

Educational gains explored

Independent report on higher education providers' approaches to educational gains in the Teaching Excellence Framework (TEF) 2023

Report to the Office for Students

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Contents

Executive summary	2
Focus and purpose of this report	2
Summary	2
1 Introduction	6
2 Context	7
3 Definitions of ‘educational gains’ by providers	9
3.1 Definitions of educational gains: values and mission	9
3.2 Comprehensive, targeted and individually tailored gains	11
3.3 Discipline-based and interdisciplinary gains	15
3.4 Distance travelled by students	16
3.5 Co-creating definitions with students and employers	17
4 Supporting students to achieve educational gains	20
4.1 Embedding in curriculum: cross-institutional models	20
4.2 Embedding gains through cross-institutional pedagogy	22
4.3 Enabling gains through specialist resources and locations	23
4.4 Gains made through extra-curricular and co-curricular activities	24
4.5 Careers guidance, work-based and professionally orientated opportunities	28
5 Measuring educational gains	29
5.1 Recognising the complexity of measuring	29
5.2 Current approaches to measuring gains	30
5.3 Providers’ plans for educational gains	34
6 Concluding discussion	37
6.1 Educational gains’ place in the TEF process	38
Annex: Educational gains in your context – prompts for discussion	40
A. Articulating educational gains in your context	40
B. Supporting students to achieve educational gains	40
C. Evaluating educational gains	41
D. Communicating educational gains	41
Bibliography	42

Executive summary

Focus and purpose of this report

1. This independent report, commissioned by the Office for Students (OfS), explores the ways in which higher education providers taking part in the Teaching Excellence Framework (TEF) 2023 assessment define and articulate their students' 'educational gains'. It outlines providers' strategies for supporting students to achieve educational gains, and the ways in which these gains are measured.
2. Identifying the range of approaches taken by the very diverse providers in the higher education sector in England, the report considers possibilities for the theme of educational gains for future TEF assessments and for the sector in general. The purpose of the report is to engage and inform higher education providers looking to enhance their approaches to defining, supporting and evaluating their students' educational gains.

Summary

3. The TEF assessment addressed the theme of educational gains explicitly for the first time in 2023, following the Pearce Report (2021). As part of the assessment of student outcomes, TEF included three 'features of excellence' related to educational gains:
 - A higher education provider's own articulation of the gains it intends its students to achieve
 - Its approach to supporting these educational gains
 - Any evidence of the gains achieved by the provider's students.¹
4. This report is based on submissions from the 51 providers that were rated Gold for 'student outcomes' in the TEF. It explores how these submissions covered each of the features related to educational gains.
5. Provider submissions articulate their students' educational gains in a range of ways. The gains are often framed in terms of a provider's particular mission and values. Gains are expressed in terms of both:
 - **Individual benefits** for students through their acquisition of knowledge, skills and attributes, and
 - **Collective benefits** for society; in this dimension, educational gains are seen as social and community goods, contributing to goals such as social mobility, sustainability, social cohesion and social justice.
6. Three broad types of gains are explored in the provider submissions: comprehensive, targeted and personalised.

¹ See page 11 of OfS Regulatory advice 22, at www.officeforstudents.org.uk/publications/regulatory-advice-22-guidance-on-the-teaching-excellence-framework-2023/.

- **Comprehensive gains** are those which all students are expected to achieve; for example, this might be a set of commonly expected learning outcomes or ‘graduate attributes’.
 - **Targeted gains** are expressed in terms of those shaped for a particular type of student, for example those who are the first in their family to access higher education, or mature students who are learning at a distance.
 - **Personalised gains** are those adapted for each student; they are defined and developed through individualised engagements, for example through personal tutorial support. Many providers also highlight the importance of both **disciplinary-based and interdisciplinary gains**, articulating the benefits of each.
7. Some providers consider gains explicitly in terms of ‘**distance travelled**’ by students from the time they enter their studies to the time they complete. There is variability in terms of the extent to which providers deem it possible to characterise and measure distance travelled.
 8. Providers articulate **a spectrum of ways in which students are supported** to achieve educational gains. These include explicitly embedding them across curricula, for example by using a shared curriculum framework, and promoting them through foregrounding specific ways of teaching, such as research-based learning or project-based learning. Gains are also explicitly supported through the provision of **specialist resources and learning environments**.
 9. **Co-curricular and extra-curricular activities** are also highlighted as important enablers of educational gain. These are very wide ranging, and include the clubs and societies run by students’ unions and guilds; institutional awards; volunteering and civic engagement; and ‘students as researchers’ schemes. Additional ways of supporting students include **connecting students with alumni; learning development centres; strategies for enhancing students’ mental health and wellbeing; and targeted financial support**. The importance of **careers-focused guidance** and structured opportunities for students to take up work-based placements and engage with professionals is also highlighted in the provider submissions.
 10. Providers vary in their current approaches to **measuring educational gains**. Core disciplinary gains are, of course, measured through student assessment on their chosen programmes of study, but some providers also attempt to measure wider gains through proxy measures such as student surveys and student self-assessments. In some contexts, ‘distance travelled’ is calculated by comparing students’ educational outcomes with those anticipated in relation to their entry qualifications. This is not considered feasible for providers whose students have very high entry qualifications within a small range. Some providers use broad-based ‘learning analytics’ to provide data to help understand how students are engaging with their studies and achieving educational gains, while others have developed bespoke schemes for measuring a selection of identified gains as a proxy for measuring gains more comprehensively. Noting the complexity and multi-layered definitions of the gains themselves, providers do not purport to measure all educational gains for all students; rather, they highlight the gains most appropriate for the provider context. Nevertheless, providers outline a range of ways in which they plan to enhance their capacity for measuring educational gains, noting the potential of developments in artificial intelligence (AI).

11. The following conclusions are drawn:

- Students' **educational gains are core to providers' missions and stated values**. They benefit both individual students and communities more broadly.
- Articulations of **educational gains can include but are not limited to a set of core graduate skills and attributes**, and these remain dynamic in the context of rapid changes in society, technology and the workplace.
- Educational gains are broader than learning gains. They include additional benefits, such as building new networks and personal, cultural and careers-related opportunities.
- The **focus on educational gains** can be on those that are **comprehensive** (gains shared by all); **targeted** (for example, at a specific demographic group); and **personalised** (curated for individual students). These are not mutually exclusive.
- The knowledge, skills and attributes developed through core academic and professionally orientated **programmes of study remain central**. These include both **disciplinary** and **interdisciplinary gains**.
- Curriculum design, pedagogic teaching approaches and resources are all of central importance in maximising students' learning outcomes.
- Co-curricular and extra-curricular activities, including connecting with alumni, employers and civic society, **provide a rich menu of opportunities** for students to extend their educational gains.
- Students and student groups are differently situated with respect to their opportunities to achieve gains, and providers are committed to offering support in a range of areas, including finances and mental health and wellbeing.
- Measuring educational gains is complex. Where a clearly defined set of gains is foregrounded, such as a particular set of skills, appropriate metrics can be selected that act as proxies for those gains. However, students' actual gains will be broader.
- Measuring the distance travelled by students is highly complex. In some but not all contexts it can be estimated through proxy measures.
- Students can have a proactive role in articulating, curating, tracking and measuring their own educational gains, both within and beyond the curriculum.
- A provider's **stakeholders**, including employers and their representatives, can make a meaningful contribution to both articulating and measuring educational gains.

12. The report also concludes that while no single, sector-wide approach to defining and measuring educational gains is proposed either by the TEF guidelines or the providers themselves, the value of articulating the depth and range of gains achieved by students within their particular contexts resonates through the submissions. Articulating gains reflects benefits to students that are deeper and wider than gaining qualifications and graduate employment. This is especially so where gains are discussed and defined with staff, students, alumni and external stakeholders such as employers.

13. There is now an **opportunity for the sector to share good practices** relating to educational gains more widely, including the articulation of educational gains as being both personal gains – benefiting individual students and improving their life prospects; and collective gains – benefiting wider society, communities and the economy. In future TEF iterations, the OfS may wish to refine its framing of educational gains, within the broader contexts of assessing student experiences and student outcomes across the sector, in the light of these findings, but continuing to include a focus on educational gains in the TEF is recommended.

1 Introduction

14. The dataset analysed in this report is the set of narrative submissions to the Office for Students (OfS) in 2023 by the 51 universities and colleges (referred to collectively in this report as 'providers') that were awarded a Gold rating for 'student outcomes' by the Teaching Excellence Framework (TEF) panel. Provider submissions, each up to 25 pages in length, offered both qualitative and quantitative evidence on educational gain for the TEF panel. Student submissions were an important part of the evidence of excellence for the panel. However, as these understandably made very few references to the newly introduced concept of educational gains, the main focus here is on the provider submissions. Provider submissions include accounts of ways in which providers are collaborating with students and their representatives to develop strategic, values-based approaches to educational gains and these will be considered as part of the discussion.
15. Some provider submissions, in their sections on educational gains, make reference to recently published research literature on the subject of 'learning gain', a term more familiar to the sector than educational gains but closely related to it. In the years before the publication of details of the TEF 2023 assessment, the learning gain pilot projects programme run by the Higher Education Funding Council for England (HEFCE), inherited by the OfS, had opened up a range of definitions of and approaches to learning gain (Kandiko Howson 2018) and a number of research publications on the subject. More recently, an analysis of literature relating to educational gains has been published by the QAA as part of an ongoing project (Kandiko Howson/QAA 2023). While this report will make some reference to definitions of learning gain in the literature, its focus is specifically on how providers of higher education in England whose students are gaining excellent student outcomes articulate, support and set about measuring these gains as evidenced by provider submissions to TEF 2023.

