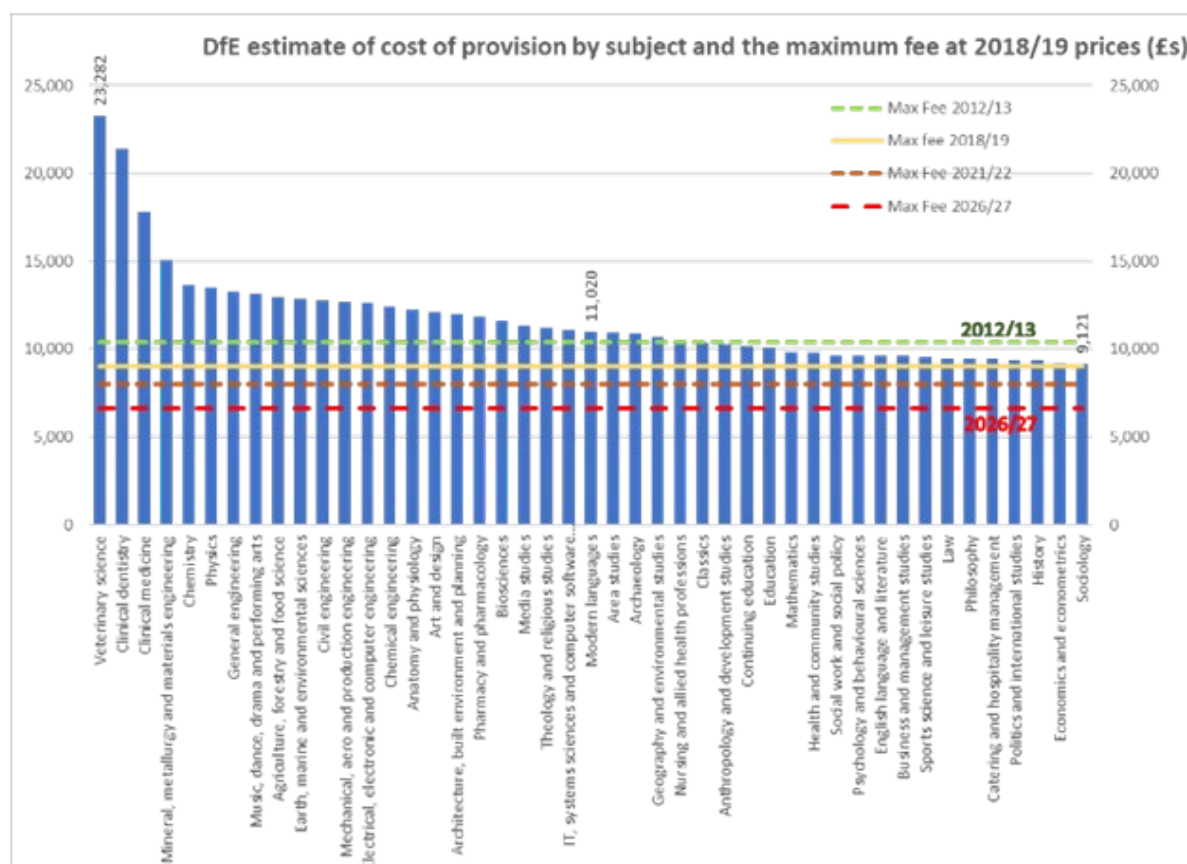
Study participants highlighted:

- **Cost bases are unsustainable**, given income constraints.
- Institutional funding for high-quality part-time provision needs to be on the same footing as for full-time provision so institutions are incentivised to grow part-time offerings.
- Welsh medium provision needs to be better funded.
- **Cross-subsidies** make it hard to fully understand the costs associated with delivery.

FINDING 9: HE providers’ mix of business models makes it difficult for the HE sector to calculate the real cost of its delivery models and to clearly articulate the size of the gap in funding. It also generates overhead costs and makes cost control harder.

Recommendation 4 responds to this with the commissioning of a data-driven study into the costs of higher education delivery that will help tertiary education providers to fully articulate the cost of delivery.

Figure 49: Comparison of costs associated with delivering different subjects (all delivery modes) with income received



Source: Universities Wales response to the Finance Committee of the Senedd's call for information on Welsh Government Draft budget proposals for 2024/25

5.6 Resources

A third component of the HE provider business model concerns itself with resources: the staff it employs, the buildings and facilities it owns or uses, the equipment.

Study participants raised a number of resourcing factors internal to HE providers which, in their views, drive institutional behaviour with regard to delivering diverse delivery models.

Factors which participants found to support new developments were:

- **Willingness to challenge** the status quo and **invest** in new systems and technologies.
- **Staff capabilities, experience, and desire** to enhance provision.
- **Resource availability**, like facilities, IT infrastructure, and staffing.
- **Pedagogical expertise** in areas like learning design and digital education.
- Benchmarking provision and **monitoring student outcomes**.
- **Partnerships** with schools, industry, and other HEIs.
- **Support services** like careers and employability embedded in curriculum.
- Bilingual provision and **Welsh language support**.

A number of other factors were raised which were seen as hindering the development of alternative delivery models:

- **Lack of resources** including staff time, skills, and appropriate IT systems.
- **Outdated legacy systems.**
- **Workload pressures** limiting the capacity to innovate.
- **Poor understanding of pedagogies** for online and blended learning.
- **Lack of sharing** of effective practices between staff.
- **Inability to sustain** innovations piloted during emergency situations.
- Geographic dispersal and **infrastructure limitations**, such as rural broadband access.

Capital estate

HE providers and nearby large public sector organisations have been changing the way they operate and as a result are using their administrative space less intensively. There has also been a trend for HE providers to increase their blended learning modes and develop combinations of different modes of delivery, such as online and face-to-face instruction. Progress has quickened following the move to the delivery of more online services and teaching during the pandemic. Staff, students and customers have got used to using digitally-delivered services and using digital technologies as a way of creating and managing those services.

Both trends may create an opportunity for HE providers to rationalise their capital estate. Capital estate is a significant source of cost and environmental impact for HE providers, as it requires maintenance, utilities, security, and other services. By shifting some parts of their taught programmes to online platforms, HE providers may be able to reduce the demand for physical space and resources, and thus achieve savings and efficiencies.

There are also considerable opportunities for public sector organisations and policy makers to work together and to think about spaces and buildings more holistically.

FINDING 10: The dominant delivery model relies on the current HE provider infrastructure. Developing alternative delivery models could free up costs relating to buildings, energy and infrastructure.

Recommendation 9 responds to this by proposing that Local Authorities include tertiary education providers in regional capital planning and environmental sustainability strategies.

Digital infrastructure

Contributors to this project spoke of the fleet-footed response of the HE sector to the pandemic. Technology was a significant element of the sector changing the way it worked to both ‘keep the lights on’ and branch out and support essential health services. Much of this was based on the sector ‘running hot’ and developing ad hoc solutions as it went. The pandemic test was passed, but now the sector is moving to put things on a more stable footing, taking good ideas learned during the pandemic forward, but also redesigning systems and services from the bottom up where needed. HEFCW’s four remit letters through 2022 and 2023 indicate the Welsh Government’s desire for the sector to find efficiencies, reduce costs, and minimise environmental impacts.

Institutions are expected to contribute knowledge and expertise to help society navigate this digital transformation⁹⁶. They need to offer courses that provide relevant digital skills for most professions.

⁹⁶ Universities Wales published an extensive response to the Welsh Government’s ‘Review of digital innovation: call for evidence’ in 2022 <https://uniswales.ac.uk/sites/default/files/2022-01/Unis-Wales-response-to-digital-innovation-review-20181102%20%285%29.pdf>

It is also an opportunity to increase the availability of decentralised and flexible courses for those unable to study full-time due to other commitments - one provider gave the example that the geographic distribution of their Welsh for Adults cohort had changed markedly during the coronavirus, going from predominantly local to fully internationalised.

Challenges

The sector faces the following digital transformation challenges:

- **Digital skills:** Students and staff need to develop their digital skills to adapt to the changing demands of education, research and society. This includes basic, specialised, vocational and educational digital skills.
- **Digital pedagogy:** Teachers need to use digital technology in a way that enhances learning outcomes, student engagement and assessment methods. This requires pedagogical principles, methods and educational digital skills.
- **Digital content:** Courses need to integrate digitalisation-relevant topics in their academic content, to provide students with relevant and labour market-oriented digital skills. This requires academic development and collaboration across disciplines and institutions.
- **Open science:** Researchers need to use digital technology to facilitate open access, data sharing and collaboration in research. This requires skills in data management, information security and data privacy, as well as compatible infrastructures and platforms.
- **Data sharing:** The sector needs to share and reuse data for analysis, statistics and innovation, as well as to provide better services for students and other users. This requires technical and organisational mechanisms, as well as a culture of sharing and trust.
- **Organisational development:** The higher education sector needs to undergo a digital transformation that involves management, culture and organisation. This requires leadership, participation, incentives and support for digital change processes.

Benefits of effective transformation

The benefits of effective digital transformation could include:

- **Improved quality and relevance of education and research.** Digital technology can help develop new pedagogical methods, enhance student learning, foster interdisciplinary collaboration, and address societal challenges.
- **Increased access and flexibility for lifelong learning.** Digital technology can enable more people to access HE regardless of their life situation, work situation, and place of residence, and offer more personalised and adaptable courses.
- **More openness and transparency in science and innovation.** Digital technology can facilitate more sharing and reuse of research data, publications, and resources, as well as more involvement of stakeholders and the public in the creation and dissemination of knowledge.
- **More efficient and user-friendly services for students and staff.** Digital technology can streamline administrative processes, provide better management information, and improve the digital learning environment and support functions. It can also release savings.
- **More collaboration and sharing across institutions and sectors.** Digital technology can foster more joint solutions, joint services, and joint procurements, as well as more cooperation with the labour market and society at large.

FINDING 11: Digital infrastructures are in need of an overhaul and investment.

Core management information systems

To support the management of the delivery of education, HE providers collect a vast and varied amount of data, including, for example, the personal characteristics of a student, the characteristics of the modules they are studying, the student's highest qualification when they joined the institution, their parents' occupation and their study pattern/location.

Respondents have identified to us challenges around HE providers' core systems' architecture. More often than not, data has to be moved from one system to another within a provider. This not only has considerable transaction costs associated with it, but also has consequences for data quality and thereby customer service. As part of our engagement, we have heard about cases where students' welfare has been impacted due to the poor management of the systems that should be there to facilitate their learning. Although painful, this is presented as being an everyday occurrence in the sector. There is a clear need for a permanent, planned step change in digital and data capability⁹⁷.

Organisation and management is one of the consistently low scoring areas in the National Student Survey. In the 2023 survey only 70.3% of respondent students in Wales thought their course was well organised, and 72.1% of students thought that changes to teaching on the course were well communicated.

The challenge is larger than a casual observer would expect – there are numerous instances of multiple student record systems and multiple placement management systems being in use within a single HE provider. The issues around an HE provider's core system architecture are amplified tenfold when they are collaborating with other HE providers, public sector organisations, health organisations or employers or innovating and developing alternative delivery models.

The Universities UK, Jisc, Emerge Education and Salesforce joint report *Digital at the Core*⁹⁸, a strategy for 'digital transformation' of UK HE, has a clear vision:

'The technology now exists to connect the variety of applications used within the university, where the IT landscape tends to be more fragmented than in the enterprise. Replacing these siloed 'information systems' with intelligent information networks will enable highly personalised engagement with students and staff, individualised experiences, and actionable strategic intelligence.'

FINDING 12: Outdated legacy management systems and the lack of joined-up systems often makes developing alternative delivery models and collaborations costly.

Recommendation 7 responds to Findings 11 and 12 with the creation of a learner-focused digital infrastructure strategy for the HE (and potentially the FE) sector in Wales.

External regulatory returns

The system governance of tertiary education in Wales is overseen by a number of different regulators. A simplified list shows at least 6 different categories of regulators:

⁹⁷ This is compounded by the recent evolution of the UKHE student record system market from being quite diverse, to being dominated by two providers, one of which has now purchased the other. Most of the HE sector is now dependent for its student records functionality on one provider. UCISA (2023) CISG Trend 2022. Trends in Corporate Information Systems 2012-2022.

⁹⁸ Iosad, A. (2020). *Digital at the core: a 2030 strategy framework for university leaders*. Jisc.

- **Sixth form, Further Education, Work Based Learning and Adult Continuing Education**
 - Overseen by Welsh Government – Education, Social Justice and Welsh Language Department
- **HE oversight and public funding allocation**
 - Overseen by HEFCW, with significant funding streams overseen by Health Education and Improvement Wales (HEIW)
- **Quality assurance**
 - Overseen by Estyn, the Quality Assurance Agency for Higher Education (QAA), and Professional, Statutory and Regulatory Bodies (PSRBs)

To discharge their regulatory duties, most of the regulators will require HE providers to make some form of external data return. The Higher Education Statistics Agency (HESA)⁹⁹, for example, collects significant amounts of data from HE providers on behalf of HEFCW, which HEFCW uses to understand individual providers' performance, improve access and participation, ensure prospective students have reliable information, understand risk and trends at a sector level and allocate funding.

Since the 2000s, the impact of the regulatory data burden has been discussed and reviewed¹⁰⁰ and it was mentioned by many of our study participants. Andy Youell initiated the *Data Burden Project* in early 2023 and concludes that the duplication of data collections across the HE landscape poses a far more significant challenge than the burden associated with any individual data collector.

Partially in response to the regulatory data burden, HESA's *Data Futures* programme was established in 2015 and set out to make data collection and reporting in higher education more efficient, standardised across providers and more frequent. It marks a significant change in the scale and frequency of the statutory reporting requirement and could address some of the barriers to improving the experience of students, to collaboration between providers and providing better evidence to support continuous improvement throughout the year.

The implementation of this sector-wide transformation programme has, however, come under increased scrutiny and criticism, and there are presently considerable concerns widely held about the quality of data that has been submitted¹⁰¹.

Whilst *Data Futures* introduced a new data model, it is still complicated and a competing set of definitions and sub categories are used by sector bodies. Many of the delivery mode definitions used are focused on the dominant delivery models, outdated and make it hard to navigate the system or to innovate¹⁰². Current student record systems can also compound this: stakeholders have

⁹⁹ HESA now forms part of Jisc.

¹⁰⁰ HEFCE conducted a series of three Accountability Reviews, followed by the introduction of initiatives like the Better Regulation Task Force and the HE Data & Information Improvement Programme (HEDIIP), which was launched a decade ago and in which HEFCW participated.

¹⁰¹ Kernohan, D. (2023). *Data even further into the future*. Wonkhe

¹⁰² Jim Dickinson rehearses some of the challenges of existing notions of 'full-time' and 'part-time'. His comments related to England, but there are parallels in Wales:

"In student finance terms, at UG level most simply think that 120 credits in a year = FT and 60 credits = PT, but as ever in student finance policy, nothing is simple. [...] "full time" is not actually defined at all in the Education (Student Support) Regulations 2011 (and its myriad subsequent amendments), despite the basic "full time" thing then being used to determine PT maintenance entitlement on a pro-rata basis. [...] As a result the SLC sets out its own definition."

Dickinson also notes that "I've certainly come across a whole heap of franchised 'full-time' provision that is advertised as requiring study at 'weekends only', or where you only study for 'two days a week'", which might

highlighted to us examples of student record systems that do not accommodate the recording of Welsh medium delivery easily, despite this being a fairly simple database requirement.

FINDING 13: The cost of data burdens associated with multiple regulators asking for similar information in a different way takes away opportunities to invest in frontline services. Definitions of delivery models are too narrow and focused on the dominant model.

Recommendation 8 responds to this with the creation of a data strategy for the Wales tertiary education sector that reduces management information costs, simplifies the definitions of delivery models, and improves the availability, consistency and quality of data, especially student outcomes data.

5.7 Processes and organisational culture

The final component of the HE provider business model concerns itself with processes: how students are recruited and inducted, how their classes are timetabled, their assessments set and marked, and their progress monitored and enabled, how programmes are accredited, validated and renewed and how partnerships are developed. It also covers how staff are recruited and promoted, how finances are planned, and how fundraising is done.

Study participants raised several factors which support the development of new delivery modes:

- **Leadership commitment** to new approaches, equality of access, and student-centred focus.
- **Collaboration** between departments and stakeholders.
- Piloting new approaches **on a small scale first**.
- **Financial planning** and diversification of income sources.
- **Institutional culture** embracing experimentation and evidence-based improvements.
- **Credit transfer frameworks** enabling learner mobility.
- Bilingual provision and **Welsh language support**.

They also raised factors which were seen as hindering the development of alternative delivery models:

- **Regulatory burdens** like quality assurance, monitoring requirements, and inflexible frameworks.
- **Bureaucracy and fragmented policy direction** from government.
- **Resistance to change and risk aversion within the sector**.

Quality assurance was a topic that was often discussed as part of our study interactions and one that we will pick up in our recommendations. Our summary of the various discussions:

- There is a feeling that quality assurance mechanisms can be overly rigid, with a lot of duplicated reporting required to multiple bodies. This administrative burden can inhibit innovation.
- Some called for more risk-based and proportional approaches to QA, rather than a 'one-size-fits-all' model, to enable greater flexibility.

interest the CMA regarding consumer protection, and highlights challenges in thinking around shared definitions of intensity. (Dickinson, J. (2023, November 3). *What even is a "full-time" course anyway?* Wonkhe.)

- However, others emphasised the need to maintain quality standards, particularly with new providers entering the market.
- There were concerns raised about qualification inflation, with proliferation of microcredentials and badges devaluing formal qualifications.
- But microcredentials were also seen by some as an opportunity for flexible, bite-sized learning to widen access. The key is ensuring clear value and transferability.
- Collaborative approaches to QA were suggested as a way to reduce duplication across institutional boundaries, though incompatible IT systems were noted as an obstacle.
- Overall, the view seems to be that QA processes need to strike the right balance between safeguarding standards, enabling flexibility/innovation, and minimising administrative burden. But there are differing perspectives on where that balance should lie.

The Quality Assessment Framework for Wales (QAFW) for HE in Wales sets out the mechanisms through which HEFCW will assure itself that the quality of education, or a course of education, provided by or on behalf of regulated institutions meets the needs of those receiving it. As part of the Quality Assessment Framework for Wales, regulated institutions in Wales are required to undergo external quality assurance reviews from an organisation listed on the European Quality Assurance Register for Higher Education. Quality Enhancement Review has been developed by the Quality Assurance Agency for HE with HEFCW to meet this requirement.

In our discussions with study participants, we noted that whilst there is significant room for flexibility and innovation within existing QA frameworks, this was often not taken advantage of. QA frameworks require expert understanding, and advising on QA rules is often concentrated in a couple of roles and individuals at HE providers. We noted that not all frameworks were equally well-understood across all HE providers (understanding of QA requirements for HNC and HNDs or degree apprenticeships, for example, was less comprehensive) and we also noted a difference in risk appetite to innovation within HE providers.

A key question for the future is whether new organisational frameworks will develop alongside academic ones, or if academic frameworks can adapt to incorporate new types of qualifications with differing delivery patterns, as we have seen with foundation degrees and degree apprenticeships. It struck us that there may be an opportunity to develop new qualification frameworks across the Welsh HE sector. This may also usefully help mitigate the risk recently articulated by the QAA in response to England's QA arrangements' divergence from internationally agreed good practice: 'if unaddressed, over time this position risks undermining the international reputation of the English – and by proxy, the UK's – HE sector'¹⁰³.

FINDING 14: Quality assurance and specifically process around accreditation and validation can make the development of new delivery models harder and more costly although they also safeguard the quality of provision.

Recommendation 1 responds to this with the creation of a financial strategy that will reduce the costs associated with administering and regulating the system by removing duplication of services, and increase the volume of education delivery in Wales to students living in Wales by continuing to raise standards and quality of Welsh HE provision and using policy levers such as fees and support. In addition, *Recommendation 6* proposed the redesign of the awarding system so that diversity and innovation of provision in Wales is supported and encouraged, and *Recommendation 11* ensures investments in CTER's planning, analysis and evaluation capacity.

¹⁰³ QAA (2023). *An English HE quality system fit for the future*.

The Coleg Cymraeg Cenedlaethol was initially set up to increase provision of higher education through the medium of Welsh and has since expanded to further education. It recognised the need for further education colleges, universities, apprenticeship providers and employers to work together, provides an infrastructure that enables effective collaboration, and enables providers to share resources in delivery models that work for students.

Significant effort was invested in ensuring that providers' various processes aligned, from sharing teaching timetables, aligning quality assurance process, to budgeting and staff recruitment. This model could provide a blueprint and starting point for other collaborations.

The challenges and rewards of delivering a pan-Wales Postgraduate Certificate in Education (PGCE) programme that provides prospective teachers the opportunity to study and work in either Welsh, English, or both have been manifold and can provide some lessons for future collaborations.

FINDING 15: Effective and efficient collaborations have worked well when a shared infrastructure has been put in place, but these require effort and resources. Change is often fragmented in local initiatives, limited to existing partnerships with costly overheads associated with bespoke, time-limited arrangements and an ad-hoc infrastructure.

Recommendation 10 responds to this by proposing the collaborative creation and delivery of a Wales-wide vehicle through which employer-facing provision can be made, irrespective of the place of employment.

A study of the experiences of nursing students on a programme in a university in Wales considered how their experiences of course administration impacted on them¹⁰⁴. Although this study had a small number of participants, the resulting paper was helpful in affirming feedback received from multiple participants in this study, and analysis of student feedback over multiple years.

Here is a summary of the issues that students found with **placements** on their nursing programmes in this study:

- **Lack of clarity and consistency:** Students reported that they often received conflicting or inaccurate information about their placements, such as the location, duration, type, and expectations. They also felt that the placement allocation process was unclear and unfair, and that they had little choice or control over their placements.
- **Poor communication and feedback:** Students expressed frustration with the lack of communication and feedback from the university and the placement providers. They felt that they were not kept informed of any changes or updates to their placements, and that they had difficulty contacting the relevant staff or mentors. They also felt that they did not receive enough constructive feedback or support during their placements, and that their concerns or complaints were not addressed or resolved.
- **Impact on academic performance and well-being:** Students reported that the placement issues had a negative impact on their academic performance and well-being. They felt that they had to balance the demands of their placements with their coursework and assessments, and that they had insufficient time to prepare or revise. They also felt that they experienced stress, anxiety, and low morale due to the placement challenges, and that they lacked coping strategies or resources to deal with them.

¹⁰⁴ Simpson, Owena (2021). Sisterhood 'We'll pull each other through.' The lived experience of mature female students on a Bachelor of Nursing (Adult) programme: an interpretative phenomenological analysis.

- **Suggestions for improvement:** Students suggested several ways to improve the placement experience, such as providing clear and consistent information, improving communication and feedback, offering more choice and flexibility, ensuring adequate preparation and support, and addressing the issues promptly and effectively. They also highlighted the importance of having positive and supportive relationships with the University staff, the placement providers, and their peers.

An observation from this project is that many providers are tackling the same administrative challenges separately at present, and there are almost certainly opportunities to combine the resource that is currently being expended in many individual pockets across the sector. This could also offer the opportunity to design a better way of doing things to take advantage of new technologies and cloud capabilities, and to provide a smoother experience for students and staff which requires less administrative wrangling on all sides. **Essentially, it could avoid solving the same problem multiple times over.**

FINDING 16: Many providers are improving their core education processes to improve outcomes for students and there is an opportunity for the sector to collaborate and develop an evidence base for what works.

Recommendation 11 responds to this by proposing that CTER develop a common set of published data dashboards used to clarify performance expectations, support regulation of the sector, inform stakeholders and support strategy review.

Study participants identified the following factors supporting innovation which relate to organisational culture and leadership:

- **Leadership commitment** to new approaches, equality of access, and student-centred focus.
- **Willingness to challenge** the status quo and invest in new systems and technologies.
- **Staff capabilities, experience, and desire** to enhance provision.
- **Resource availability**, like facilities, IT infrastructure, and staffing.
- **Collaboration** between departments and stakeholders.
- Piloting new approaches **on a small scale first**.
- **Pedagogical expertise** in areas like learning design and digital education.
- **Financial planning**
- **Institutional culture** embracing experimentation and evidence-based improvements.
- **Partnerships** with schools, industry, and other HEIs.

FINDING 17: Innovation in delivery models requires an organisational culture which supports its staff and promotes healthy risk taking.

Recommendation 3 responds to this with an expansion of the regulatory framework in Wales that encourages HE providers to deliver innovative models addressing learner needs, while *Recommendation 11* proposes that CTER develops a sector research function that provides insight into how the sector can best deliver policy and strategy development, operational improvement and strategically significant innovation.

Conclusion: We identified a number of barriers to HE providers developing innovative delivery models and improving the educational offering. Our recommendations address each of those in turn.

6. Recommendations

As HEFCW is preparing to transition into the Commission for Tertiary Education and Research, work has started on developing a strategy for the tertiary education sector which articulates what is required of it to meet the agenda set out by the Minister for Education and Welsh Language¹⁰⁵ and how it will support WG priorities in health, education, civic society and the economy. This study has focused specifically on the ambition for learners of all ages to have access to the full range of tertiary education activities.

Our analysis shows that there is still a dominant HE delivery model in Wales; more specifically, the three-year, full time undergraduate degree. Other forms of Higher Education provision in Wales are less available, less well known about, more difficult to access and may be struggling for student numbers and/or funding. Our analysis also shows that, whilst the current delivery models meet learners’ needs quite well, there’s room for improvement for the average student and that for certain groups of students (Black, those with a reported disability, carers) there is a significant and urgent need to improve the educational offering. We also linked the need to diversify delivery models with the wider role HE institutions play.

Funding in its broadest sense is a key driver for institutional behaviour, but we also identified other important drivers.

In this section we make thirteen recommendations which address each of the barriers to developing more diverse delivery models. We hope they will help shape important aspects of the strategy for the tertiary education sector. Our recommendations cover funding and resourcing, structures and systems, and collaboration and collaborative Infrastructure and are informed by international perspectives¹⁰⁶.

Funding and resourcing	
<p>Recommendation 1</p> <p>To create an investment strategy that sustains a thriving HE sector in Wales whilst driving institutions to innovate, invest, operate with financial prudence and perform to high standards. For Welsh Government and CTER to develop and implement a financial strategy that will:</p> <ul style="list-style-type: none"> • reduce the costs associated with administering and regulating the system by removing duplication of services, 	<p>FINDING 5: Teaching funding allocated to HE providers favours the dominant delivery model.</p> <p>FINDING 7: Levels of public funding for higher education providers in Wales have been falling and we have heard</p>

¹⁰⁵ “By taking a **whole-system approach** to tertiary education, we will **narrow educational inequalities, expand opportunities and raise standards**. Our tertiary education and research reforms will support **the different but complementary strengths of all institutions**, so that **learners of all ages** have access to the **full range of opportunities** and are able to contribute **economically, academically, and to our communities**”, Miles, J. (2023). *Our national mission: high standards and aspirations for all*. Welsh Government.

¹⁰⁶ Appendix 10 includes a summary of the various international perspectives we have drawn on.