2 Context

16. In 2023, a panel made up of both academic experts in learning and teaching and student representatives carried out TEF assessments on behalf of the OfS. The main purpose of this round of TEF assessments was to drive improvement, or enhancement, of higher education provision above the OfS' s high quality baseline.²
17. The TEF panel examined data relating to each of the 227 higher education providers taking part in the assessment. Along with the narrative submissions of up to 25 pages by each provider, panel members discussed a range of quantitative datasets.³ The panel took into account the missions and student demographics of each provider in a very diverse sector. The panel then gave each provider an overall rating of Gold, Silver, Bronze or Requires improvement, and two underpinning ratings: one for student experience and one for student outcomes, in line with the published guidelines.⁴ The OfS has published the ratings, together with the provider and student submissions and the summary panel statements setting out their reasoning for the outcome.⁵
18. The OfS designed the 2023 TEF assessment following an independent review by Dame Shirley Pearce and a consultation exercise.⁶ Pearce's detailed report to the Secretary of State for Education proposed that a new dimension should be introduced to the TEF: 'Educational Gains'. Pearce recommended that TEF asks for evidence, determined by providers, that addresses 'what our students gain from our educational experience and how we evidence that' (Pearce report 2021, p10). Her report suggested that educational gains 'might include knowledge, skills, experience, work readiness, personal development and resilience', but also noted that 'This will be conceptualised differently in different institutions', as there is no single nationally comparable metric to draw on (Pearce report 2021, p10). The Pearce report highlighted the need for each provider to 'demonstrate how, within their own particular mission, they articulate and measure (quantify if possible) the educational gains they aim to provide for their students' (Pearce report 2021, p10).
19. The published guidelines for TEF 2023 (Regulatory advice 22) draw on Pearce's report. Providers were invited to define educational gains as relevant to their mission and context, and the gains could include (but were not limited to) academic development, personal development and work readiness. For the first time educational gains have become a key theme in the TEF assessment. The overall TEF framework (Regulatory advice 22, p10) brings together two 'aspects of excellence' in higher education provision:
 - The student experience aspect, which focuses on the extent to which teaching, learning, assessment and the educational environment deliver an excellent educational experience for each provider's students.

² <https://www.officeforstudents.org.uk/news-blog-and-events/blog/introducing-the-tef-panel/>

³ <https://www.officeforstudents.org.uk/data-and-analysis/data-used-in-tef-2023/>

⁴ <https://www.officeforstudents.org.uk/publications/regulatory-advice-22-guidance-on-the-teaching-excellence-framework-2023/>

⁵ <https://www.officeforstudents.org.uk/advice-and-guidance/the-tef/tef-2023-ratings/>

⁶ <https://www.gov.uk/government/publications/independent-review-of-tef-report>

- The student outcomes aspect, which focuses on the extent to which the provider's students succeed in and beyond their studies, and the educational gains delivered for students.
20. The guidelines (Regulatory advice 22, p11) explain that the TEF assessment will consider three 'features of excellence' relating to educational gains:
- A provider's own articulation of the gains it intends its students to achieve
 - Its approach to supporting these educational gains
 - Any evidence of the gains achieved by the provider's students.
21. Since 'educational gains' is new to TEF, the guidelines emphasise the theme's exploratory nature:

We recognise that there is currently no national measure of educational gain, and that many providers may not have developed their own approach to measuring the educational gains they deliver for their students. The approach to assessing educational gain in the TEF 2023 is intended to enable providers to demonstrate a clear articulation of their ambitions for educational gain, credible approaches for delivering this, and where possible evidence that it is delivered in practice. It is intended to allow providers time to establish their practice in measuring and evidencing educational gains, which could then become the focus of assessment in subsequent TEF exercises. (Regulatory advice 22, p11)

22. Acknowledging that providers may be at an early stage in terms of thinking explicitly about educational gains, the guidelines explain that providers will not be unduly penalised in the assessment for not having developed approaches to measuring educational gains:

Panel members should not prevent a provider from being awarded higher TEF ratings solely based on an absence of its own developed measures of educational gains. (Regulatory advice, p65)

23. The definitions of 'outstanding' for these three features of excellence are as follows:

SO4. The provider clearly articulates the range of educational gains it intends its students to achieve, and why these are highly relevant to its students and their future ambitions.

SO5. The provider's approaches to supporting its students to achieve these gains are evidence-based, highly effective and tailored to its students and their different starting points.

SO6. The provider evaluates the gains made by its students, and demonstrates its students are succeeding in achieving the intended gains.

24. It is within this context that providers developed their TEF submissions and TEF panel members assessed evidence relating to educational gains in the data before them. This report explores educational gains against this backdrop; it looks at evidence generated by TEF 2023 and considers future possibilities. It is important to note, however, that while the report is based on providers with Gold student outcomes, that does not mean that all their educational gain features were rated highly by the panel. The rating for outcomes was based on a holistic assessment of a wider set of information of which educational gain was one part. Readers should not therefore assume that all the examples given in this report were considered excellent by the panel.

3 Definitions of ‘educational gains’ by providers

25. Higher education providers’ narrative submissions to the TEF panel typically respond to the published guidelines by providing one or more definitions of ‘educational gains’ relevant to their own mission and values. Most submissions begin with an outline of the distinctive character of the provider’s mission, and this is often linked explicitly with an institutional approach to intended educational gains. This is so across the full range of providers explored in this report, including further education colleges offering higher education, smaller specialist providers, and larger more comprehensive providers.

3.1 Definitions of educational gains: values and mission

26. Overarching definitions of educational gains in the submissions vary in form: most are in narrative format, while some are illustrated by one or more graphical models. The following examples, illustrative of the range of definitions, show that while there is a considerable degree of commonality of core ideas, there are also variations in nuance.
27. Providers often explain their approach to educational gains by defining them explicitly in relation to their institutional mission, strategy and values. The following illustrative examples suggest that while providers’ definitions of educational gains often make reference to the OfS examples given in the TEF guidelines of ‘work readiness, personal development and academic gain’, they have roots in wider social values.

The University of Manchester (PS p21⁷) ‘While discipline mastery is expected from a Manchester graduate, our educational gains transcend academic excellence. Our breadth of opportunities also enables students to prepare for their futures, develop as excellent, distinctive employees or entrepreneurs, and contribute as capable, confident citizens. We base our approach on our values of knowledge, wisdom, humanity, social responsibility and pioneering spirit, which characterise our University, home city and region’.

City, University of London (PS p21) ‘Our founding institutional mission to provide for ‘the industrial skill, general knowledge, health and wellbeing of young men and women belonging to the poorer classes’ succinctly encapsulates the three kinds of educational gain suggested by the OfS and its learning gain project as major areas of gain: work readiness; personal development; and academic gain.’

University of Leicester (PS p22) ‘Fostering social responsibility, community-mindedness and environmental responsibility reflects the values and ethos of our University. We recognise the importance of widening our students’ horizons and empowering them to engage in new experiences.’

28. Attributes such as intercultural competencies, social responsibility, community-mindedness and environmental responsibility are intended, arguably, to give students a competitive edge with respect to building successful futures, but they highlight the benefit of education not only to the individual students themselves but also to local and wider communities.

⁷ Page numbers refer to those in the relevant provider submission (PS).

29. Norwich, University of the Arts highlights qualities such as energy and confidence, personal attributes, and links these with 'shaping the world in which [students] live'. Similarly, Solent University explains that it is enabling graduates to become 'work-ready, world-ready and future-ready' but also links these individual gains to 'social mobility, social justice and inclusivity'.

Norwich, University of the Arts (PS p21) 'We aim to support students to succeed as partners and activists in their education journey and enable them to graduate with the energy and confidence to activate change and transformation, shaping the worlds in which they live, the enterprises they establish and the places they work. These aims are actioned through the architecture of course design and curriculum at Norwich.'

Solent University (PS p21) 'Solent's Strategic Vision states our commitment to producing graduates who are 'work-ready, world-ready and future-ready.' Our range of Educational Gains (EG) therefore reflect our conceptualisation of work-readiness. We want our students to leave us with a clear understanding of the knowledge and skills that they take to the employment setting alongside the confidence to contribute and to make a difference... Our EGs are equally driven by our institutional commitment to social mobility, social justice and inclusivity'.

30. Blackpool and the Fylde College writes extensively about educational gains. The provider identifies knowledge, skills, work-readiness and personal development, alongside disciplinary gains, but also the importance of making 'maximum impact' on social justice, sustainability and social cohesion, and challenging intergenerational poverty. It also notes the very different starting points and end points of each student.