<ul style="list-style-type: none"> • remove nugatory competition and foster agile and effective competition, • make more strategic use of existing funding by reviewing size, scale and effectiveness of current budgets, • increase the volume of education delivery in Wales to students living in Wales by continuing to raise standards and quality of Welsh HE provision and using policy levers such as fees and support, and • consider coupling the level of student tuition fees with changes in costs and inflation. (This will only be acceptable if the system and the value of private benefit to the learner is better understood.) <p>Action: Welsh Government and CTER (Lead)</p>	<p>concern throughout our engagement that they are unlikely to sustain the sector’s current business models.</p> <p>FINDING 4: Significant levels of investment are made into funding student loans for Welsh students studying outside the Welsh HE sector. This reduces the amount of funding available to Welsh Government for investment in other priorities, which could include the expansion of alternative delivery models in Welsh HE providers.</p> <p>FINDING 8: This continued fall in levels of public funding¹⁰⁷ has driven institutional behaviour to the extent that providers’ now seek to grow income associated with surplus, generating delivery with proportionally high margins, and in many cases this has led to increased competition for international and some UG and PG students. From our focus groups we have heard that it has also driven a number of HE providers to chase small pots of additional public funding for the development of new delivery models, which compete for resources with their existing delivery models, at times unnecessarily duplicating delivery across Welsh HE providers; a position which is not sustainable without ongoing dedicated funding.</p> <p>FINDING 14: Quality assurance and specifically process around accreditation and validation can make the development of new delivery models harder and more costly although they also safeguard the quality of provision.</p>
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¹⁰⁷ The Welsh Government FY 2024/25 budget is worth £1.3 billion less in real terms than when it was set in 2021. The Welsh Government has prioritised the NHS and local government. These areas have been protected with more funding to ensure the continuation of essential public services. Higher education is one area that has been hit hard by budget cuts. This will be managed through reductions in funding for undergraduate student support, postgraduate loans and grants, incentive bursaries, and student mobility programmes.

<p>Recommendation 2</p> <p>To redesign the student finance system in Wales so that it releases the latent demand for more diverse forms of HE. The new system will (as a minimum):</p> <ul style="list-style-type: none"> • support a much wider range of delivery models (including online), • be known about and understood by all potential students, • be simple and easy to use for all but especially those with multiple barriers to education, • give courses with alternative modes of attendance funding parity with the full time model, and • make it easier for second chance learners to study in HE (by including funding for Access courses and Maths and English skills boosters). <p>The new system will be clearly communicated to all stakeholders in a form that can be understood by all.</p> <p>Action: Welsh Government (Lead) and CTER</p>	<p>FINDING 2: As an ecosystem the student finance system and teaching funding allocated to HE providers favour the dominant delivery model</p> <p>FINDING 3: The long-term impacts of student debt on a student’s future finances and life opportunities are not well understood by students and parents.</p>
<p>Recommendation 3</p> <p>To ensure that the regulatory framework facilitates the registration and funding of a broader range of HE providers delivering models that innovatively address learner needs while minimising costs for them to do so.</p> <p>Action: CTER (Lead)</p>	<p>FINDING 5: HE is funded through multiple streams in Wales making it harder and more costly for HE providers to collaborate and innovate.</p> <p>FINDING 17: Innovation in delivery models requires an organisational culture which supports its staff and promotes healthy risk taking.</p>
<p>Recommendation 4</p> <p>To support tertiary education providers to articulate fully the cost structures of their delivery models, by commissioning a holistic study of the costs of higher education delivery, which recognises the triple mission of HE providers – to deliver teaching research/knowledge transfer, and to be civic anchor institutions – and, where appropriate, uses existing provider workload data.</p>	<p>FINDING 9: HE providers’ mix of business models makes it difficult for the HE sector to calculate the real cost of its delivery models and to clearly articulate the size of the gap in funding. It also generates overhead costs and makes cost control harder.</p>

Action: CTER (Lead)	
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Structures and systems	
<p>Recommendation 5 To simplify how teaching funding is allocated and administered.</p> <p>Action: Funding bodies (Welsh Government, HEIW, CTER (Lead))</p>	<p>FINDING 5: HE is funded through multiple streams in Wales making it harder and more costly for HE providers to collaborate and innovate. The way some FEIs, alternative providers and their students currently access teaching funding or student loans leads to additional costs associated with the contractual and regulatory arrangements that allows them to do that. Teaching funding allocated to HE providers favours the dominant delivery model.</p>
<p>Recommendation 6 To ensure, through review and redesign, that the awarding system can not only support, but also encourage:</p> <ul style="list-style-type: none"> • diversity of provision • efficient provision • ease of creating varied forms of provision • ability to create new provision quickly • international quality reputation of 'Welsh' qualifications. <p>Action: Qualifications Wales (Lead) and HE providers</p>	<p>FINDING 14: Quality assurance and specifically process around accreditation and validation can make the development of new delivery models harder and more costly although they also safeguard the quality of provision.</p>
<p>Recommendation 7 To develop and invest in a digital infrastructure strategy for the higher education sector, which gives prospective learners and, initially, HE learners visibility of and access to all delivery models equally (e.g. the creation of a Higher Education Learner Progression – HELP – system which gives school leavers, FE learners and those seeking employer-related provision, visibility of all HE</p>	<p>FINDING 11: Digital infrastructures are in need of an overhaul and investment.</p>

<p>learning opportunities in one place) and gives all providers the opportunity to serve their diverse community of learners (i.e. urban and rural) equally. This might possibly be extended to cover the whole tertiary education provision in Wales.</p> <p>Action: CTER (Lead)</p>	<p>FINDING 12: Outdated legacy management systems and the lack of joined-up systems often makes developing alternative delivery models and collaborations costly.</p>
<p>Recommendation 8</p> <p>To develop a data strategy for the tertiary education sector, which:</p> <ul style="list-style-type: none"> • maps out how management information system costs (including student records and associated external returns) can be reduced through data architecture and cloud technology, • simplifies and expands the definitions describing delivery models, and • improves the availability, consistency and quality of data across all delivery models, with a focus on student outcomes rather than diversity per se. <p>Action: CTER (Lead)</p>	<p>FINDING 13: The cost of data burdens associated with multiple regulators asking for similar information in a different way takes away opportunities to invest in frontline services. Definitions of delivery models are too narrow and focused on the dominant model.</p>
<p>Recommendation 9</p> <p>To include tertiary education providers in regional capital planning and environmental sustainability strategies, and to focus on additional tertiary sector building needs as well as what estates can be rationalised, re-purposed and improved.</p> <p>Action: Local Authorities (Lead)</p>	<p>FINDING 10: The dominant delivery model relies on the current HE provider infrastructure. Developing alternative delivery models could free up costs relating to buildings, energy and infrastructure.</p>

<p>Collaboration and collaborative infrastructure</p>	
<p>Recommendation 10</p> <p>To create a Wales-wide vehicle through which employer-facing provision could be developed and delivered collaboratively through a wide range of education models by experts in the field (either</p>	<p>FINDING 6: The Regional Skills Partnerships successfully brings together employers, a long-term view of Wales’s economic development and HE providers to map skills</p>

<p>from one or many Welsh HEIs) and be made available to employers, irrespective of the place of employment. For CTER to:</p> <ul style="list-style-type: none"> • work with HEIW to pilot the vehicle for the health sector, • evaluate, review and develop a vehicle blueprint for other sectors, with sector needs driving planning and funding, and • roll out the approach to other strategic economic sectors. <p>We sketch out what we mean by a vehicle in appendix 11 to this report.</p> <p>Action: CTER (Lead) and HEIW</p>	<p>shortages and develop regional strategies, but there is a gap between analysis and plans on the one hand and delivery of change and implementation on the other hand.</p> <p>FINDING 15: Effective and efficient collaborations have worked well when a shared infrastructure has been put in place, but these require effort and resources. Change is often fragmented in local initiatives, limited to existing partnerships with costly overheads associated with bespoke, time-limited arrangements and an ad-hoc infrastructure.</p>
<p>Recommendation 11</p> <p>To ensure CTER has the necessary tools to guide, develop and regulate the sector:</p> <ul style="list-style-type: none"> • Invest in CTER’s planning, analysis and evaluation capacity • Develop a common set of published data dashboards used to clarify performance expectations, support regulation of the sector, inform stakeholders and support strategy review. • Develop a CTER sector research function that commissions effective research into how the sector can best deliver. This will: <ul style="list-style-type: none"> ○ inform policy and strategy development and implementation ○ inform operational improvement ○ support strategically significant innovation. <p>Action: Welsh Government and CTER (Lead)</p>	<p>FINDING 16: Many providers are improving their core education processes to improve outcomes for students and there is an opportunity for the sector to collaborate and develop an evidence base for what works.</p> <p>FINDING 17: Innovation in delivery models requires an organisational culture which supports it staff and promotes healthy risk taking.</p> <p>FINDING 14: Quality assurance and specifically process around accreditation and validation can make the development of new delivery models harder and more costly although they also safeguard the quality of provision.</p>
<p>Recommendation 12</p> <p>To work with HE providers to develop a ‘study in Wales’ offering to attract Welsh-domiciled students who choose to study outside Wales back to Wales, to study Welsh-medium modules, thus enhancing their bilingual skills.</p> <ul style="list-style-type: none"> • Explore, with select English HE providers, the creation of a one-year, primarily Welsh-medium, ‘study in Wales’ offer along the lines of year abroad offer. 	<p>FINDING 4: Significant levels of investment are made into funding student loans for Welsh students studying outside the Welsh HE sector. This reduces the amount of funding available to Welsh Government for investment in other priorities, which could include the expansion of alternative delivery models in Welsh HE providers.</p>

<ul style="list-style-type: none"> • Work with providers in England so that Welsh-speaking students in England can include online/distance Welsh-medium modules from Welsh providers within their degree programmes. An initial linkage with between five and eight English providers would offer considerable percentage coverage of Welsh-domiciled students in England. <p>Action: CTER (Lead) and Coleg Cymraeg Cenedlaethol</p>	
<p>Further Research</p>	
<p>Recommendation 13</p> <p>To further develop a more comprehensive and nuanced picture of the diversity of delivery models on offer in Wales, which should include:</p> <ul style="list-style-type: none"> • further development of the typology to include the subjects taught, • analysis of the additional factors driving students living in the rest of the UK to study in Wales, • analysis of the factors that drive Welsh students to choose to study outside Wales, including the delivery models they choose, • analysis of the factors driving students from different ethnic minority backgrounds to choose delivery models and programmes, and • investigation into the importance of Welsh medium provision to the choices students make about where and how they study at higher education level. <p>Action: CTER (Lead)</p>	<p>FINDING 1: there is no clear and comprehensive dataset which describes the full diversity of delivery models in Wales</p>

Appendix 1: Background to and rationale for this investigative study

Between August 2021 and April 2023, HEFCW conducted a review of teaching funding to evaluate whether its teaching funding methodologies were appropriate and fit for, given that the core credit-based method was established more than twenty years ago. There have been sizeable changes to the HE funding landscape in that period, including as a result of the outcomes of the UK government reviews of HE ([Dearing](#), [Browne](#) and [Augar](#)) and the [Diamond Review](#) in Wales.

After extensive consultation with the sector and development of the proposed funding models, HEFCW arrived at a new credit-based funding methodology which would provide more equitable funding for full-time and part-time provision. HEFCW will provide the updated model to the Commission for Tertiary Education and Research (CTER), when it becomes responsible for the funding of tertiary education and research in Wales later in 2024.

In 2019/20, a qualitative review of part-time higher education provision in Wales for HEFCW was conducted by Old Bell3 (OB3), supported by data analysis from HEFCW. HEFCW Council formed a task and finish group involving Council members, NUS Wales, and HEFCW staff to guide the review. The aim was to inform changes to part-time higher education policy and funding methodologies from 2020/21 onward.

The funding reviews highlighted several issues relating to HE delivery, which HEFCW now wants to explore in greater detail through an investigative study of HE in Wales. Specifically, HEFCW wants to understand better how teaching funding could support the delivery and expansion of increasingly diverse and flexible provision. Whilst the HE sector has always provided education in varied ways, and whilst this diversity was further increased during the pandemic, HEFCW identified a need to increase the opportunities for students to be able to study with flexibility and to support the up-skilling and re-skilling of mature students. (W21/07HE). It is HEFCW's intent to provide the study and its outcomes to CTER so that it can be used in developing and implementing a funding model for post-16 provision.

Anna Verhamme Consulting was appointed to undertake the review in July 2023 following a competitive tender process.

Appendix 2: Scope and methodology of the review

Our Scope

The study is concerned with the delivery of higher education in Wales, the drivers for students who choose to study in Wales and the impact of Welsh arrangements for funding of higher education on institutional behaviour and their relationship to Wales's ambition to narrow educational inequalities, expand opportunities and raise standards. This means that we do not look in depth at HE delivery models outside of Wales or at Welsh students who choose to study outside of Wales, and whilst we touch upon international students, they are not central to this study.

We have focused on all forms of taught provision, in line with our brief, although the study has a stronger focus on non-Master level provision.

Our methodology

The study is principally qualitative, using a mixed methods approach to gain a broad, deep and rich understanding of the diversity of higher education in Wales. In this context, *broad* means involving many institutions and many sources of data; *deep* means involving viewpoints from all levels within provider institutions and other stakeholders; *rich* means involving many varied perspectives and using a curious, probing and at times provocative approach to the research. Quantitative data from secondary sources is used to support, amplify, test, or evaluate the validity of our qualitative findings.

Diversity in this study means both *diversity of provision* (types of provider, modes of provision, level of qualification provided and so on) and in some sections, *diversity of student population*. The latter is relevant to the extent that we have sought to understand how the needs of a diverse student population are being met, and can be met in future, by the HE sector in Wales.

The research design was created to test our assumptions and to illuminate the extent of diversity of provision.

The assumptions we had at the start of this study were:

1. There is still a dominant HE delivery model in Wales. More specifically: the three-year, full-time undergraduate degree. Other forms of higher education provision in Wales are less common, less well known about and may be struggling for student numbers and/or funding.
2. That dominant model does not work for significant groups of Wales's diverse body of learners and may need adjusting in light of wider societal changes.
3. There are reasons why there aren't more diverse delivery models: some relate to funding, some to policy and regulation and some are internal to how HE providers work and are organised.
4. Sector-wide change can only come about if there are structural and policy changes and if the individuals working within that sector change.

The design included the following strands:

Desk Research

Literature Review of over 400 academic papers, research reports and webpages

Data analysis – qualitative

Data analysis – quantitative

Primary Research¹⁰⁸

Online survey of people working in HE and FE – 125 responses

Online survey for executive teams – 11 responses

Online survey for people with an interest in HE (employers, third sector) – 9 responses

53 individual discussions/semi-structured interviews with staff from HE sector, employers, student representatives and staff from policy and research institutes

5 focus groups with 35 participants from Welsh HE providers, 7 careers advisors and 7 PVCs with responsibility for Teaching and Learning

2 roundtable discussions with 24 participants

Analysis and Synthesis of Findings

Development of Conclusions and Recommendations

Report Writing

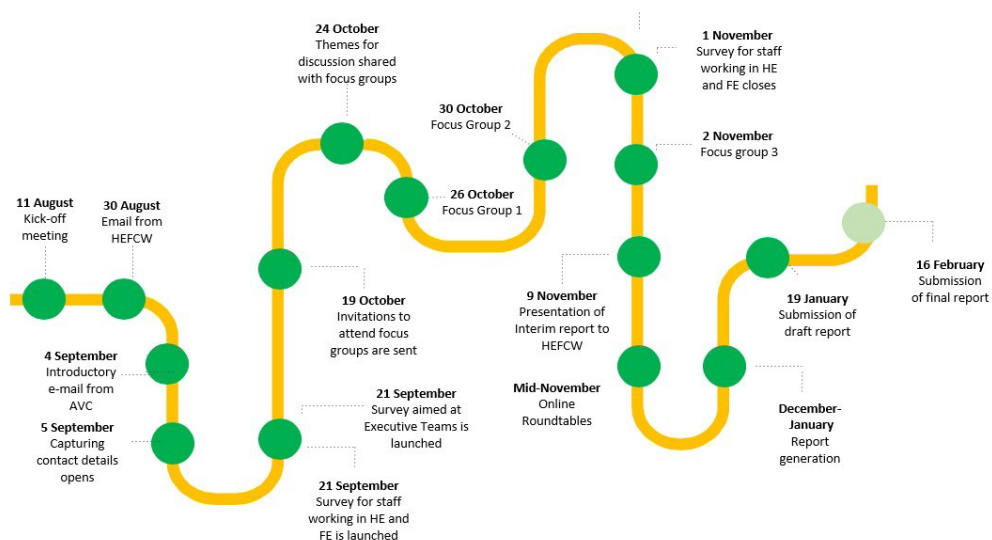
The approach taken was flexible, so that, if a new method of data collection became available, it could be included. The research team met weekly to consider the validity of new sources as they were identified. In this way, it was possible to grow the survey in line with the ‘mood’ of the sector (its propensity to contribute to the study), whilst maintaining the integrity of the research design.

The study ran from August 2023 to February 2024, with the main data collection period occurring from September to November 2023. An interim report was presented for HEFCW’s consideration on 9 November. Report writing commenced in December 2023, with a draft report delivered in January 2024 and a final report submission date of 16 February.

The key engagement milestones in the study are shown in Figure 50:

Figure 50: Engagement milestones

Engagement journey



¹⁰⁸ Details of number of respondents and people engaged can be provided.

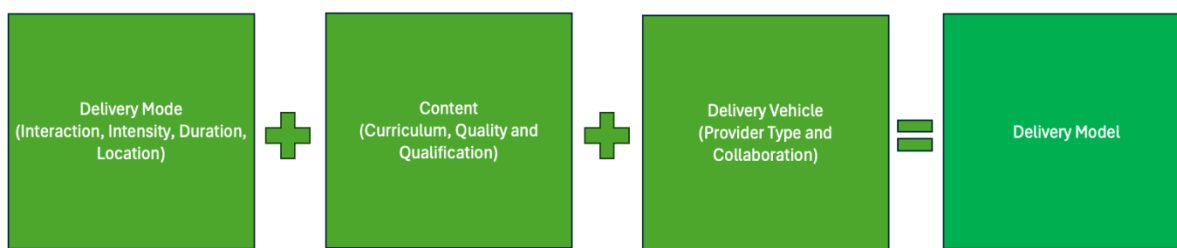
Appendix 3: Further details on the typology of delivery models

Much of the literature in this area seeks to sort institutions into categories for regulation and ranking purposes¹⁰⁹. HE providers have also electively joined mission groups, although these can come and go (e.g. the disbanded 1994 Group), and membership changes. These groups also overlap, and the nature of institutions themselves change. The purpose of this study is to better understand the diversity of **HE delivery** in Wales. The typology of providers is not especially helpful to our project.

Middlehurst¹¹⁰, in considering how a typology for new forms of HE can be developed, observes that:

‘It is perhaps clearer to consider the range of new variables that are affecting the provision of higher education. These new variables include any one or a combination of the following: new providers, new media used for the delivery of programmes, provision that is cross-sectoral, provision that is transnational and multinational, varied locations for the delivery of HE, new curricular forms and content and new or changing qualifications.’

In devising a typology of HE delivery, we suggest that there are three factors that combine to enable delivery – essentially the ‘how, what and who’ of delivery:



Each component of the ‘how, what and who’ of delivery has its own collection of types and each of those in turn interacts with one another. We describe the key components and the complex interdependencies between them in the next pages.

Delivery modes

Modes of delivering education include factors like the **physical proximity (location)** of students and tutors, the level and type of **interaction** among learners, tutors, and learning resources, as well as expectations regarding the independence of learners in relation to the curriculum and resources. The **intensity** of delivery and **duration** of delivery are also important components of how education is delivered.

The ‘how’ interacts with the ‘what and who’ components of a delivery model:

The choice of location for learning delivery raises, for example, quality assurance considerations, including accessibility and the extent of learning opportunities. And whilst new technologies offer the advantage of incorporating a diverse range of interactions into the learning experience, consideration of how they are incorporated in the curriculum and quality assured (components of the ‘what’) will determine whether these enhance the learning experience in specific ways, such as improving accessibility for different learning styles or addressing disadvantages in learning.

¹⁰⁹ e.g. <https://wonkhe.com/blogs/a-return-to-type-for-the-ofs/> and Bartelse, J., & Van Vught, F. (2007). *Institutional Profiles: Towards a Typology of HE Institutions in Europe*. IAU horizons, 13(2-3).

¹¹⁰ Middlehurst, R. (2001). *Quality assurance implications of new forms of higher education: Part 1: A typology*.

Technology-mediated delivery can sometimes replace certain activities associated with particular skills or levels of learning, potentially necessitating adjustments to qualification standards as technology advances.

Intensity is often defined in a rigid way between full-time and part-time delivery, with strong linkages between this categorisation and access to funding for providers, and student support for students. This often shapes the 'who' in the delivery model.

Content

Delivery models are determined in part by the content a programme aims to deliver. The content is primarily shaped by three variables: the **curriculum**, the **quality of delivery** and the **qualification awarded**. We discuss a fourth variable separately which is the language through which the programme content is delivered.

The unique features of new **curricula** or educational content are influenced by various factors including the 'how and who' in our delivery model: who designs it (academics or others), who owns and maintains it, the educational level it's intended for, and the governing authority overseeing its use. Curricula must be suitable for their intended purpose and be validated before and during use. They should also offer value for money, benefiting both the direct client and the indirect purchaser (e.g., state or employer). With a growing variety of content suppliers beyond traditional academic institutions ('the who' in our model), issues like level, recognition, currency, and equivalence become important. Not all curricula are linked to qualifications, and the level of regulation may depend on the purpose of a qualification, such as a licence to practice.

New curricula and content can arise from various sources, including advancements in knowledge, socio-economic demands for practical knowledge, and the combination of subjects to create new areas of learning. The expansion of knowledge, along with the use of communication and information technologies and the trend toward customised learning (the 'how' in our model), suggests an ongoing need for new content in educational programmes. The traditional academic sector is no longer the sole source of new knowledge or the sole determinant of practical knowledge requirements. Consequently, the responsibility for designing, maintaining, and ensuring the currency and credibility of content is likely to be shared more widely (our 'who' in the delivery model) leading to implications for standards, assessment, and qualification frameworks.

The scope of the term **quality assurance** encompasses the following dimensions:

1. **Regulation** (including legal frameworks, governance, responsibilities, and accountabilities).
2. **Educational process** (covering admissions, enrolment, curriculum design and delivery, support for learning, and assessment).
3. **Curriculum design and content** (involving validation and approval frameworks, levels, and standards).
4. **Learning experience** (which includes consumer protection, student experience, complaints, and appeals).
5. **Outcomes** (comprising qualifications, certificates, transcripts, transferability, recognition, currency, and value).

Middleton notes that these dimensions may pose challenges to current quality assurance systems, such as for-profit education businesses affecting regulatory and consumer protection measures, technology-mediated learning challenging traditional views of student experience, transnational education raising issues of credit transfer and comparability, and new curricula and qualifications

challenging existing frameworks and recognition systems. The diversity of educational provision questions the feasibility and desirability of a single, public quality assurance framework for all. In response to these challenges, there is a need for increased transparency and reliability of information about quality, benefiting students, institutions, agencies, and society as a whole.

Currently, in terms of **quality assurance**, the quality of HE in Wales is primarily overseen by the Quality Assurance Agency (QAA). In addition to the QAA there are over 80 other bodies overseeing organisational quality assurance and standards. There are implications here both in terms of regulatory burden and the speed in which HE providers can respond to the needs of learners and employers. This is compounded when there are multiple providers working together to deliver higher education, and thereby adding layers that need to interact to fulfil the quality assurance and enhancement functions. This also introduces risk, as the 'line of sight' between the body responsible for the qualification award and the organisation delivering is more complicated.

The unique characteristics associated with new educational content are often connected to new **qualifications**. Ownership and authority for awarding qualifications are crucial aspects, with some authorities being statutory, some privately owned¹¹¹, and others relying on charters or other instruments. Qualifications hold importance as they signify competence, a range of knowledge and skills, or a licence to practice. Quality agencies may or may not have responsibility for qualifications' frameworks, including their design, review, or recognition arrangements. Many professions have their own systems for designing and regulating qualifications and certifications, as seen in the IT industry, where IT suppliers are deeply involved in programme design and certification processes, often operating independently from national quality assurance systems.

A key question for the future is whether new qualification frameworks will develop alongside academic ones, or if academic frameworks can adapt to incorporate new types of qualifications with differing delivery patterns, as we have seen with foundation degrees and degree apprenticeships.

Some of the different types of HE qualifications delivered to learners in Wales and mapped on to the Credit and Qualifications Framework for Wales. The Fan diagram in Figure 51 below illustrates the levels and examples of qualifications included in The Credit and Qualifications Framework for Wales¹¹². The Levels capture all learning from the very initial stages (Entry, 1, 2 & 3) to the most advanced (Level 8).

It is important also to consider HE learning which is not linked to a qualification award, or which can be detached from a qualification award.

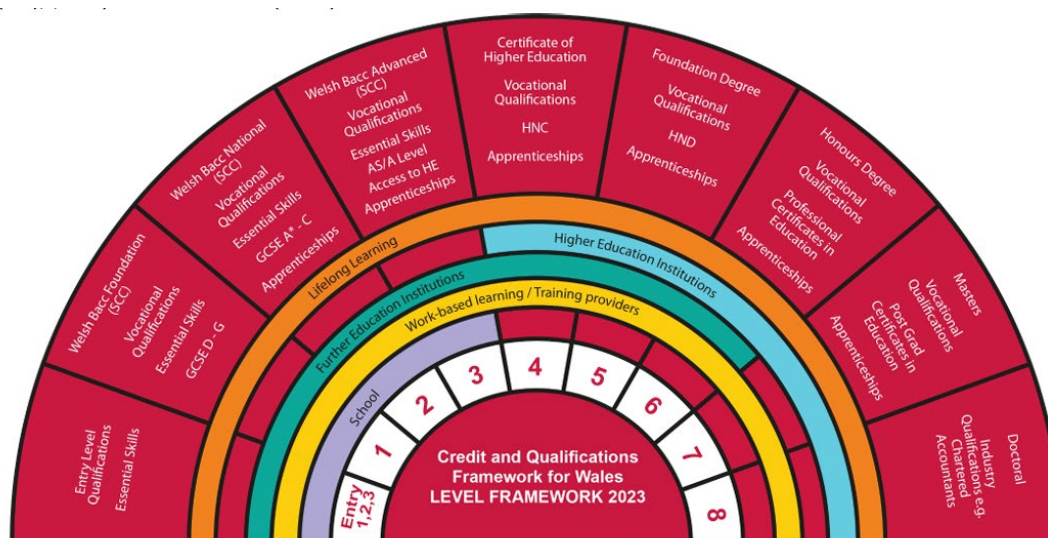
Welsh language

The Welsh Government aims to have one million Welsh speakers by 2050. Recognising that the choices available to students wishing to study through the medium of Welsh were limited, the Coleg Cymraeg Cenedlaethol was set up to increase provision. The Coleg's aim is to create training and study opportunities through the medium of Welsh by working with further education colleges,

¹¹¹ The BTEC Higher National Diplomas (HND) and BTEC Higher National Certificates (HNC) qualifications are owned by Pearson.

¹¹² The Credit and Qualifications Framework for Wales is owned by Qualifications Wales, which is the regulator for non-degree qualifications and the qualification system in Wales. Qualifications Wales is responsible for overseeing and maintaining the Credit and Qualifications Framework for Wales to ensure quality and consistency in qualifications and learning experiences in Wales.

Figure 51: The Credit and Qualifications Framework for Wales



universities, apprenticeship providers and employers. According to the UCAS course finder¹¹³ there are over 500 courses students can choose from, which, to some degree, are delivered through the medium of Welsh.

There have been other curriculum developments in support of Cymraeg 2050. It has been more than a year since the commencement of the OU in Wales’s fully bilingual Postgraduate Certificate in Education (PGCE) programme in Wales in 2021. A crucial component of Initial Teacher Education (ITE) provision is the Government's directive for all ITE students throughout Wales to engage in Welsh language development and position themselves within a linguistic skills framework, akin to the Common European Framework for Reference.

Delivery Vehicle

Higher Education is delivered by **HE providers** and a consistent definition is tricky to pin down following the post-devolution divergence of the four sectors in the UK. Table 20 below shows the number of providers in the UK nations published by the House of Commons as at 20th December 2023.

Table 20: Registered HE providers in the UK nations

England	423
Scotland	19
Wales	9
Northern Ireland	12
Total	463

Sources: OfS, *The OfS register*; SFC, *Universities and Higher Education institutions we fund*; HEFCW, *HEFCW Annual Regulatory Report*; NI Department for the Economy, *Higher education division* (accessed 20 Dec 2023).