Blackpool and the Fylde College (PS p23) 'We recognise how each student and apprentice starts at a different point, based on their own individual past experience, and we understand that we need to constantly finesse our practices to achieve individualised educational gains for each student'.

31. The definitions above illustrate an interesting juxtaposition in provider submissions more broadly. Educational gains are seen both as:

- Individual benefits for students through their acquisition of knowledge, skills and attributes, and
- Collective benefits for society; in this dimension, educational gains are seen as social and community goods, contributing to goals such as social mobility, sustainability, social cohesion and social justice.

32. There is a constant iteration across the submissions between these two framings.

3.2 Comprehensive, targeted and individually tailored gains

33. The provider submissions also show a spectrum of approaches to educational gain with respect to emphasis on:
- Comprehensive gains: that is, gains to be made by all of the provider's students.
 - Targeted gains: that is, gains explicitly targeted at a specific demographic group, for example those who are from families for whom higher education is not the norm or distance learners. This demographic may also form all or most of the provider's student body.
 - Tailored gains: that is, gains shaped for individual students, for example through individualised tutorial support and learning plans.
34. Some providers orientate their articulations of educational gains to more than one of these, as they can of course be complementary, while others focus more closely on one.

3.2.1. Comprehensive gains

35. The following examples are illustrative of the 'comprehensive gains' approach, whereby all students studying with a given provider should achieve a particular set of gains or outcomes, with respect to what they know and can do. The 'all students' approach typically centres around *either* a set of transferable skills, competencies or wider 'graduate attributes', acquired regardless of the subject studied, *or* a set of subject-based skills, competencies and attributes which, in the case of highly specialist providers such as music conservatoires, applies to all students because they all share a subject orientation.
36. The following are illustrative of definitions relating to comprehensive educational gains. It is important to note that it is typically made clear in the submissions to the TEF panel that these gains are acquired by all students *in addition to* the subject-specific intended learning outcomes associated with the specific course(s) each student has studied. Subject-based education is written about at length in the submissions within the framing of the first 'aspect of excellence', student experience.
37. For the purpose of the TEF exercise, however, providers with a broad subject offering have often chosen to emphasise the collective gains that transcend or resonate across different subject areas, while for specialist providers the emphasis is on the shared outcomes arising from the depth and scope of the specialist subject(s). There are practical reasons why this would be so; there is not space in a 25-page written submission to articulate large numbers of sets of subject-specific gains. It therefore makes sense for larger multidisciplinary providers to have used the space available for articulating educational gains by focusing on comprehensive gains, such as transferable skills or generic graduate attributes, while also making reference to the diversity of the rich gains made by students through their subjects of study.

University of Birmingham (PS p23) 'We define educational gain by the competencies and behaviours that our students develop during their time with us: their knowledge and skills acquisition, but also the broader intellectual, ethical, and civic/global attributes that we believe are part of a holistic university education, and that are increasingly recognised as supporting personal success, career readiness, and wider societal gain. Our approach to teaching and learning is designed to transform the way our students think and act. We

support our students to become curious, critical, reflective and independent learners, able to make decisions with confidence, resilience and emotional intelligence.'

Loughborough University (PS p22) 'Our approach to education and student experience has at its heart a focus on ... encouraging students to develop an enquiring and adventurous mindset through working collaboratively; providing all students with opportunities to develop skills for life through both the curriculum and extra-curricular opportunities...'

38. The term 'graduate attributes' is sometimes used as a heading under which to define this comprehensive set of intended gains. Imperial College London, for example, describes its intended graduate attributes as a 'set of core competencies that our graduates should possess on successful completion of their programmes' (PS p18). The University of Exeter also summarises its graduate attributes. It explains that it has drawn on relationships with industry, feedback from alumni and 'analysis of the global changes in the world of work' to shape graduate attributes under the following headings: intellectual enquiry, problem-solving skills, entrepreneurship, digital literacy, cultural competence and global citizenship' (PS p21).
39. These broad competencies and attributes include disciplinary-based and interdisciplinary understandings and skills (see Section 3.3). However, as Imperial College London makes clear, these cannot be a fixed set of intended outcomes since '[Many students] will be in professions that don't yet exist, addressing global challenges that we don't yet fully understand or even recognise' (PS p18). The University of Exeter's characterisation of global changes echoes this. Although characterising a set of expected outcomes in terms of skills and personal attributes can be a helpful starting point and provide a generative framework of expectations that apply across programmes of study, such a framing should not be static or inflexible.
40. It is evident from across the range of submissions that providers with excellent outcomes do articulate an indicative set of expected graduate skills and personal attributes, either in prose or graphical form, but they do not limit their discussion of gains to a particular set of comprehensive attributes. The discussion is typically widened to highlight additional gains made by students as they select from the wide menu of opportunities made available to them by the provider, its departments and its stakeholders. Changing global, national and regional landscapes mean that any characterisation of graduate attributes, or comprehensive gains, must remain dynamic.

3.2.2 Targeted gains

41. Along with the 'comprehensive gains' approach, we see in some provider submissions a particular emphasis on the needs of a specific student demographic. Solent University, for example, notes the need to be mindful of the particular journeys of students who come to it 'without the educational (cultural or social) capital of traditional student groups' (PS p21). Orientating its articulation of educational gains towards work-readiness in the context of their 'institutional commitment to social mobility, social justice and inclusivity' (PS p21), it explains further:

Solent University (PS p21) '[W]e recognise that we sit in a different space to providers whose students may arrive already on this journey, with attributes and gains derived from existing social networks and/or educational experiences. ... [W]e are seeking the overall positive outcome of a greater proportion of our students, including those from widening participation target groups...'

42. Providers from across the range make reference to the particular needs of ‘non-traditional’ student groups to gain enhanced life choices, including meaningful employment. These articulations are often explicitly linked with providers’ mandatory access and participation plans, which ‘set out how higher education providers will improve equality of opportunity for students with disadvantaged backgrounds to access, succeed in and progress from higher education’.⁸

South Devon College (PS p21) ‘[We] conceive educational gain as the academic, personal and professional enhancements students make as they undertake their undergraduate studies with us. Our theory of change ... recognises students’ starting point and the barriers they face as predominately widening participation students or from groups under-represented in higher education, and with low tariff-point qualifications.’

City, University of London (PS p2) ‘We provide a tailored approach to supporting excellent outcomes and educational gains for our students, which includes careful consideration of their intersectional identities.’

43. The Open University explicitly links the need for their part-time and mature students to succeed with respect to academic gains (subject knowledge and academic skills), personal gains (soft skills and personal growth) and graduate gains (work readiness, transferable skills and confidence), noting the benefits of these to physical and mental health.
44. Characterising educational gains explicitly in terms of a group of students who all have something in common – for example, they are distance learners, or they are the first in their family to access higher education – shows that providers are tailoring their provision for their own mix of students. This is a characteristic of outstanding provision in the first feature of excellence under the student experience aspect of TEF (Regulatory advice 22, Annex A):

SE1. The provider has embedded outstanding teaching, feedback and assessment practices that are highly effective and tailored to supporting its students' learning, progression, and attainment.

45. Articulating intended educational gains in relation to one or more groups of students shows strategic awareness of a provider’s distinctive mission, but of course every student, even if a member of a particular student demographic, is an individual, so arguably the ‘holy grail’ of educational gains is the ability to tailor provision to each student.

3.2.3 Individually tailored gains

46. Some providers emphasise the difficulty or undesirability of expecting all students, or even any group of students, to make the same kinds of gains. Individual students can have very different prior learning experiences and, importantly, very different educational and life goals. The University of Plymouth writes of ‘supporting a diverse student population to maximise educational gains’ (PS p1), and this is a theme echoed across many different types of providers in the context of personalising provision so that educational gains are tailored to individual circumstances. Hartpury University (PS p20) similarly aims to create ‘life-changing educational experiences that empower students to transform their passions into measurable, career focused outcomes, valuing their different starting points and associated educational and personal distances travelled’.

⁸ <https://www.officeforstudents.org.uk/advice-and-guidance/promoting-equal-opportunities/access-and-participation-plans/>

47. Within the dataset of submissions examined for this report, there are examples from both large comprehensive providers and smaller specialist providers of a particular focus on personalisation. UCL, a very large multi-disciplinary provider, notes the wide range of aspirations of its students:

UCL (PS p22) 'What makes a UCL education distinctive is the ability for students to curate pathways of modules from across disciplines so that their programmes are tailored to their chosen futures. In line with this core principle, we do not want to prescribe a set of Educational Gains for UCL; instead, we have worked with the Students' Union to co-create a definition which can be personalised to individual students' ambitions.'

48. UCL goes on to explain that having undertaken a literature review and an internal research project to gain insights from current students, it has found that students want to be able to make an impact not only academically and with their careers, but also in the areas of innovation and enterprise, social impact, and personal impact, whereby they see themselves 'belonging to a global community and making a meaningful difference to the world around them' (PS p23).
49. For more specialist providers, the articulation of personalisation may be framed within the context of the subject discipline. The following examples illustrate the individualised nature of degrees in music and ballet.