The table shows nine HE providers in Wales (8 campus-based universities and the OU in Wales), a narrow list of predominantly HE providers that receive funding from and/or are regulated by HEFCW and which have degree awarding powers¹¹⁴.

¹¹³ [Studying University Courses In Welsh | UCAS](#)

¹¹⁴ [Check if your university or college can award a degree: Recognised bodies in Wales - GOV.UK \(www.gov.uk\)](#)

It does however not include FEIs that receive HEFCW funding (a further 3), or FEIs that deliver HE in Wales on behalf of an HEI (a further 9), or alternative providers based in Wales not funded by HEFCW (a further 4).

For the purpose of this study, we have opted for a broad definition of 'HE provider' (including 25 institutions) and have categorised them as predominantly delivering higher education (HEI), delivering predominantly further education (FEI), alternative providers (AP) and specialist higher education providers (SPI).

We need to note here that learners in Wales can also access HE from providers based outside Wales:

- Predominantly HE (research-led and teaching-led)
- Specialist higher education
- Predominantly further education
- Open access or distance education providers based outside Wales, or English Providers (e.g. MIT Open Learning, Harvard University online, IU International University of Applied Sciences¹¹⁵)

We have not classified institutions by external typologies such as the sources of funding they receive as, again, that would be a narrow specific lens and what concerns us is what HE is being delivered. The majority of flows to providers outside Wales will be to institutions in England. We explore cross-border flows in section 3.

The **delivery vehicle** can be summarised very simply: HE providers can deliver HE **predominantly themselves** (although even then they will seek things like employer input to curricula), **in collaboration with other HE providers** (e.g. one provider overseeing the quality of provision at another using its taught degree awarding powers), **jointly with another HE provider** (e.g. joint degrees awarded by more than one HE provider) **or in collaboration with employers** (in more than just a consultative role). In some cases multiple providers will collaborate, and this can also be with multiple employers directly involved.

The above is a helpful abstraction, but we can also think about some of the types of collaboration that exists to support the delivery of higher education:

- HE and HE Academic Partnerships (such as for example '2 + 1' degrees where students articulate from one institution to another; double or joint degrees, particularly at Master's level)
- HE in FE Academic Partnerships (through collaborative working and oversight of degree standards)
- HE in FE and with employers' Academic Partnerships (Foundation Degrees; specialist bachelors degree e.g. Airbus)
- Collaborative groupings of providers (e.g. The University of London)
- HE provider–employer partnerships¹¹⁶
- Online HE marketplaces (e.g. EdX, Coursera)

¹¹⁵ IU International University of Applied Sciences is an interesting case study. Since receiving accreditation from the German Council of Science and Humanities, IU has grown into Germany's biggest university, offering study 100% online or on campus, through the medium of English and with varying levels of intensity. It now has over 100,000 students. This article provides further information about the growth of private providers in Germany: <https://www.che.de/en/2023/decline-in-the-number-of-new-students-universities-experience-significant-losses/>

¹¹⁶ Reyes Rios, C. (2022). *HE and industry collaborations: A primer*. United States Agency for International Development.

Collaborations can take many forms, and have multiple focal points which relate to the 'how and what' in our delivery model including degree apprenticeships, work-based learning, professional development courses, and joint research projects.

Appendix 4: Detailed walk-through of Sankey chart at Figure 2 (Visualisation of provision, by programme characteristics)

Typology Component		
Delivery Mode – How	What the Sankey diagram tells us	Where this is shown
Are programmes available for remote learning?	Most HE programmes in Wales (95%) are NOT available for remote learning. Only 136 programmes are available for remote learning.	Column 1: The wide band of red threads indicates that most courses are not available remotely and the thin band of blue threads shows the small number that are.
In what mode can programmes be studied?	The full-time mode is the most common, with 81% of HE programmes in Wales being available in this format. 19% of HE courses in Wales are available in the part-time mode.	Column 2: The wide band of red threads indicates the full-time courses and the narrower band of blue threads indicates the part-time courses. A course will be added to both the red and the blue bands if it is available in both modes.
What is the duration of each programme?	Most (85%) of HE programmes in Wales are either of 3 or 4 years' duration. Almost all 2-year degrees are at Level 5.	Column 3: The two widest red bands indicate the predominance of 3 and 4 year programmes. Moving left from these bands to Column 2, we can see that the majority of these 3 and 4 year programmes are full-time.
Content – What?		
At what Level(s) is the programme taught?	Most (80%) HE programmes in Wales are Level 6 (Bachelor's) and the majority of these are full-time. A small proportion (12%) of HE programmes are at Level 5 and only 2% are at Level 4. Integrated masters' (Level 7) programmes account for 6% of HE programmes.	Column 4: The large central, red band indicates the predominance of the Level 6 programme, of which most are full-time. Smaller blue bands at the top and bottom show the part-time Level 6 courses. The very mixed, red and blue, lower section of the column highlights some diversity in the provision of Level 4 and 5 qualifications.
To what qualification does the programme lead?	Most (77%) HE courses in Wales are designed to lead to Honours degrees. 6% lead to Integrated Masters degrees. Of the rest, most courses lead to Diploma of Higher Education, Foundation degree or Higher National Diploma awards, which each account for 3–5% of the total. 2% of HE courses in Wales allow the award of a Certificate of Higher Education.	Column 5: As would be expected, a high degree of complexity is evident in the diagram when we consider type of qualification linked to name of provider and to mode, duration and level. This results in a very 'busy' column with multiple crossing, blue and red threads leading to the various providers.

Delivery Vehicle – Who?		
What type of institution delivers the programme?	<p>The vast majority (97.5%) of HE courses in Wales are delivered by the eight physical universities plus The Open University in Wales.</p> <p>The mean average number of HE courses offered by the nine universities is 277, with a range of 109 to 545.</p> <p>There is a roughly even distribution across the nine universities, with a median number of HE courses of 266.</p> <p>Nine FE and specialist colleges or alternative providers deliver a total of 62 courses independently of universities.</p>	Column 6: This shows the number of programmes offered by each HE provider (including those that do not hold degree-awarding powers but do collaborate with the awarders in the delivery of HE programmes).
What extent of collaboration is involved in delivering the programme?	<p>7(6.7)% of HE courses in Wales are delivered on a collaborative basis.</p> <p>There are three HEIs who extensively collaborate with FEIs. This is shown by the connections between columns 6 and 7: HEIs who collaborate are connected to FEIs.</p> <p>There are 13 further education, alternative or specialist providers that collaborate with a university to provide HE courses.</p> <p>These providers offer a total of 169 out of the 2,489 HE courses available in Wales.</p>	Column 7: The thinner bands in this column indicate the fewer number of HE programmes that are delivered by a provider that is not a university.
What extent of work based learning or year abroad provision is there?	<p>Just under a third (32.8%) of HE courses in Wales offer the opportunity for a period of work based learning or a year abroad.</p> <p>In 58% of these programmes, the additional experience is compulsory.</p>	Column 8: Scanning from column 6 to column 8, it can be seen that, whilst examples of courses with a work-based or year abroad element can be found in most HE providers, there are two universities that specialise in this.

Appendix 5: Notes to accompany Table 19 (Public funding streams for Welsh providers for different types of HE delivery models (to UK students))

Notes:

1. Blank cells denote no obvious source of funding.
2. Fees are not paid directly by the public sector but tuition fee loans are subsidised by the Welsh Government for Welsh-domiciled learners.
3. Full-time (FT) or part-time (PT) status depends on student eligibility for FT fee as well as course intensity.
4. Health Education and Improvement Wales (HEIW)-funded Healthcare and Medical includes: Nursing, Midwifery, Healthcare Professional Education, Healthcare Sciences, Healthcare Support Workers, Post-registration Education, Pharmacy, Medical Workforce, General Practice, Eyecare. It does not include Dentistry.
5. Initial Teacher Education (ITE) is not funded by HEFCW other than for some part-time provision at the OU in Wales. The majority is Welsh Government-funded.
6. The 'Majority of subjects except HEIW-funded' include some healthcare professional disciplines that are HEFCW-funded, known as 'Allied to Medicine'.
7. A UK student would be fundable by HEFCW unless: the student's place receives funding from other sources, is the responsibility of a body other than HEFCW (e.g. ITE (QTS) entrants from 2019/20), or, for students under the FT UG/PGCE fee regime, if the tuition fee is paid for by a public source other than HEFCW. There are also further restrictions in the availability of HEFCW funding for PG research students who are funded already from other sources.
8. Examples of Level 4,5, and 6 taught provision include HNC, HND, Foundation Degree, Honours Degree.
9. HEFCW premiums consist of the expensive subjects and higher cost subjects premium (for FT UG), access and retention premium (PT UG), the Welsh-medium premium (FT & PT UG) and the disability premium (FT UG, PT UG, FT & PT PGT and FT & PT PGR).
10. Some FE colleges are directly funded by HEFCW to deliver specific HE taught programmes, others receive student fees and HEFCW funding via an HE provider.
11. Service fees to HE partners will vary in scope and amount can include fees for activities such as overseeing degree quality, collecting student fees, and providing data to regulatory bodies on behalf of the FE provider.
12. The table is simplified as it does not include specific details of the funding streams (such as an additional uplift for performing arts in the HEFCW teaching funding formula), or of funds that presently exist but will not be part of the landscape in the near future, such as European Social Fund.
13. See Student Finance Wales Information Notice SFWIN 08/2020¹¹⁷ for information regarding the criteria relating to specific course designation.
14. HEFCW microcredentials funding was a specific time-limited fund to support this activity.

¹¹⁷ https://www.studentfinancewales.co.uk/media/ycqeqzwh/sfwin-008_20-specific-designation-policy-update-2020.pdf

Appendix 6: UG FT Tuition Fee and Maintenance Support across the UK 2023/24

Table 21: Tuition fee funding across the UK nations

Student Domicile	Tuition Fee Loan (max)	Maintenance Loans (max)	Maintenance Grants (max)
England	£9,250 (UK)	Living at home: £8,400 Living away from home: £9,978 Living away from home in London: £13,022	£0
Wales	£9,000 (Wales) £9,250 (Rest of UK)	A mixture of loans and grants*, with the grant share reducing in line with household income. Living with parents: £9,950 Living away from parents outside London: £11,720 Living away from parents in London £14,635	
Scotland	£0 Paid by the Scottish Government (Scotland) £9,250 (Rest of UK)	Young Students: £7,000 Independent student: £8,100	Young Student: £2,000 Independent Student: £1,000
Northern Ireland (NI)	£4,710 (NI) £9,000 (Wales) £9,250 (Rest of UK)	Living with parents: £5,250 Living away from parents: £6,776 Living away from parents in London: £9,492	£3,475

Source: Atherton, G., Lewis, J., & Bolton, P. (2023). *Higher education in the UK: Systems, policy approaches, and challenges*. Commons Library Research Briefing. Edited for inaccuracies relating to the Welsh system.

Tuition fee funding for new EU students in Wales (without a 'settled' or 'pre-settled status') ceased in academic year 2021/22. However, those continuing a course remain eligible for financial support for the duration of their course.

* Student Finance Wales provides more fine-grained detail, e.g. how the maintenance loans and grants for Welsh-domiciled students taper with parental income, here:

<https://www.studentfinancewales.co.uk/UG-finance/full-time/welsh-student/what-s-available/>

Appendix 7: Further details on employability and skills

Stronger, fairer, greener Wales: a plan for employability and skills

The March 2022 Welsh Government plan for employability and skills¹¹⁸ aims to help people up-skill, access fair work and thrive, for a more equal Wales. The key priorities and the areas of action are:

- **Supporting people with a long-term health condition to work:** This involves preventing people from falling out of employment, promoting healthy workplaces, and maximising the role of the health service as an anchor employer.
- **Investing in the Young Persons Guarantee:** This is an offer of work, education, training, or self-employment for everyone under the age of 25, including 125,000 new apprenticeships.
- **Prioritising and consolidating national employability support:** This targets those underrepresented in the labour market, such as those with long-term health conditions, and strengthens joint working with the Department for Work and Pensions (DWP) to optimise national provision.
- **Supporting and encouraging employers to create high quality employment:** This involves championing fair work practices, ensuring the social value of investment, and encouraging the public sector to embed the priorities in workforce planning.
- **Promoting collective responsibility for advancing Fair Work for All:** Delivered through the Social Partnership and Public Procurement (Wales) Bill, the Commission for Tertiary Education and Research (CTER), and a placed-based approach to economic development.
- **Expanding support for career switchers and older workers:** This includes mid-Career Reviews, and Personal Learning Accounts to help workers to up-skill or re-skill.
- **Ensuring educational inequalities narrow and standards rise:** This focuses on widening participation in the skills system for disabled people and ethnic minority groups, tackling low qualifications, and increasing the mobility of workers.

Regional Skills Partnerships

The Regional Skills Partnerships (RSPs) of Wales are in place to drive investment in skills by developing responses based on local and regional needs. They provide labour market intelligence to the Welsh Government and are a pivotal component of the regional skills landscape, working with local economy stakeholders to analyse economic challenges, opportunities for growth and support needed to encourage economic development. The four Regional Skills Partnerships in Wales are:

1. South East Wales Cardiff Capital Region Skills Partnership (CCRSP)
2. North Wales Regional Skills Partnership (NWRSP)
3. South West Regional Learning and Skills Partnership (RLSP)
4. Mid Wales Regional Skills Partnership

These partnerships support City Deal and Growth Deals across Wales, acting as strategic partnerships on all matters relating to employability and skills. They also produce Regional Employment and Skills Plans. The most recent plans were produced in late 2022.

Here are some of the key issues and concerns identified across the regions:

South East Wales

- Skills shortages in priority sectors, including digital skills, green skills, leadership and management skills.
- Recruitment challenges exacerbated by the pandemic.

¹¹⁸ Welsh Government. (2022). 'Stronger, fairer, greener Wales: A plan for employability and skills: Summary.'

- Barrier of poor perceptions towards some sectors like manufacturing.
- Need for up-skilling given technological change.
- Declining apprenticeship starts in some areas.
- Support needed for disadvantaged groups furthest from labour market.

Mid Wales

- Recruitment difficulties and job vacancies hard to fill.
- Work readiness of new entrants into employment.
- Ageing workforce and upcoming retirement levels.
- Low levels of apprenticeships in some sectors.
- Accessibility of training given rurality and sparse population.

North Wales

- Recruitment and retention issues in sectors like health, manufacturing, hospitality.
- Younger and older workers disproportionately affected by the pandemic.
- Need for up-skilling and re-skilling opportunities.
- Graduate retention in the region an issue.
- Economic inactivity levels persistently high in some areas.

South West Wales

- Financial challenges for businesses and impact of inflation.
- Workforce mobility issues, exacerbated by rurality and costs.
- Skills shortages across occupations.
- Declining job numbers in some priority sectors.
- Issues attracting talent to some sectors with poor perceptions.
- Reducing apprenticeship uptake.

Priorities

The priorities identified in the Plans were:

- **Responding to climate change and transitioning towards a net zero economy** - This was a common theme across the Regional Employment and Skills Plans, with a recognition that sectors will need support to develop the skills needed as part of the move towards decarbonisation and renewable energy. This includes areas like retrofitting, green technologies, project management, and sustainability skills.
- **Supporting recovery from the pandemic** - The plans highlighted the impacts of the pandemic on skills needs and employment, and the need to help sectors rebuild and address recruitment and skills gaps exacerbated by the pandemic.
- **Digital skills development** - Developing digital skills across sectors was seen as a priority to help drive technology adoption, automation, and support the growth of digital industries. This ranged from basic IT skills to advanced skills like coding and data analytics.
- **Apprenticeships** - Expanding apprenticeships and higher/degree apprenticeships to help provide high quality routes into employment. This included ensuring frameworks meet industry needs.
- **Support for priority sectors** - Key sectors were highlighted like health and social care, manufacturing, construction, and the creative industries (see Table 22 below). Plans aimed to strengthen the skills system to meet sector demands.
- **Career guidance and work placements** - Improving career advice in schools was noted as important to promote key sectors and opportunities. Links between employers and schools are needed.
- **Upskilling the workforce** - Providing flexible retraining and upskilling for those in employment was seen as essential for workforce development.

- **Supporting disadvantaged groups** - A focus on helping groups like NEETs¹¹⁹, unemployed, older workers, and those with disabilities was viewed as important for an inclusive economy.
- **Collaboration and engagement** - Partnership working between employers, providers and other stakeholders was identified as crucial in responding to skills needs.

Key Priority Sectors By Region

The Regional Employment and Skills Plans identified the following key sectors:

Table 22: Key priority sectors by region

North Wales	Mid Wales
<ul style="list-style-type: none"> • Health and Social Care • Tourism and Hospitality • Advanced Manufacturing • Food and Farming • Energy and Environment • Construction • Creative and Digital 	<ul style="list-style-type: none"> • Logistics • Health and Social Care • Tourism and Leisure • Advanced Manufacturing • Agriculture • Food and Drink
South West Wales	South East Wales (Cardiff Capital Region)
<ul style="list-style-type: none"> • Advanced Materials and Manufacturing • Construction • Digital Technology • Energy and Environment • Financial and Professional Services • Food and Land Management • Health and Social Care • Hospitality, Retail and Tourism 	<ul style="list-style-type: none"> • Advanced Materials and Manufacturing • Compound Semiconductors • Construction • Creative Industries • Financial and Professional Services • Digital Technology (cuts across all the others) • Human Foundational Economy (Health, Education, Social Care etc.)

Shortage occupations at UK level

The *Review of the Shortage Occupation List* undertaken by the Migration Advisory Committee in October 2023¹²⁰ assessed the UK-wide demand for staff. The resultant Shortage Occupation List (SOL) is a list of occupations that are in high demand in the UK and face skill shortages. Being on the SOL grants an occupation more favourable migration conditions, such as lower salary thresholds and visa fees, and faster processing times. The document presents the recommendations of the Migration Advisory Committee (MAC) for the SOL review in 2023, based on the evidence from various stakeholders and data sources.

¹¹⁹ Not in Education, Employment or Training (NEET)

¹²⁰ Migration Advisory Committee. (2023). *Review of the Shortage Occupation List*.

There are two skilled worker lists of shortage occupations. One for healthcare and education¹²¹ and one for all other occupations¹²². The majority of these occupations are likely to require HE qualifications and skills, and could offer potential career opportunities for graduates and PGs.

Some of the implications of this October 2023 *Review of the Shortage Occupation List* for HE providers are:

- **Collaboration:** The document highlights the importance of aligning the education and training system with labour market needs, and suggests that the MAC could collaborate with other bodies to examine the skills gaps and shortages in specific occupations or sectors.
- **Data:** The document also emphasises the need for improving the quality and availability of data on skills and occupations.
- **Policy improvement:** The document also recommends removing some occupations that are currently on the SOL, such as nurses, social workers, and secondary school teachers. These occupations may still face shortages, but the document argues that the SOL is not the best solution for them, and that other policy interventions are needed to address the underlying issues.

High skill jobs, where there are high levels of vacancies in the UK, were added to the to the UK-wide SOL. These included:

- **Programmers and software development professionals:** The document reports that there were 68,929 vacancies for this occupation in 2022, and that the demand for digital skills is growing across sectors and industries.
- **Geoscientists:** The document reports that there were 4,829 vacancies for this occupation in 2022, and that the UK has a comparative advantage in this field.
- **Architects:** The document reports that there were 4,729 vacancies for this occupation in 2022, and that the UK has a strong reputation in architecture and design.
- **Artists:** The document reports that there were 3,829 vacancies for this occupation in 2022, and that the UK has a vibrant and diverse creative sector.

¹²¹ <https://www.gov.uk/government/publications/skilled-worker-visa-shortage-occupations-for-health-and-education/skilled-worker-visa-shortage-occupations-for-healthcare-and-education>

¹²² <https://www.gov.uk/government/publications/skilled-worker-visa-shortage-occupations/skilled-worker-visa-shortage-occupations>

Appendix 8: Skills Needs – A focus on social and healthcare professionals

The Chief Scientific Adviser for Health has recently published 'Science Evidence Advice – An examination of the projected impact of Long-Term Conditions and Risk Factors in Wales'¹²³ which seeks to describe the complex problems and challenges the NHS is likely to face over the next 10 or more years, and sets out the evidence-based recommendations that are most likely to create efficiencies where they are most needed. The paper aims to aid discussion about what the NHS in ten years will look like, and what the main non-communicable disease pressures will be, considering the diseases that are major causes of morbidity and mortality. The paper highlights the following key factors:

- **Population projections:** The paper shows that the proportion of people aged 67 or older will increase faster than the working age population, and that economic inactivity and long-term sickness are common reasons for inactivity.
- **Long-term conditions:** The paper estimates that the prevalence of several long-term conditions, such as atrial fibrillation, dementia, heart failure, and diabetes, will increase more than the demographic growth, and that multimorbidity and polypharmacy will also rise, putting more pressure on the NHS.
- **Risk factors:** The paper identifies poverty, obesity, and smoking as the main modifiable risk factors that contribute to the burden of disease, and suggests that prevention and public health interventions are needed to reduce their impact and improve health outcomes.
- **Supply and demand:** The paper analyses the future needs for NHS staff, beds, and social care, and argues that more investment in primary and community care, workforce development, and new technologies is required to make the NHS more efficient and sustainable.
- **New technology, genomics, and AI:** The paper explores the potential of new innovations to transform health care delivery and public health, and highlights the need for continued investment, skilled workforce, and collaborative effort to harness their benefits.

The paper then goes on to consider how these factors will impact upon the numbers of staff and skills required by health and social care services. This is pertinent to our report as many of those staff will receive initial training and re-skilling or up-skilling via higher education. There will also be indirect effects that are of interest to us – factors such as more people being required to provide unpaid care who as a consequence may be interested to retrain in areas of work that can fit around caring responsibilities, but who also need HE delivery that can fit around them.

From 2011 to 2022, there has been a notable increase in the number of NHS staff in Wales per 100,000 population, excluding General Medical and Dental Practitioners. Specifically, the count for 'Doctors' (medical and dental staff) rose from 191 per 100,000 to 244 per 100,000, while 'Nurses' (nursing, midwifery, and health visiting staff) increased from 1,013 per 100,000 to 1,160 per 100,000. The upward trend was generally smooth, with a slight temporary rise in nursing associated with the pandemic in June 2020, quickly reverting to the overall upward trend. This growth aligns with age-group trends, indicating that treatment requirements increase as populations age. Some staff counted were employed at all-Wales bodies (such as Public Health Wales, Health Education and Improvement Wales, Digital Health & Care Wales, NHS Wales Shared Services Partnership) rather than at local health boards.

¹²³ Welsh Government. (2023). *Science Evidence Advice (SEA) – An examination of the projected impact of Long-Term Conditions and Risk Factors in Wales, NHS in 10+ years.*

The demand for trained professional staff

Looking ahead, despite a nearly 20,000 increase in the number of directly employed NHS staff in Wales compared to a decade ago, the paper identifies that workforce shortages emerge as the primary challenge for the NHS and adult social care. The Health Foundation projects a need for approximately 17,000 more full-time equivalent NHS staff in Wales by 2030/31, assuming continued, albeit slower, reductions in hospital stay times. This projection incorporates potential productivity improvements from reduced hospital stays and increased day case procedures. However, it does not account for variables like technological changes and workforce composition shifts. Meeting these staffing needs will require effective integrated care beyond a focus on hospital processes, with additional capacity needed in general practice, community care, and adult social care.

A detailed analysis by the REAL Centre on workforce supply and demand in England up to 2030/31, focusing on registered nurses and general practice patient care staff, reveals a projected overall workforce supply-demand gap. In 2021/22, this gap is around 103,000 full-time equivalent (FTE) across the NHS Hospital and Community Health Service (HCHS) and general practice, increasing to 179,000 FTE by 2024/25 before gradually declining to 156,000 FTE in 2030/31. Applying this analysis to Wales suggests a shortfall of 6,000 in 2021/22, 10,000 by 2024/25, and 9,000 in 2030/31, particularly in the case of general practitioners (GPs) and general practice nurses. In all scenarios, the projections report a persistent shortfall of FTE GPs and general practice nurses. In the pessimistic case, the GP supply-demand gap grows to around 18,900 FTE by 2030/31 – nearly half of GP posts (48%) based on projected demand. This equates to 1,000 in Wales.

The changing skills required of the health and social care workforce – health information technology

The paper refers to work by Wachter and Chair¹²⁴ that underscores the critical role of the workforce in implementing health information technology (HIT). HIT, while complex, can automate tasks, change care delivery methods, and foster collaboration. To realise the full potential of HIT, workforce challenges such as a shortage of skilled clinicians, lack of HIT training, resistance to change, and the need for new roles must be addressed. Recommendations include investing in workforce development, providing effective HIT training, fostering a culture of change, and developing new roles and responsibilities. Digital literacy for health and care staff is highlighted as a priority to ensure effective use of digital health resources and promote digital inclusion.

The *Digital Inclusion and Health in Wales* report emphasises the opportunity for the NHS to enhance healthcare quality, safety, and efficiency through health IT. However, it warns that substantial investment in a skilled workforce, interoperable and secure systems, and user-friendly health IT systems aligned with patient and clinician needs is necessary. Digital literacy for health and care staff is reiterated as crucial for both their own work and advocating for digital health with patients and service users. Developing digital leaders to drive information and technology transformation is identified as a need, along with evaluating the impact of health IT on healthcare quality, safety, and efficiency.

Emerging skills demands – New Technology, Genomics and Artificial Intelligence

The rapidly evolving landscape of health technology, particularly in genomics and artificial intelligence (AI), is poised to have profound implications for healthcare in the coming years. The McKinsey Global Institute identifies twelve disruptive technologies expected to significantly impact

¹²⁴ Wachter, M and Chair, MD (2016) *Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England* (publishing.service.gov.uk)

society by 2025. Some of these, such as autonomous vehicles and advances in materials, hold promise for older populations, improving their ability to travel and offering new possibilities for joint and organ replacements.

Advancements in genomics, materials, and robotic surgery are anticipated to extend life expectancy and maintain physical capability in older age. The pervasive nature of mobile internet, the Internet of Things (IoT), and cloud technology is expected to revolutionise healthcare by improving chronic condition management, expanding home-based care, and reducing projected costs. Health surveillance is predicted to incorporate digital and technological innovations, utilising big data analytics, machine learning, and AI to identify and track health trends and outbreaks.

Digital healthcare technologies, including genomics, digital medicine, AI and robotics are essential in addressing challenges like increasing demand and financial constraints. The 2019 *Topol Review*¹²⁵ addresses the education and training needs of the current and future workforce and presents recommendations to enable the NHS to harness technological innovation for the benefit of patients and staff. Although this report was developed on behalf of the Secretary of State for Health and Social Care in England, there are likely to be very similar lessons for Wales. Recommendations regarding the workforce include:

- Senior roles should be developed with responsibility for advising on the opportunities offered by digital healthcare technologies and identifying local skills gaps.
- Healthcare professionals will need to access training resources and educational programmes in digital healthcare technologies to assess and build their digital readiness.
- Each organisation should assign Board-level responsibility for the safe and effective adoption of digital healthcare technologies at scale, with a focus on clinical outcomes and on promoting effective and consistent staff engagement.
- NHS Boards should take responsibility for effective knowledge management to enable staff to learn from experience (both successes and failures) and accelerate the adoption of proven innovations.
- The NHS should strengthen systems to disseminate lessons from early adoption and share examples of effective, evidence-based technological change programmes.
- NHS organisations should use validated frameworks to implement technological solutions and ensure staff are trained to use these.
- The NHS should support collaborations between the NHS and industry aimed at improving the skills and talent of healthcare staff.
- The NHS should work with stakeholders across sectors to review the regulation and compliance requirements for new digital healthcare technologies, including the provision of guidance and training on cyber security, data privacy and data anonymisation, learning from the experience of other international healthcare systems.