The Royal Academy of Music (PS p18) '[We] are reluctant to be too prescriptive in the ways we articulate our expectation of learning gains to our students. We embrace and support the diversity of our students' life stories: students come to the Academy from a wide range of social and educational backgrounds, and when they graduate they disperse around the music world and continue to contribute in manifold ways to their local and global communities. This diversity provides us with an opportunity to support our students in ways that motivate engagement and deep learning according to our students' individual needs.'

Rambert School of Ballet (PS p8) 'Each BA (Hons) student is encouraged to take an individual pathway – whether through work placement or opportunities for professional development (in school and externally); auditions; working with guest choreographers; opportunities to gain experience in teaching practice...; and through their research.'

Guildhall School of Music (PS p22) 'Educational gain at Guildhall is secured in two interconnected ways: a stepped learning in and through industry-aligned performance and production outcomes, in quasi-professional settings with exceptionally high production values; and the opportunity for students to develop individual creative agency in the learning journey towards their chosen field of employment. This means that, regardless of the student's level of talent and aptitude on enrolment at the School, Guildhall's learning environment and framework for study enables each student to undergo distinctive development...'

50. This consideration of personal needs or personally curated outcomes, alongside an iteration of the broader needs of the whole student body, highlights another area of productive discussion with respect to educational gains. As noted earlier, gains are for both the individual and for society; within the context of a particular provider, gains have a collective but also an individual, personalised dimension. At the centre of this discussion is the notion of personal choice for individual students within an environment which has to provide for a whole student body. The University of Warwick's articulation of student agency, referred to also by the Guildhall School of Music above, is helpful here.

The University of Warwick (PS p20) 'Warwick students typically seek to increase their social and cultural capital to fulfil their current and future potential. They proactively seek to gain agency, intellectually and personally, through means within and beyond the core learning required within their disciplines. Agency is where we view the most significant educational gain for Warwick students can be found. Therefore, educational gain is co-designed to stretch students' intellectual, personal, and cultural learning through learning beyond the boundaries of their discipline, the taught context, and cultural or national contexts, to enhance their agency for life during and after their studies.'

51. Whether educational gains are mainly framed by providers as collective, targeted or individually tailored – and for most providers it is some combination of these – there appears to be agreement that although some expectations can be set for all (for example with respect to broadly defined academic, work-related and personal gains), gains for each individual student are unique.

3.3 Discipline-based and interdisciplinary gains

52. Providers explicitly recognise that educational gains are both made within the curriculum and through co-curricular and extra-curricular activities; as King's College London notes, there is a 'synergy that occurs between academic programmes and co-curricular activities' (PS p5). However, some providers, in their articulations of educational gains, explicitly foreground the importance of both the gains made through the students' subject discipline and those made through interdisciplinary or cross-disciplinary learning.
53. The University of Oxford, for example, highlights the importance of both 'educational gains specific to [students'] disciplines' and of 'interdisciplinary thinking' (PS p21). It notes that departments articulate the educational gains specific to their discipline, and this reflects a wider practice in higher education of making sure that every programme of study and every course or module has clearly defined intended learning outcomes, and that these are explained to students.

University of Oxford (PS p21) 'Often these [educational gains] are framed by the notion of 'becoming' – thinking and behaving in the ways of the discipline. For example, in the Mathematics course this is about 'thinking mathematically, arguing clearly and concisely as you solve problems'. But alongside this, interdisciplinary learning is 'particularly encouraged through interactions with students and staff from other courses, as part of college life'.

54. The University of Bristol refers to disciplinarity and interdisciplinarity in relation to its 'educational pillars of *knowing*, *acting*, and *being* [which] are central to our idea of educational gain' (PS p22/23). LSE (London School of Economics and Political Sciences), with its broad social sciences focus and mission to 'educate for global impact', foregrounds the relationship between its disciplinary expertise and commitment to interdisciplinarity.

LSE (PS p7) 'Learning beyond one's home disciplines is a powerful way to crystallise both disciplinary and cross-disciplinary learning opportunities, opening new insights and different routes for students to test their knowledge and skills.'

55. For providers focused on professionally accredited programmes of study, and for comprehensive providers that include professionally accredited programmes as part of their portfolio, the educational gains achieved by students on those programmes may be largely defined and circumscribed by external bodies and in partnership with employers.

The Royal Veterinary College (PS p21) '[T]he nature of our professionally accredited programmes means that a range of professional and academic skills (critical reasoning, problem solving, communication and reflective skills) are integral to our curricula [with] competencies defined by the professional bodies that accredit them'.

56. Many degree programmes do carry external accreditation; the intended gains, or pre-defined gains, associated with these are developed by, or in partnership with, the accrediting professional bodies in order to ensure that students acquire the range of knowledge and skills needed for the profession. Even for students studying these courses, however, gains can still potentially be tailored somewhat, including through co-curricular and extra-curricular activities. Accredited programmes may also cover a range of interdisciplinary as well as discipline-based outcomes. Disciplinary-based gains and interdisciplinary gains will be revisited below (4.1) when we consider how providers are supporting students by embedding educational gains into their curriculum.

3.4 Distance travelled by students

57. Most of the definitions articulated, as illustrated above, focus on the *qualities* of the educational gains; that is, the knowledge, skills, attributes and experiences the students take with them as they complete their programmes of study. This focus echoes the established practice in higher education of explicitly assessing students' 'learning outcomes', for example through assignments and examinations. When students are summatively assessed at key moments in a course and at its conclusion, students are awarded marks which feed into their final award. The assessment is of what students know and can do *at that point in time*; it is not usually an assessment of how far students have travelled to get to that point.
58. It is perhaps not surprising therefore that less attention is paid in the provider submissions to the complex challenge of defining gains explicitly in terms of the distance travelled by students in acquiring them. In the literature on learning gains, the notion of distance travelled, which is implicit in the term 'gain' (by contrast simply with, say, skills and attributes students 'demonstrate'), is more frequently highlighted. The term 'learning gain' can be used in conjunction with that of 'value added', although there is a useful distinction between the two:

The concept of 'learning gain' is defined as the 'distance travelled', or the difference between the skills, competencies, content knowledge and personal development demonstrated by students at two points in time. This allows for a comparison of academic abilities and how participation in higher education has contributed to such intellectual development. ...The concept of learning gain is often used interchangeably with the notion of value added. Learning gain is measured based on the difference between two measures of actual student performance, while value added is based on the comparison between performance predicted at the outset of studies and actual performance achieved. (RAND 2015, pxi)

59. The notion of recognising improvement from one point to another has been central to recent projects on learning gain around the world,⁹ and this report will return to the subject of distance travelled by students in the section on measuring educational gains (5.2) and in the final discussion. However, it is interesting to note that in the articulation of educational gains in the provider submissions the notion of distance travelled is not always touched upon.

⁹ <https://www.qaa.ac.uk/membership/collaborative-enhancement-projects/educational-gain/accounting-for-student-success-measuring-educational-gain>

60. Specialist providers are more likely to foreground the notion of distance travelled in their submissions, however. The following examples link distance travelled to recruitment policies.

Rambert School of Ballet (PS p18) 'The School has a broad-minded approach to recruitment and students are selected on the basis of their potential rather than the level of skill at the point of application. Our vocation is to realise the potential of every single student, whatever their background, circumstances and starting point. Each member of staff at Rambert School welcomes individuality, and this is at the heart of our teaching.'

Royal Northern College of Music (PS p20) 'We audition all applicants and are able to offer places to students with potential to succeed, but who do not necessarily have a standard educational background. ... Through the application of scholarship to the real-life artistic landscape, students are inspired to find an artistic voice that has traction in the industry and thus underpins a sustainable career.'

61. The University of Osteopathy similarly emphasises the wide varieties of backgrounds and prior learning experiences that students come in with; this may include 'existing qualifications in personal training, sports therapy massage or yoga' and 'they themselves may be competitive sports people or accomplished dancers' (PS p23). The provider explains that some students enter with degrees in other subjects, while others come through Access routes.

The University of Osteopathy (PS p23) 'Students [come] from a range of backgrounds but all of them have travelled a significant distance, educationally, by the time they leave.'

62. By contrast, the typical focus in the submissions of comprehensive providers is on a) explaining that core educational gains are subject-based, and assessed on the programmes of study, and b) that more broadly based graduate attributes are developed through both the academic programmes and through co-curricular and extra-curricular activities. For larger, comprehensive providers, the challenge of defining and measuring distance travelled is arguably much greater; what logical approach can be taken to defining distance travelled by students of medicine, say, in any meaningful relation to distance travelled by students of music? How can the distance travelled by an engineering apprentice be meaningfully compared with that of a student of pure mathematics?
63. For highly selective providers, whose students almost all enter their programmes of study with very high entry qualifications within a very narrow range, the challenge of measuring 'improvement' cannot be met by analysing the distance travelled from those entry qualifications to degree outcomes. This is especially difficult as degree classifications in England are very broadly based and do not, typically, provide the finer gradations of, for example, Grade Point Averages.

3.5 Co-creating definitions with students and employers

64. A question not always answered in provider submissions is that of who has been involved in defining its 'educational gains', whether in relation to the provider's mission and strategies in general or more specifically for the purpose of the TEF 2023 exercise. Some providers, however, made it clear that their articulation of educational gains has resulted from consultation with students. This practice strengthened the TEF panel's appreciation of the providers' practices in relation to one of the features of excellence under the heading 'student experience':

SE7. The provider embeds engagement with its students, leading to continuous improvement to the experiences and outcomes of its students. (Regulatory advice 22, Annex A, p74)

65. Examples here suggest that meaningful consultation and co-creation of definitions have taken place in some contexts. They also illustrate once again an emphasis on a generic set of educational gains applicable to all students, since students and their representatives are generally consulted in relation to the whole student body rather than a targeted group.

Loughborough University (PS p22) 'Through a joint focus group involving students from all disciplines, we sought to establish what academic, personal, work-related and 'other' development and skills matter to and are valued by students, and what they feel they gain and should gain from their educational experience. This exercise has enabled us to capture the breadth and range of gains that are important to students... It will also help identify clear and credible approaches and opportunities for further embedding and measuring these.'

66. The University of Bath offers a definition that centres on high-level skills, including leadership skills, that lead to 'strong prestigious employment opportunities' (PS p21).

University of Bath (PS p21) 'This definition of Educational Gain has been co-created with our Students' Union as a shared understanding and common goal between students and staff and allows the University to assess itself and the students to hold us to account as to the excellence of their education.'

67. The University of Bath's link here between creating a shared understanding of intended gains with students and empowering students to 'hold us to account' with respect to the quality of the provider's education echoes some of the discussion in the educational literature of the reasons why there is an increased focus on the notion of learning gains, or educational gains, across the sector: that of accountability.

68. Elsewhere in the provider submissions, alongside core articulations of skills and attributes gained, there are references to educational gains in terms of extra benefits to students that go beyond learning, as the following quotations illustrate.

Norland College Ltd (PS p22) '[Our students] do not have to go looking for their first graduate post; they have access to a jobs list which has been curated by Norland. ... Thus, Norland graduates receive support to put into practice the learning they receive as undergraduates as well as the learning they receive from feedback on their performance, resulting in them being highly skilled, highly knowledgeable and highly sought-after nannies... This is another example of educational gain.'

Arts Educational Schools (PS p19) 'During the third year, students are introduced to professional agents, directors and casting directors and are given one-to-one tutorial advice on agent representation and employment opportunities.'

69. These examples find echoes in many of the Gold-rated providers, whose submissions highlight, in the student outcomes section, the full range of support provided, for example by careers services as noted below (4.5), and the doors which are opened to students as a result.
70. The emphasis for the Royal Northern College of Music is also on the graduate attributes fostered. These move beyond but are rooted in the subject specialism.

Royal Northern College of Music (PS p20) 'Generated through extensive consultation with students, alumni, industry representatives, employers and staff, our Strategic Plan 2020-2025 outlines the graduate attributes that RNCM students develop during their programme of study.'

71. Many providers indicate that their articulation of educational gains has been developed, and will be developed further, with reference to employers and stakeholders.

Kingston University (PS p22) 'Our Future Skills model has emerged through critical reflection on our educational model and the changing needs of students and society, our evaluations of previous projects and initiatives, and extensive engagement with employers and stakeholders.'

The University of Lincoln (PS p8) 'Working in partnership with our increasingly diverse student body, programme leaders, professional bodies, alumni, industry and employers will be critical to ensuring that we are supporting educational gains that will allow our students to compete for global careers of the future.'

Spurgeon's College (PS p23) 'Every element of the College UG [undergraduate] programme has been analysed, assessed and evaluated, in partnership with the PSRB [Professional Statutory and Regulatory Body], regional and local employers, students, faculty and external academic subject matter experts, to ensure that graduates from Spurgeon's College can succeed in achieving its intended educational / learning gains.'

72. This raises a related set of questions:

- How do students come to understand the notion of educational gains in general, and how clearly can they define the range of gains available to them?
- Can students articulate the gains that they personally have made on their programmes of study to others, for example to potential employers?
- How might providers' external stakeholders, such as employers, who may not be involved in developing articulations of educational gains, come to understand what it is that students are gaining from their educational experiences with a particular provider?

73. These questions will be revisited in the concluding discussion below and in the Annex.

4 Supporting students to achieve educational gains

While the range of definitions of educational gains in the dataset analysed for this report is considerable, and often exploratory, the ways in which providers approach supporting students to achieve educational gains is more firmly established. Providers with excellent student outcomes may embed key gains within the content and design of curriculum:

- through signature pedagogies (ways of teaching and assessing students)
- through providing excellent specialist resources
- through promoting a wide range of co-curricular and extra-curricular opportunities
- through activities related explicitly to careers, work-related learning and entrepreneurship.

These areas are explored in this section.

4.1 Embedding in curriculum: cross-institutional models

74. Providers with excellent student outcomes typically explain that they have a cross-institutional approach to the curriculum, whereby a scheme or framework of key principles has been strategically applied to the whole range of programmes of study. Such schemes may be articulated as central to a holistic educational strategy, whereby connections are made across the core curriculum offer and also out to wider extension activities.
75. The University of Nottingham, for example, refers to a set of 'Professional Competencies' which are echoed across both academic and co-curricular learning opportunities.

University of Nottingham (PS p20) 'Since 2018, all degree courses are required to embed four University of Nottingham 'Professional Competencies' in the curriculum: Professional Communication, Co-ordinating with others, Digital Capabilities, and Reflection. We embed these through learning outcomes in academic and co-curricular courses and modules... This approach provides opportunities for teaching enhancement through the sharing, adoption and adaptation of good practice across our diverse portfolio of academic disciplines and research-led vocational training.'

76. Nottingham's reference here to a link between a cross-institutional approach and teaching enhancement is echoed across other submissions; if a provider shapes a set of desirable gains, it makes sense to foreground them in teacher development activities.
77. Hartpury University has also introduced a cross-institutional academic framework, in consultation with a range of stakeholders.

Hartpury University (PS p21) 'In order to provide a platform from which to develop educational gain, in 2019 Hartpury identified the need to review, expand and embed the desired attributes we wish students to develop. The aim was to create clarity and consistency in the skills, competencies and attributes experienced and demonstrated by all Hartpury graduates. Following extensive consultation and collaboration with employers, industry,

educational experts, students, graduates and staff, the Hartpury Academic Framework (HAF) was created.'

78. The University of Bristol's Curriculum Enhancement Programme (CEP) and education strategy are underpinned by a conceptual framework drawn from literature on the philosophy of higher education. These philosophical principles are used as a basis to shape a set of practices relating not only to educational activities but also to educational gains, including impact and agency.

The University of Bristol (PS p2) 'We have used the model of *knowing, acting and being* (Barnett and Coate 2005) as our conceptual framework: *knowing* is the process by which students connect to and make sense of intellectual concepts in their discipline; *acting* is the process by which they become insiders, learning ways of thinking and doing in a discipline, and methods and skills to use knowledge to positive effect; *being* is their capacity to reflect on their personal and intellectual development, in relation to grand challenges that they will face in their lives. We believe that this emphasis enables our students to make a difference in the world and exercise their agency and contributes to the gains we provide through our excellent education.'

79. UCL's submission articulates its Connected Curriculum educational framework (Fung 2017), which underpins its approach to ensuring that students across its wide range of subject disciplines connect with researchers, gain research-related skills and engage with innovations and professional practice. Spurgeon's College has also developed a Curriculum Framework based on the Connected Curriculum.

UCL (PS p8) UCL's Connected Curriculum is our educational framework which encourages and supports academics to ground their teaching in the very latest knowledge and thinking, and to engage taught students in research, innovation and professional practice throughout their programmes... The framework has inspired teams across UCL to engage students in research, innovation and professional practice from the very start of their programmes.

Spurgeon's College (PS p12) The design and implementation of the College's Curriculum Framework is based upon a Connected Curriculum approach (Fung 2017) which upholds the principle that the predominant mode of learning for students at all stages of their programmes should be through active engagement in applied enquiry and research.

80. Some providers, including the University of Northumbria, have developed a framework for embedding opportunities for students to achieve educational gains within the curriculum. This is achieved through scaffolding their learning – building it up in stages – throughout each programme and including a capstone project in the final year.

University of Northumbria (PS p22) 'The fundamental aim is to build confidence among our students, as learners and professionals, and to support them to establish the networks and connections that will allow them to see themselves in professional destinations. This involves early and sustained support for students' academic and personal development to maximise opportunities for success; embedded enquiry-based learning to develop research, analytic and professional skills; engagement with employers and professional practice, including placements and internships, to enable students to build networks and contacts; access to support and facilities after graduation to support and enable career success.'

81. Some providers embed a mandatory course or type of course into their curriculum. All first-year students at LSE, for example, have to take an interdisciplinary course that explicitly

engages students with notions of interdisciplinarity, including the nature of evidence and argument, and with the work of its researchers. A variation on a single mandatory course for all is to embed a type of course into the curriculum that delivers identified educational gains. These may, for example, be practice-focused modules, or capstone courses whereby a wide range of gains may be assessed.