The report notes:

“The greatest challenge is the culture shift in learning and innovation, with a willingness to embrace technology for system-wide improvement. An ambitious drive ‘towards the NHS becoming the world’s largest learning organisation’ is the best way to respond to this challenge. Recognising that there will be a five-to-seven year time lag to full adoption, there is now a window of opportunity in which to strengthen the infrastructure, upskill the workforce and catalyse the transformation. There is no time to waste”

¹²⁵ Health Education England, (2019) *The Topol Review*

Already there is extensive HE provision in Wales delivered in partnership with the NHS, or seeking to meet the needs of the NHS. The Topol Review gives helpful steers about the direction required regarding curriculum and expectations of staff.

The Genomics for Precision Medicine Strategy outlines the Welsh Government's plan to create a competitive environment for genetics and genomics, emphasising collaboration between healthcare providers, researchers, and industry partners. The Life Sciences Vision by the UK government aims to improve health and economic growth, emphasising collaboration between government, industry, and academia. However, the adoption of digital healthcare technologies requires careful consideration of ethical and social implications – there is a clear role for HE delivery in developing the practitioners and researchers in these subject areas.

In the realm of genomics, Wales has played a significant role, particularly in responding to the pandemic. The Genomics Delivery Plan for Wales 2022–2025 aims to transform healthcare delivery and public health action. The impact of genomics is expected in areas such as One Health (an approach that recognises that the health of people, animals, and the environment are interconnected), lung cancer diagnostics, and congenital heart disease.

AI, a rapidly advancing field, has the potential to revolutionise various industries, including healthcare. The UK's *National AI Strategy* and the European Commission's proposed AI Act aim to establish frameworks for responsible AI development and use. The Centre for Data Ethics and Innovation emphasises transparency, accountability, and public engagement in AI development. The *AI Regulation: A Pro-Innovation Approach* white paper proposes a flexible regulatory framework categorised by risk levels.

The future of healthcare will be significantly shaped by technological innovations in genomics and AI. These advancements offer opportunities to improve patient outcomes, increase efficiency, and transform healthcare delivery, but careful consideration of education and training requirements for the workforce, alongside ethical, regulatory, and social implications is crucial for their successful integration into the healthcare system.

Changes in social care and demands on carers

In terms of social care, a paper by the Health Foundation¹²⁶ discusses the complexities of predicting future demand for health and social care services in England. While an ageing population is expected to increase overall demand, the rate at which people develop social care needs can vary. Despite a decrease in the proportion of people aged 85 and older with social care needs from 2006 to 2018, those with the highest needs experience increasingly complex conditions. To address these challenges, integrated care systems need a sophisticated understanding of population needs based on evidence and analysis of joined-up datasets. Policymakers must grasp how changes in population structure will impact overall demand for effective service delivery planning.

Between 2007 and 2032, the number of people aged 65 and over in the UK requiring unpaid care is projected to grow by over one million. Supporting these unpaid carers, particularly in balancing other responsibilities such as work and study, becomes crucial to meet the increasing demand for unpaid care.

¹²⁶ Raymond, A., Bazeer, N., Barclay, C., Krelle, H., Idriss, O., Tallack, C., & Kelly, E. (2021). *Our ageing population: how ageing affects health and care need in England*.

The role of Health Education and Improvement Wales

On 1 October 2018, the Welsh Government established Health Education and Improvement Wales (HEIW) by bringing together three key organisations for health: the Wales Deanery; NHS Wales's Workforce Education and Development Services (WEDS); and the Wales Centre for Pharmacy Professional Education (WCPPE). HEIW is the strategic workforce body for healthcare, and so is particularly concerned with the issues we have discussed in this section. As a Special Health Authority, HEIW plays a crucial role in addressing strategic and specialist workforce issues, seeking to make Wales an excellent place for health and care staff to train and work. HEIW's focus includes planning, commissioning, delivering, and quality managing UG and PG education and training for various health professions. Additionally, HEIW serves as the Welsh Government's development partner for healthcare apprenticeship frameworks.

Health and social care delivery models in Wales

Health and social care is particularly interesting from a HE delivery perspective, as much of the education is commissioned in a different way from the HEFCW-funded majority (through a tendering process) and managed differently, although with the same aims of high quality, pertinent curriculum and a good student experience.

HEIW has a tripartite agreement with the universities and health boards, to ensure that academic quality and student support are of an adequate standard. HEIW works constructively with HEFCW to use existing data on the student experience such as the National Student Survey to understand how students on programmes they fund are faring, although there are lags as a result of the stages between students completing the survey, the data being crunched, it going through provider quality processes, and commentary being provided to HEFCW who then share it with HEIW.

HEIW also engages directly with students through virtual student engagement events which it uses to pick up key themes and bring them into their quality management processes with the universities they work with. The learnings from these sessions and from the data in the NSS are then tested back with providers. If there are significant concerns these can be escalated into a monthly monitoring process.

One interesting example was given of an event with a number of nursing students who each had a different disability. The conversation was really effective in drawing out how they could be effective nurses in the future with their understanding and empathy for specific conditions. It was a good example of the richness of the conversations during dialogue with students.

Delivery changes were implemented in September 2022 with placements now managed on an all-Wales, encouraging opportunities for students to live and learn locally, with an intention that they will strengthen the future supply of staff into areas such as west Wales and Powys. This could be strengthened further by the implementation of an all-Wales data system to facilitate placements. This would reduce the reporting burden on the NHS and universities, as all partners could pick data directly from the same system, which is consistent with the aim of 'make once use many times', to reduce the cost and improve the consistency of data, to improve the student and staff experience.

Data was a key issue raised in discussions with HEIW staff. In order to help with their monitoring and management arrangements (for example, in checking if students who have agreed to work in the NHS in Wales are doing so) they would require data on graduate outcomes both earlier than it is currently available (the current Graduate Outcomes Survey is conducted 15 months after graduation) and consistently over the first two years of graduate employment. It would also help

with workforce planning. There is clearly potential for data matching exercises to be used in the future, along the lines of the Longitudinal Education Outcomes (LEO) work (employment and earnings outcomes for those who graduated with a first degree (Level 6), Level 7 or Level 8 qualification). Work in other areas such as with administrative health data to inform public health planning demonstrates that the technical barriers to using administrative data for these purposes have largely been bridged, and the challenges tend to be more around ensuring that information governance sign-offs are in place.

A workforce data observatory is being planned by the HEIW to pull together better data on vacancies, the age profile of staff, new entrants to the workforce, and the cross-border flows between England and Wales.

In terms of planning provision there is evidence of HE providers working together in the health and social care space to ensure that there is not nugatory competition. The tendering process includes discussion with likely providers to ensure that requirements are realistic.

In terms of curriculum and placements work is underway by HE providers, facilitated by HEIW to develop more interprofessional education standards. For example, placements should be delivered to consistent standards across different healthcare disciplines in terms of quality and the range of opportunities offered. There are some challenges with the funding streams inhibiting this in areas such as the interface between pre registration and PG study. The levels of Service Increment For Teaching (SIFT) funding support for the NHS to deliver placements also varies from subject to subject, which will feed into what is offered.

HEIW staff highlighted from their engagement with students how student behaviour has changed following the pandemic, with challenges around engagement and self-confidence. These will require changes to the way that education is delivered. The cost of living crisis was also highlighted as impacting on the ability of students to travel to learning and placements, but also influencing the post-study destinations of students, with the cost of living in Cardiff noted as a challenge for people seeking to go into jobs in that area.

The demographic profile of nurses was highlighted with a significant number in older age categories of workers. This was seen as a positive in that they are rooted in the local community and understand it, and still often provide around 20 years' service to the NHS after training. This was contrasted with younger graduates who, with fewer ties and many opportunities open to them, were more mobile and less likely to stay in Wales after learning. The mature learner route was seen as essential for meeting skills demands.

The absence of degree apprenticeships in health care subjects in Wales was seen as a missed opportunity. There are some barriers, including legislative change requirements, that need to be passed in order to introduce this provision. There is appetite from the healthcare sector to do this.

HEIW also raised important issues of the support and development for staff who are teaching the future health service workers. There are a number of change agendas in the NHS including the compassionate leadership approach and new ways of working. There needs to be a systematic approach introduced to ensuring that HE staff are up-to-date with these changes and can inculcate the right knowledge and behaviours in future workers.

Appendix 9: HEFCW Review of part-time HE provision

In 2019/20, a qualitative review of part-time higher education provision in Wales for HEFCW was conducted by Old Bell3 (OB3), supported by data analysis from HEFCW. HEFCW Council formed a task and finish group involving Council members, NUS Wales, and HEFCW staff to guide the review. The aim was to inform changes to part-time higher education policy and funding methodologies from 2020/21 onward. The final report from OB3, received in March 2020, considered input from higher education and further education institutions in Wales, as well as stakeholder organisations and NUS Wales.

The OB3 report observed:

- **Decline in part-time provision:** The number of part-time students in Wales has decreased over the last decade, partly due to changes in funding and student support arrangements. The implementation of the Diamond Review recommendations has improved the parity of support for part-time students and coincided with a small increase in part-time enrolments in 2018/19.
- **Funding challenges:** HEFCW provides around £26m per year to fund part-time UG and PG provision, using credit-based and per capita methods. However, this funding is not directed towards any specific policy or regional needs, and does not incentivise providers to expand or develop their part-time provision. Part-time provision also generates less income for providers than full-time provision, and may require additional costs for infrastructure and support.
- **Strategic commitment:** Successful providers of part-time provision have a clear strategic vision and investment for part-time provision, and adapt their systems and structures to meet the needs of part-time students. Part-time provision also needs to be driven by a national policy and a collaborative sector response to address regional disparities and gaps in provision.

The report offered recommendations for HEFCW to consider how part-time provision should be funded in the future, which include: reviewing the current funding methods and exploring alternative models; developing a funding premium or incentive scheme for part-time provision; and enhancing the data and evidence base on part-time provision and students.

The report also made recommendations in other areas, including:

- **Collaboration and coordination:** The report recommends that HEFCW works with other stakeholders, such as the Welsh Government, regional skills partnerships, employers, and providers, to develop a coordinated and collaborative approach to part-time provision, aligned with regional and national priorities and needs. This could involve sharing good practice, developing joint initiatives, and creating pathways and progression routes for part-time learners.
- **Information, advice and guidance:** The report recommends that HEFCW, in collaboration with the sector, ensures that comprehensive and accessible information, advice and guidance is available to prospective part-time students, covering the range of provision, costs, and financial support options. This could involve enhancing existing platforms, such as Student Finance Wales and Careers Wales, as well as developing new ones, such as a dedicated website or portal for part-time learning.
- **Quality and innovation:** The report recommends that HEFCW, in collaboration with the sector, supports the development and enhancement of quality and innovative part-time provision, which meets the needs and preferences of part-time learners and employers. This could involve promoting flexible and blended learning models, using technology and online platforms, and recognising prior learning and experience. The report also suggests that HEFCW should monitor and evaluate the quality and impact of part-time provision, using appropriate indicators and measures.

Appendix 10: International comparisons

A recent paper¹²⁷ by Dirk van Damme, former head of the Center for Educational Research and Innovation at the OECD, examines the changing landscape of postsecondary education in the industrialised world, where more than half of the young population now hold a tertiary qualification. It argues that the massification of higher education participation has led to challenges such as graduate underemployment, overqualification, mismatches, and substitution effects. It also suggests that the skill demand of the economy is not only increasing, but also diversifying, requiring more varied and flexible postsecondary education offerings.

The paper explores different pathways that countries have taken to address these challenges, such as:

- Maintaining a binary system of higher education and vocational education, as in the Netherlands or Sweden, which allows for some institutional diversification and responsiveness to the labour market needs.
- Developing a strong vocational training system that extends into the postsecondary space, as in Germany, which has successfully bridged the reputation gap between academic and vocational qualifications and met the skill demand of its industrial infrastructure.
- Expanding subdegree, short-cycle programmes, such as associate degrees or microcredentials, which can fill the gap between secondary and bachelor-level qualifications, offer shorter and more flexible trajectories, and increase equity and success rates in postsecondary education.
- Bridging the divide between higher and further education, which are traditionally seen as separate sectors, as in the United Kingdom, Ireland, or Australia, which aim to create a more integrated and coherent postsecondary education system that serves the needs of lifelong learners.

The paper concludes that the postsecondary education landscape is undergoing a positive transformation, and that the challenge is to strengthen the postsecondary education system that falls outside higher education. It also calls for more research and policy attention to the emerging trends and developments in this sector.

One trend we would wish to highlight is the massive increase in the number of programmes being delivered through the medium of English both online and also in country, particularly in EU countries. An increasing number of higher education institutions in the EU are offering taught degrees entirely in English, with the number of English-taught bachelor's degrees (ETBs) having doubled between 2012 and 2017¹²⁸. This poses some interesting challenges and opportunities; providing a second chance to some students in oversubscribed programmes such as medicine and veterinary studies, but also creating potential competition for studying in the UK, with prices often lower than UK institutions' tuition fees.

Australia

Australia has developed a comprehensive HE system anchored around a strong public university base, with quality, access and affordability policy drivers. Key distinctive characteristics of the Australian HE system include:

¹²⁷ Van Damme, D. (2023). *The widening space of postsecondary education. International Higher Education*, (114), 3-5.

¹²⁸ Sandström, A-M and Neghina, C (2017) *English-taught bachelor's programmes: Internationalising European higher education*.

1. **Strong public university system:** Australia has a strong system of 43 universities: 37 public, four private, and two international private universities. Public universities enrol over 80% of domestic HE students. They conduct most of Australia's research and have obligations to serve the public good.
2. **Binary system history:** Australia, like the UK, previously had a binary system of universities and colleges/institutes of advanced education. This influenced the development of its current unified national system, with some universities still showing traces of their former binary roles.
3. **High private returns:** Australian HE is seen as delivering strong private returns, reflected in high demand. This underpins policies like income-contingent student loans and uncapped bachelor degree places.
4. **High international student enrolment:** Australia has the highest proportion of international students in its domestic HE student body in the OECD. In 2019, international students made up over 30% of enrolments.
5. **Focus on quality assurance:** Australia seeks to be a premium provider of higher education. The Tertiary Education Quality and Standards Agency (TEQSA) oversees a quality assurance and regulatory system with a stronger focus on standards than comparable systems.
6. **Funding model:** The bulk of university revenue comes through Australian Government and student loan funding rather than student fees. However, increasing costs have put pressures on budget-derived funding over time.
7. **Emphasis on equity:** Widening participation and supporting equity groups has had a policy emphasis for many years, though attainment gaps still persist particularly for rural, indigenous, low socio-economic status and disabled students.