City, University of London (PS p6) 'The first part of the Career Activation Programme (CAP) is to ensure the inclusion of 'career focus' modules (or elements of modules) which are bespoke to individual programmes. Each module is core and credit-bearing and focuses on equipping all students with: (i) an understanding of the career options relevant to their subject; (ii) support with decision making; and (iii) knowledge of how to present themselves effectively during competitive recruitment processes.'

DCG (Derby Colleges Group) (PS p6) 'Primarily, courses are aimed at cultivating skills and knowledge that relate to a future career aspiration. All courses include core elements of industry expectations. DCG takes a scaffolding approach to the student journey.'

The Chicken Shed Theatre Trust (PS p9) '[We] guarantee students a range of professional level experiences every term to allow for continuous "practice as research" opportunities and so constant practitioner development.'

82. For other providers, a core goal connected with their institutional mission is translated into the curriculum. For the University of Plymouth, this is sustainability.

University of Plymouth (PS p19) 'To embed sustainability in teaching and learning we design and deliver programmes (and short courses) in which the focus is around the Sustainable Development Goals, but also take every opportunity to place education for sustainability into every curriculum and the wider student experience. ... Staff are provided with a range of resources and support for embedding sustainability into the curriculum.'

83. Submissions from providers that were awarded a Gold TEF rating for 'student outcomes' also make reference to enhancing student assessment practices as a vehicle for embedding identified educational gains into the curriculum, explaining that their range of assessments is designed to assess beyond subject knowledge.

Hartpury University (PS p23) 'The desire to support and ensure students make gains in transferable and employment related skills resulted in the need to assess beyond subject specific knowledge, triggering assessment practices in order to enable wider skills to be nurtured and assessed.'

4.2 Embedding gains through cross-institutional pedagogy

84. Alongside the focus on the design and content of the curriculum, many providers highlight the ways in which educational gains are supported through a particular kind of pedagogy; that is, through shared approaches to teaching and learning. This may seem like an obvious point, but in higher education there are very diverse cultures and practices with respect to how courses are taught and how students are expected to learn. These diverse cultures are particularly seen in different subject disciplines. Despite this variety, some providers characterise a distinctive educational approach that applies to all students.
85. The University of Oxford and the University of Cambridge, for example, both highlight their college tutorial systems and their small group supervisions in relation to educational gains.

University of Oxford (PS p20) 'The gains which characterise Oxford's graduates are those developed through our distinctive educational approach. The college tutorial system is key to becoming critical and independent learners, as students develop the discipline of producing substantial pieces of independent work each week for their tutorials. The role of the tutorial in developing deep approaches to learning are well established. Students' independent study skills are honed and tested in final-year assessments which all involve at least one piece of extended research or a dissertation.'

University of Cambridge (PS p20) 'Cambridge students develop significant transferable skills during their studies. In supervisions students develop the ability to articulate their knowledge, engage in an academic discussion and debate with an expert on a regular basis, producing skills that employers value highly, such as the ability to formulate and respond to arguments, assimilate complex ideas and information rapidly and accurately, and apply information in new contexts. Across all disciplines, supervisions help undergraduates take a reflective orientation to their learning, develop the ability to communicate effectively (in writing and verbally), present ideas, evaluate evidence critically, and solve problems.'

86. For others, there is a widespread pedagogy of enquiry-based or project-based learning, both individual and collaborative. This may be underpinned by opportunities such as experiential learning in the workplace, professional practice and structured opportunities for civic engagement. In arts-orientated contexts, 'embodied learning' and reflective practice may be foregrounded.

Norwich, University of the Arts (PS p7) 'Our creative pedagogy is centred around enquiry-based learning delivered through projects undertaken either individually or collaboratively. Projects are designed to advance learning through experimentation and practice, leading to iterative development of skills and knowledge over time.'

Royal Academy of Dramatic Arts (PS p21) 'Embodied learning is at the core of our disciplines... Physical and technical skills are honed and reflected upon in a number of projects, productions and other contexts. Reflective practice is fully integrated into our undergraduate courses...Through these processes, students take responsibility for their own development and become aware of their own educational gains.'

87. The above examples are illustrative of a rich range of pedagogic approaches across the sector, and of how providers with outstanding student outcomes can articulate the distinctiveness of the pedagogic approaches that enable their students to achieve educational gains. The various framings found in the provider submissions illustrate the complex yet constructive steps being taken by providers to ensure that educational gains are supported through cross-institutional pedagogic principles.

4.3 Enabling gains through specialist resources and locations

88. A case for the importance of excellent and specialist resources in supporting students' educational gains is made by many providers. These resources range from equipment, including highly developed digital environments, to libraries, museums, laboratories and specialist recording studios, to working environments such as farms.

LIPA (Liverpool Institute for Performing Arts) (PS p17) 'LIPA leads the conservatoire sector nationally in terms of its programme delivery relating to industry level teaching and learning in creative technologies. Specialist spaces for television, green screen, sound recording, video

editing and more are part of the school's baseline infrastructure and serve the students with 24 hour access to cutting edge future focussed technologies'.

City College Plymouth (PS p15) 'Work with the students studying at [specialist facilities] has highlighted that the professional nature of the environment has supported them in being self-directed in their studies, providing them with the scope to not only learn new theories but to apply these theories through simulation and testing and then practical and hands-on project work.'

Hartpury University (PS p13) '*On-site 500-acre farm estate: A rare occurrence within HE agriculture providers today, the farm is commercially viable demonstrating real-world best practice to support students to be career ready. This is attractive to students and the over 700 industry partners using the farm. Our new £2m Agri-Tech Centre allows industry partners and students to gain experience of the latest smart farming technologies and provides opportunities to collaborate on real-world projects.*'

The Chicken Shed Theatre Trust (PS p9) 'Our dedication to our students and the learning environment we set up for them means we ensure student access to all resources we have in our live working professional theatre.'

89. Providers' learning resources are considered by the TEF panel in the student experience section of the TEF:

SE6. Physical and virtual learning resources are tailored and used effectively to support outstanding teaching and learning.

90. It is worth noting, however, that providers emphasise that these are central to achieving outstanding student outcomes in general, and to students' educational gains in particular, and articulate this in their submissions.

4.4 Gains made through extra-curricular and co-curricular activities

91. There is a strong argument made by providers that extra-curricular and co-curricular activities provided for students are not only a vital part of students' educational experiences but also make a strong contribution to their educational gains. These range from academic skills support to civic engagement and student clubs and societies. The following are illustrations.

4.4.1 Clubs and societies

92. Many providers highlight the role of student clubs and societies in students' lives and development. These narratives are supported by student submissions to the TEF, which characterise the wide range of opportunities provided by bodies that represent students, including student unions and guilds. These include not only opportunities to participate in clubs, societies and events, but also opportunities to benefit from taking leading roles in facilitating these and becoming representatives, for example on student or provider committees.

University of Durham (PS p20) '[Our] colleges offer a programme of skills development, volunteering and employer-related opportunities, and support and facilitate participation in wide-ranging co-curricular activities, from interdisciplinary seminar series to arts and music societies, and from alumni mentorship schemes to community volunteering. Every college has an undergraduate representative body with a President and Executive Committee, and structures to support the running of societies, events and activities.'

University of Cambridge (PS p22) 'Participation in extra-curricular activities including volunteering, sports, music and drama enable students to deploy and hone skills developed through their studies in new environments and situations. Many opportunities are available through student-led clubs and societies supported by University staff acting as senior committee members.'

93. Opportunities for students to engage in wider cultural activities such as sports and music are referred to in many submissions. These extra-curricular activities can add educational gains to individual students through developing a wide range of transferable skills and attributes.

4.4.2 Institutional awards

94. Some providers support students through institutional awards that are designed to stretch students beyond their programmes of study. These can be designed to promote and capture the full range of educational gains, through students' reflections on their whole educational experience.

University of Exeter (PS p23) 'For more than ten years, Exeter has recognised students' achievement of extra and co-curricular educational gains through our Exeter Award and Exeter Leaders Award, recognising contributions to student leadership. The Exeter Award helps students evidence the development of attributes and skills to boost their competitiveness in the graduate jobs market.'

University of Nottingham (PS p20) 'A key enhancement to the journey of our students is the Nottingham Advantage Award (NAA). This offers a wide choice of optional modules to help students acquire skills that complement their academic studies. ... During the pandemic, one NAA module was created specifically for our medical and healthcare finalists, and other 'key worker' students.'

King's College London (PS p22) 'All taught students can undertake one of our King's Experience Awards in service, leadership or research ... to develop their employability skills through self-reflection and gain formal recognition alongside their degree.'

95. Such an award can echo some of the goals of capstone courses, which are typically embedded into the curriculum (see 4.1), and which can enable students to bring together and showcase their educational gains from across and even beyond their programme of study.

4.4.3 Volunteering and civic engagement

96. Many providers offer structured opportunities for students to volunteer. These can be within or beyond the curriculum, and feedback from students suggest that such experiences can be transformative. The following examples are illustrative.