A 2018 Nous Group review of HE policy¹²⁹ described a system that is likely to resonate with UK HE policy practitioners:

‘There is a set of policy questions that start by mapping the arbitrary nature of the relationships between the financing and regulation of the Vocational Education and Training (VET) sector, the university sector and the non-university HE providers (that most awful acronym, NUHEPs). Starting with the proposition that a modern, resilient and cohesive economy will require harnessing all of the potential in these sectors, the [Business Council of Australia] Future Proof paper proposes a unified funding structure.’

Two other reviews¹³⁰ of the Australian system at that time make the same call to simplify funding and regulation.

Ireland

Ireland has achieved high levels of HE attainment, which has contributed to its economic and social transformation. However, this has also led to an imbalance in the postsecondary system. Sixty-three per cent of the 25-to-34-year age group in Ireland have higher education qualifications. Ireland ranks third in the OECD and second in the European Union for tertiary education attainment.

¹²⁹ Griew, R. (2018). *Three lessons from a decade of HE policy stalemate*. Nous Group, Australia.

¹³⁰ KPMG (2018) *Reimagining tertiary education: From binary system to ecosystem* KPMG Australia, and Maddocks, S., Klomp, N., Bartlett, H., Bean, M., Kristjanson, L., & Dawkins, P. (2019). *Reforming post-secondary education in Australia: Perspectives from Australia's dual sector universities*.

Hazlekorn and Boland¹³¹ observe that ‘Along with membership of the European Union, this level of participation in higher education has led to the dramatic transformation of Ireland’s economy. From having been heavily dependent on protectionist policies and agriculture, Ireland now has one of the most open economies in the world and one of the best performing in the European Union. Without question, adoption of the knowledge economy paradigm has transformed Ireland, with huge implications for tertiary education. The implications for Irish society have also been profound, with the move from a highly conservative, inward-looking society to one characterized by a more open-minded, liberal democratic ethos.’

Hazlekorn and Boland argue that ‘overfocusing on growing the level of higher education attainment has resulted in hollowing out the Further Education and Training (FET) sector’, where FET is seen as inferior and underfunded, and where there are skills shortages, labour mismatches, and income inequalities. Ireland also faces demographic changes that require a more flexible and lifelong learning system.

As a policy response, the government has launched a policy platform to progress a unified tertiary system for learning, skills, and knowledge, which aims to create a single system that responds to individual talents, ambitions, and motivations, and provides opportunities for reskilling, upskilling, and repurposing qualifications. The system would also differentiate and collaborate among institutions according to their mission, role, and responsibilities.

There are several challenges for implementing the policy, such as creating greater connectivity and parity of esteem between FET and HE, addressing the cultural biases and expectations of learners and parents, strengthening FET and addressing the skills imbalance, and clarifying the mission and boundaries of different types of institutions.

Hazlekorn and Boland conclude that Ireland needs to develop, fund, and implement a more balanced education and skills strategy for the future, which would leverage the potential of both FET and HE, and foster a culture of lifelong learning and innovation.

New Zealand

The commencement of higher education reform in New Zealand transpired roughly two decades ago when the Tertiary Education Advisory Commission was convened in response to funding crises, assessments of performance deficits, and a loss of confidence in the government’s management of the tertiary education system. Recognising the need for a more strategic approach, the Commission recommended establishing a Tertiary Education Commission (TEC) to oversee a unified tertiary education framework integrating Vocational Education and Training (VET) and Higher Education (HE).

Observing the New Zealand TEC provides valuable insights¹³². The extensive tasks involved in administering the funding decisions for over 190 HE providers registered with TEQSA, along with the broader responsibilities associated with tertiary education integration, are considerable. Managing such responsibilities, including advising on policy and strategy while shouldering political accountability, may prove to be an overwhelming volume of work.

Nevertheless, considering a TEC with a specific focus on influencing the sector to achieve targeted outcomes – such as increasing equity in student participation and success, and expediting progress,

¹³¹ Hazlekorn, E., & Boland, T. (2023). ‘Ireland: Toward a unified tertiary education system.’ *International Higher Education*, (114), 5-7.

¹³² HEDx. (2023). *Global lessons from reviews of higher education policy*.

especially for Indigenous students – merits consideration. Drawing from the New Zealand example, where the TEC prioritised equity for Māori and Pacific students, such an entity could potentially serve the purpose of 'holding our feet to the fire,' ensuring accountability and progress.

The New Zealand Productivity Commission conducted an inquiry into new models of tertiary education and published its final report in March 2017. Some of the findings of the inquiry that specifically related to higher education were:

- The current system serves many students well, but it could be better, and it could do more to extend the benefits of tertiary education to groups who currently can't access it.
- The system is tightly controlled and inflexible. Providers have too few incentives to find better ways of reaching and teaching learners.
- The system is not well-placed to respond to the changing nature of work, technology, and learner preferences.
- The system is characterised by high levels of policy instability, low levels of trust, and high regulatory burden.

The inquiry also made several recommendations to improve the system, such as enabling more self-accreditation, facilitating more innovation, and providing better careers education.

Norway

The distinctive characteristics of the Norwegian tertiary system include:

- **Diverse:** The system consists of 24 public and 25 private universities and university colleges, 73 vocational colleges, and several study centres that offer programmes in different parts of the country. The system aims to accommodate a diversity of students and a multifaceted workforce that is undergoing change.
- **Decentralised:** Half of the population in Norway lives within ten kilometres of at least ten different types of programmes and nearly everyone lives within one hundred kilometres of a programme.
- **Flexible and accessible:** The system offers a range of flexible programmes that are not location-based, such as web-based, session-based, module-based, part-time, and decentralised programmes. These programmes are intended to make education more available to people who are unable or unwilling to move away from rural areas or to combine education with work and family life. Web-based instruction at universities and university colleges is rising, while decentralised instruction is declining.
- **Relevant and responsive:** The system seeks to align the supply and demand of education programmes with the skills needs of the labour market and the society. This involves strengthening cooperation between educational institutions, county councils, regional skills forums, enterprises, and other actors. The system also supports lifelong learning and skills development through various application-based schemes and programmes.
- **Quality-oriented and research-based:** The system strives to ensure high-quality education programmes that are adapted to the needs of individuals and working life. The system also emphasises research-based education, active learning, pedagogical skills, and digital transformation. The system is subject to quality assurance and evaluation by national agencies and frameworks.

There are several initiatives aimed at enhancing education and skills development in Norway:

- **Skills Programme:** This initiative, run by Skills Norway, develops education programmes that align with the needs of the working world and can be combined with near full-time employment. It includes grants for developing flexible continuing education programmes to improve access to skills, digitalise businesses, and foster cooperation between educational institutions and businesses.
- **Tripartite Industry Programme:** This programme aims to ensure that employees, furloughed personnel, and unemployed individuals in industries undergoing significant change receive the necessary skills development. It is a tripartite collaboration between the government, social partners, and various educational institutions.
- **Skills Pilots (2020–2022):** This initiative aims to identify enterprises' needs for skills-enhancement measures and facilitate adapted continuing and further education programmes in rural Norway. The projects under this initiative contribute to the development and testing of new methods and models to achieve this objective, supporting the county councils' strategic roles and responsibilities in regional skills policies. The target groups of the projects are public and private enterprises, particularly small businesses in rural Norway.

The Norwegian Ministry of Education and Research's strategy for flexible and decentralised Education has four priorities:

- **Priority area 1: Increasing access to flexible and decentralised programmes throughout the country.** It includes measures such as funding, developing fully digital delivery, and promoting flexible and decentralised programmes, improving the knowledge base and reporting on them, and establishing a separate rural programme to stimulate demand in rural areas.
- **Priority area 2: Strengthening cooperation between actors in education and working life and ensuring a better connection between supply and demand.** This area aims to improve the coordination and communication among various stakeholders, such as county councils, educational institutions, enterprises, social partners and students, to identify and meet the skills needs of the regions and the labour market. It also involves measures such as establishing regional meetings, developing a digital skills platform, and supporting study centres and similar actors.
- **Priority area 3: Efforts to ensure high-quality flexible education that is adapted to the needs of individuals and working life.** This area emphasises the importance of maintaining and enhancing the quality of flexible and decentralised programmes, in terms of learning outcomes, research basis, traineeships, skills training and assessment. It also involves measures such as developing digital teaching methods, ensuring student involvement and feedback, and facilitating recognition and accreditation of prior learning.
- **Priority area 4: Better framework conditions that offer better opportunities for institutions, working life and students.** This area addresses the need for improving the legal and regulatory framework, the funding system, and the student support system to facilitate more flexible and decentralised education. It also involves measures such as reviewing the admissions regulations, developing fully digital programmes, and giving students good framework conditions for success in their education.

United States Community Colleges

US community colleges are public two-year institutions that offer associate degrees, certificates, and non-credit programmes in various fields. They enrol about 34% of undergraduate students in the US

and have a mission of equity and access¹³³. These nearly 1,100 institutions are perceived simultaneously as an extension of secondary education, a low-cost option for the first two years of university education, and a trustworthy delivery mechanism for postsecondary vocational education and training (VET).

- **Innovations and influences:** They have been agile and adaptable to social, economic, and political changes, driving some key transformations in US higher education. Some of their innovations include workforce development and microcredentials, cost-sharing arrangements for professional development, corequisite developmental education, guided pathways, and dual and concurrent enrolment for high school students.
- **Challenges and opportunities:** They face challenges such as low retention and transfer rates, limited international labour markets, and bureaucratic hurdles. They also have opportunities to leverage their local relevance, diversity, and quality to attract and retain skilled migrants and contribute to the development of their communities.

US community colleges emerged in the early 20th century as an alternative to the elite and selective four-year universities. The diversity and inclusiveness of community colleges is notable. They serve students from various backgrounds, ages, and goals, and offer a range of academic and vocational programmes. They are also relatively affordable, as they charge lower tuition fees than the traditional universities and have open admission policies.

Some of the innovations that community colleges have introduced, and the influences that they have had on US higher education, especially in response to the changing needs and demands of the society and the economy are significant. Community colleges have developed new programmes and credentials, such as microcredentials, that are aligned with the skills and competencies required by employers and industries. Community colleges have collaborated with other stakeholders, such as employers, universities, and governments, to create cost-sharing arrangements, articulation agreements, and policy reforms that support the professional development and mobility of their students and faculty.

Some of the challenges and opportunities that community colleges face in the current and future contexts include the difficulties in maintaining and improving their quality and outcomes, such as low retention and transfer rates, low completion rates, and low earnings of their graduates. Community colleges have faced barriers to expanding their international reach and recognition, such as visa restrictions, accreditation issues, and competition from other providers. Richard R. Hopper suggests that community colleges can overcome these challenges and seize the opportunities by leveraging their strengths, such as their local relevance, their diversity, and their quality assurance mechanisms¹³⁴.

Hopper emphasises the importance and potential of community colleges for the US and the world, especially in the post-pandemic era. He argues that community colleges can play a vital role in addressing the skills gap, the equity gap, and the innovation gaps that exist in US economy and society. The author calls for more research and advocacy to support and promote the value and impact of community colleges.

¹³³ Hopper, R. R. (2023). 'US community colleges: Innovations, challenges, and opportunities'. *International Higher Education*, (114), 8-10.

¹³⁴ Hopper, R. R. (2023). 'US community colleges: Innovations, challenges, and opportunities.' *International Higher Education*, (114), 8-10.

Appendix 11: Collaborative vehicle

The research highlighted examples of how HE institutions collaborate with partners in the private and public sectors in the development of academic provision at the undergraduate and postgraduate levels, and where training courses to up-skill staff are also offered collaboratively. A prime example is the partnership work between HEIs and their local NHS Trust. This approach is ideal if the local HEI has the required expertise, facilities, time and resources to develop and maintain such provision, but is less attractive if the courses do not meet the needs and expectations of the sponsor. There is also a danger that such a local partnership could result in duplication of provision and resources.

It is envisaged that there would be considerable benefits for the HE Sector and the employers if interested parties could collaborate to create a vehicle through which employer-facing provision could be developed, and offered through diverse methods, by experts in the field (either from one or many Welsh HEIs, FE Colleges and or employers) and be made available to employers, irrespective of the place of employment.

A collective approach could result in the development of truly innovative provision delivered in ways that meet the requirements of the employer. The collaborative vehicle would operate within a nationally developed academic strategy (to include Welsh-medium provision – in partnership with the Coleg Cymraeg Cenedlaethol), drawn up by key stakeholders and overseen by a strong national Management Board. It would adopt a business model with the aim of generating profit through the development of reputable provision which would offer meaningful up-skilling opportunities for the Welsh workforce. It would develop a quality assurance and control system, designed by the awarding bodies, professional accreditation bodies and the Quality Assurance Agency (for HE provision) which would be robust but sufficiently bureaucratically light, leading to nationally recognised awards (whether credits or qualifications) which would be transferrable within Wales, and possibly beyond. The vehicle would have its own governance structures, underpinned by legal articles, and a financial model to manage and share the costs and profits associated with the delivery of the employer-facing provision. Systems to manage common issues that might arise, such as management and ownership of resources, intellectual property rights, data protection, appeals and complaints would be developed collectively. Successful models could, in turn, be rolled out nationally (UK) and internationally. Moreover, by using the networks and partnerships developed via Taith funding (particularly Pathway 2 funding) the development and delivery of such employer-facing provision could be informed and enhanced by international collaboration and the sharing of good practice. Finally, it is envisaged that the new vehicle would work collaboratively with the Coleg Cymraeg Cenedlaethol to deliver employer-facing Welsh-medium provision.

Wales is fortunate to be able to benefit from an organisation which already operates on an inter-sector and cross-sector basis, which offers collaborative provision on a national basis, in line with a nationally approved strategy. The Coleg Cymraeg Cenedlaethol could offer answers to some of the constitutional and legal challenges of delivering national employer-facing provision.

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