King's College London (PS p14/15) 'Beyond voluntary student activities, [we embed] "service to society" into the curriculum. Students can enrich their degree with modules that serve a local community. ... In the Department of Geography, the Sustainability in Practice module allows students from across the university to address real-world sustainability problems with local partners such as Transport for London and Westminster City Council.'

University of Liverpool (PS p8) '[W]e develop graduates who are capable of effectively applying their knowledge to real-world settings... We provide a range of activities and opportunities including work placements, enterprise modules, authentic digital assessments, study abroad and civic engagement activity to ensure variety in the learning experience, keeping students actively engaged with their studies.'

4.4.5 Students as researchers

97. A large number of diverse providers refer to schemes whereby students have extra-curricular or co-curricular opportunities to undertake research, often alongside the providers' own researchers. These examples are very typically seen in the submissions of research-intensive providers, which offer a range of opportunities within and beyond the curriculum to engage with researchers and research projects. These providers also often offer students the opportunity to take up extra-curricular research opportunities through 'students as change makers' schemes, for example at the University of Exeter, UCL, LSE and Imperial College London. These schemes enable students to research aspects of the student experience in order to improve it.
98. However, it is notable that opportunities for students to engage with research are seen in submissions from a range of types of providers.

Kingston University (PS p6) 'Our on-going support for institutional research is demonstrated through our Student Academic Development Research Associates Scheme (SADRAS) which provides funds for students to participate as co-researchers with academic staff in educational research projects aimed at improving student retention, attainment, employability, well-being, or access to higher education, with specific relevance to under-represented or disadvantaged populations.'

Harper Adams University (PS p6) 'Student research projects ... support the wider research work undertaken by academic staff and their work has contributed to published academic research.'

99. Many providers indicate that engaging students in research projects, and developing related skills such as investigation, analysis of evidence, argument and effective communication of findings, are vital educational gains for life and for the workplace.

4.4.6 Alumni connections

100. Providers are able to articulate to varying degrees the ways in which promoting connections with alumni can support students to achieve educational gains. Such gains can be *learning* gains, for example the changes in skills, confidence and values that result from spending time with alumni. However, there can be additional *educational* gains here that are not learning gains: students can gain life opportunities from networking, making connections with those already progressing with their careers. Examples include mentoring and entrepreneurship schemes. For students who do not arrive at university with a developed network of contacts, which is typically the situation for students who are the first in their family to access higher

education for example, opportunities to develop networks and even career openings through meeting alumni can be transformative.

University of Liverpool (PS p25) 'We work hard to maintain lifelong connections with alumni, many of whom support our educational endeavours by acting as advocates, mentors, guest speakers, a source of placements and advisors in programme design. During the TEF period, 7,998 individual alumni volunteered to be involved in University activities, with over 44,000 hours dedicated collectively.'

University of Cambridge (PS p23) 'Our alumni are globally employed and are global employers in every corner of the labour market; bringing these alumni back to the University, whether in physical or virtual format, allows students to broaden their horizons and build valuable connections. Students are supported to connect with alumni via the Alumni Careers Connect platform and networking events.'

LSE (PS p21) 'LSE students are active entrepreneurs aspiring to shape and make an impact in the world. In 2018 we launched LSE Generate, an entrepreneurship incubator to support our students' aspirations to build socially responsible businesses around the world. 3,000 students a year, including a significant number of undergraduates, participate in LSE Generate activities.'

4.4.7 Additional support

101. Providers of all kinds highlight the importance to students' continuation through their studies of learning development centres, whereby students gain additional support with their academic and transferable skills. In enabling students who need additional guidance on one or more aspects of their learning to progress and complete their studies, such support centres can make evidenced contributions to their educational gains.
102. All providers articulate the importance of supporting students' mental health and wellbeing. This is also evidenced widely in student submissions, which often highlight ways in which both providers and students' representative bodies are working to provide appropriate support for wellbeing in general as well referrals to counsellors and relevant health services where these are needed.
103. Meeting the mental health needs of students is a huge task for providers in these challenging times, but submissions note that such support can make a significant contribution, albeit indirectly, to students' achieving educational gains.
104. The activities outlined above can have financial implications for students. Many providers refer to targeted financial support offered to enable students to benefit from them.
105. Financial support is also offered through student unions and guilds, as evidenced by many student submissions. Arguments are clearly made that students experiencing financial hardship will be able to access a narrower menu of opportunities through their time in higher education. Once again, although the link with educational gains is indirect, empowering students to engage, continue with and complete their studies through targeted financial support can transform individual students' prospects.

4.5 Careers guidance, work-based and professionally orientated opportunities

106. Every provider whose student outcomes were judged to be outstanding in TEF 2023 illustrated clear and multi-layered approaches to supporting students to make gains connected with their future careers. In addition to the work-related opportunities that are embedded into the curriculum, many providers have careers services that offer or broker internships, work experience placements and other professionally orientated activities, as well as advising students on their career options. The following extracts are illustrative of these.

City College Plymouth (PS p7) 'Good practice in employer engagement is shared across different areas of provision, and this has [been] supported [by] the delivery of a series of multidisciplinary employer-led masterclasses since 2019-20, that bring together students from [a range of subject areas]. Key members across all sectors (private, public and 3rd) have led these masterclasses, supporting students in learning about the career opportunities.'

Royal College of Music (RCM) (PS p22) 'The dedicated Creative Careers Centre team partners with leading consultants, reputable arts organisations and local communities, delivering unique career-building opportunities and a direct route to the music industry. They are committed to supporting RCM musicians to discover their professional identity, gain hands-on experience and new skills, develop an entrepreneurial mindset and build a fulfilling professional portfolio... The service is available to graduates up to five years after graduating.'

107. Many providers also enable students, through the careers service, to track their own careers-related goals and experiences, for example by completing a survey on arrival that is revisited through their time with the providers. Such a survey can also enable careers services to target provision, both activities and resources, effectively to the right students.

Kingston University (PS p18) 'We ... introduced the Career Registration survey. This is a self-reported career student survey that derives from the HEFCE-funded Learning Gain pilots and provides students with an opportunity to track their developing readiness for employability.'

University of Exeter (PS p20) 'All students are asked to complete a career registration survey at the start of each academic year to reflect on their journey to career-readiness and identify opportunities and to enable us to tailor support to students. All first-year students join 'Create Your Future', a personal and professional development programme that explains how to gain skills for employability and the practical steps they can take to achieve their career goals.'

108. As noted above in the context of connecting with alumni, one important way in which students are supported to make educational gains is through entrepreneurship schemes. These vary in size and scope, but providers are increasingly facilitating students' opportunities to become entrepreneurial and even develop start-ups while still studying. These opportunities can be offered in partnership with student unions and guilds.

5 Measuring educational gains

5.1 Recognising the complexity of measuring

109. It is clear from the above analysis that defining educational gains is complex and nuanced, even at provider level. Characterisations of students' individual gains include:
- Knowledge, skills and attributes derived from disciplinary academic learning opportunities
 - Knowledge, skills and attributes derived interdisciplinary academic learning opportunities
 - Knowledge, skills and attributes derived from diverse and dynamic co-curricular and extra-curricular experiences, along with wider gains for life such as creating social networks
 - Knowledge, skills and attributes derived from work-based and professionally orientated learning opportunities, both within and beyond the curriculum, along with wider gains such as new professional networks and career-related opportunities.
110. From a provider's perspective, it can be useful to frame these gains into a locally shared definition or schema as it considers the strategic development of its own provision; providers have done this in their written TEF submissions, generating rich insights into a range of approaches and practices. In the lived experiences of individual students, however, educational gains are those which are embedded in their person: to use the University of Bristol's notion from literature, in their 'becoming' (Barnett and Coate 2005). This personal change, this becoming, happens for individual students within an ever-changing dynamic: each new day, each new experience, can add new knowledge and skills or hone those already gained. And as providers have noted, while commonly identified skills and attributes are sought for all students, a distinctive set of educational gains is achieved for each subject cohort, and a unique set of gains is made by each individual student.
111. If measuring the full range of *individual* gains is difficult, then measuring the *collective* gains, including the benefits to wider society, would be doubly challenging. It is not surprising, therefore, that providers typically offer proxy measurements or evaluations which focus on specific, illustrative areas of the gains made by students.
112. To add to the complexity of measuring such diverse and dynamic gains, the question of *who measures these gains* comes into play. Staff with teaching roles assess students' learning outcomes within the curriculum, but other stakeholders can play a part in assessing students' development. Providers offer examples of employers and other external partners contributing to the assessment of wider educational gains.

Harper Adams University (PS p8) 'Our employer partners provide us with consistently positive feedback on the work-readiness of our students, their knowledge of current and emerging industry context and practice, as well as the significant contributions they make to their businesses through the projects they undertake. This feedback is gathered through progress meetings with placement tutors, informal feedback and structured feedback... We use this evidence to assess educational gain and impact.'

113. Similarly, as we have seen, students can have a role in assessing their own gains, for example through tutorial-supported or online reflective activities, journals or surveys.

Norwich, University of the Arts (PS p17), for example, uses a 'bespoke platform that enables students to track their own skills gain, log evidence of their progress and connect to employment opportunities through our jobs board'. Harper Adams University also uses such a platform, linked with a professional skills module.

Harper Adams University (PS p22) 'Within programmes of study, students continually assess their own learning and have space to personalise aspects of their education to meet specific needs; students track their own progress toward professional competencies. We have invested in an ePortfolio platform which is used predominantly for reflection and personal development. Measuring personal growth across different disciplines is undoubtedly challenging, but all our undergraduates undertake a placement year and an associated reflective assignment about their individual experiences of development.'

114. As we will see (5.3), many providers have plans for developing their approaches to include more opportunities for students themselves and external partners such as employers to play a part in measuring or evaluating educational gains.
115. Given the profound complexity of articulating and capturing educational gains across these different dimensions, providers have been developing a range of different ways of evaluating these gains. We will look first at how they are doing so now, and then consider providers' plans for measuring educational gains in the future.

5.2 Current approaches to measuring gains

116. Recognising that it is not feasible to undertake a comprehensive measurement of all gains made by students, providers with outstanding student outcomes set out some illustrative measures of, or proxies for, the range of gains made. These include, for example:
 - Assessing students' learning outcomes on their programmes of study. These outcomes include subject-specific and interdisciplinary knowledge and skills as well as wider transferable skills.
 - The OfS datasets showing students' continuation, completion and progression rates.
 - Measuring engagement with co-curricular and extra-curricular activities.
 - Student portfolios and career-focused surveys, through which students track their own development.
 - Student surveys, paying particular attention to questions that ask students to assess their own gains.
 - Learner analytics, whereby data from across one or more platforms is used to track student engagement, progress and achievements.
117. Providers can draw from these datasets, among others, to create a profile of key performance indicators (KPIs) which give a picture of the range of gains achieved by all students; by a particular student cohort; by student groups (including 'split' demographic groups such as disabled students and those from particular ethnic groups); and by individual students.

5.2.1 Examples of providers' approaches to measuring gains

Sheffield Hallam University (PS p21) 'Educational gain is typically measured in terms of student outcomes at the points of continuation, completion, or progression, with few in-year indicators of progress when compared to the individual starting point. At Hallam our analysis shows that student engagement with learning and development opportunities provides an intermediate measure towards educational gain, and when combined with the use of learning analytics can provide real-time measures that inform interventions to support or enhance educational gain.'

118. Sheffield Hallam explains further that it has implemented Jisc Learning Analytics software to consolidate students' biographical and engagement data, helping academic and student support advisers to support students appropriately. Students can also see their own engagement data. Sheffield Hallam also uses some of the optional NSS question banks focused on personal development, careers, work placements, employability and skills, and includes related questions on their internal surveys. Another key part of this approach is the creation of an 'impact dashboard' linked with the provider's access and participation plan, which 'tracks demographics and outcomes data for student groups', including, for example, 'student representatives, student researchers and those receiving specific interventions such as financial support' (PS p21) and showing the impact of such support on outcomes. The suggestion here is that greater engagement by students with activities, both curricular and extra-curricular, contributes not only to positive measurable student outcomes but also to wider educational gains, which can be tracked through surveys, including optional NSS question banks.

Sheffield Hallam University (PS p21) 'The combination of learner analytics with tracking outcomes during study through our 'impact dashboard' provides Hallam with confidence that students are engaging with their studies and achieving measurable educational gain. We have a substantial record of supporting our least engaged students to continue and complete their studies and our evaluation of several interventions demonstrates that engagement with learning activities, support services and extracurricular activities all lead to students achieving increased educational gain and positive outcomes.'

119. The University of Bath also describes a suite of measures that, together, provide a picture for the provider of how both individual and groups of students are achieving educational gains.

University of Bath (PS p22) 'We take an institutional approach to monitoring students' results to meet with our education strategy. We work closely with our main committees who oversee institutional performance, and with our Students' Union representatives. This openness and scrutiny facilitate our shared understanding and this allows the University to assess itself, and the students to hold us to account as to the excellence of their education and their outcomes. ... We evaluate our students' gains ... through our interrogation of Key Performance Indicators.'

120. The University of Bath explains that it tracks the KPIs it has identified as relevant to educational gains through the Senate and Council (governing bodies at the provider), triangulating continuation, completion and progression data with National Student Survey (NSS) indicators and degree outcomes.
121. City, University of London presents a range of triangulated approaches to measuring educational gains. It explains that its approach has been developed in part through their engagement with one of the earlier HEFCE/OfS-funded pilot projects on learning gain. It also

refers to the use of Graduate Outcomes data; alumni responses to the Graduate Outcomes survey can potentially track educational gains that go beyond the data on employment.

City, University of London (PS p23) 'Our ability to support our students' educational gains is underpinned by the systematic use of a range of internal methods for collating and analysing evidence. Our use of Graduate Outcomes data in the evaluation of employability educational gains, for example, is multi-layered, co-ordinated and evidence based.'

The provider goes on to explain (PS p23) that it:

- analyses institutional performance to understand progress in supporting all students to achieve success post-graduation
- breaks down data at course level to target bespoke interventions towards cohorts at the highest need of additional support
- analyses outcomes by student characteristics to understand the varied experience of diverse student communities and to target bespoke interventions;
- uses Graduate Outcomes data in the design of Career Activation modules to ensure pedagogy is optimal in its relevance for the cohort.

122. Solent University also presents a comprehensive approach to evaluating educational gains. It draws on its access and participation plan to develop an evaluation checklist, using a Theory of Change approach.

Solent University (PS p24-25) 'We are confident that by using this established approach, our [educational gains] evaluation activities will meet the expectations of both Type 1 evaluations (Narrative) and Type 2 evaluations (Empirical Enquiry) and where the interventions allow, Type 3 (Causality). ...Wherever possible our aligned and integrated quality management and strategic business planning processes will combine with course teams' continuous reflection and action on practice, to build and monitor success.'

123. The University of Huddersfield is another provider measuring its educational gains, defined as 'the benefits accrued by individual students' during their time with the provider', by using Theory of Change principles to provide a detailed table outlining a 'series of proxy measures' (PS p25). The specific measures they use are included in a detailed table (PS p24 Table 1) and, as for most providers, these are still in development.

University of Huddersfield (PS p25) '[Our] measures are integrated into the student journey from moving in, moving through to moving on and ultimately combine to provide an 'Educational Gain Index' that can be measured at university, subject, and course level to allow targeting of improvements as necessary. It can also provide a binary checklist for individual students with the transitioning and progression sections allowing for targeting interventions by [personal tutors] and other support staff. Many of these measures are already available as part of our embedded offer, and others will be enhanced and developed in line with our definition over the next few years.'

124. The University of Plymouth, also articulating its approach to measuring educational gains within a 'Theory of Change' framing (PS p19), explicitly tackles the question of 'distance travelled' by students (see 3.4). It explains that it sees distance travelled as particularly important and has therefore 'attempted to define a quantitative measure of educational gains, [to support] qualitative data, also allowing comparison across the sector' (PS p22).

University of Plymouth (PS p22/23) 'The progress of a student from entry to the University through to professional career or further study can be considered a measure of educational gains. ... We have used entry tariff as a suitable proxy for entry to University as it reflects both prior educational attainment and likely educational deficit... Entry qualifications for graduating 2019/20 FT UG [full time undergraduate] UK domiciled first degree students were determined from Heidi Plus data to enable sector comparison, measured against the 2019/20 GO [Graduate Outcomes] survey data as a summary of the level of educational gains achieved. The latest GO sector data were used to track FT UG students throughout the TEF period, the majority commencing a three-year degree in 2017/18, as an experimental metric.'

125. Kingston University has also tackled measuring educational gains in terms of distance travelled, or 'value added'.

Kingston University (PS p21) 'The delivery of educational gain within programme frameworks has been monitored through the development of an institutional Value Added (VA) metric. This metric was developed at Kingston University and has since been adopted by other higher education providers as a result of OfS Catalyst Funding (2017-19) and other dissemination initiatives. At its core, Value Added is a conceptualisation of Educational Gain as the distance travelled between the qualification with which a student entered our university, and the classification of their award when they graduate.'

126. Kingston University explains that, by using data for all UK domiciled graduates over a three-year period, it can determine the probability that any student with a known entry tariff will achieve a particular degree outcome, such as a First or 2:1. Expected rates of classification can then be calculated for groups of students differentiated by course or personal characteristics. The provider notes that through this approach to analysis it has been able to demonstrate significant falls in the 'value-added' gap between White and Asian students, between White and Black students, between commuter and non-commuter students, and between IMD quintile 1 and 5 students. It explains that their consistent use of this 'value-added' metric has 'provided a tool through which we can track and monitor our progress in delivering value added'.
127. Where the University of Plymouth and Kingston University are among those who have tackled 'distance travelled' through measuring links between, for example, entry qualifications, attainment and outcomes, the University of Cambridge notes that such a task is not feasible in its context; entry qualifications are all very high and therefore within a narrow range. The emphasis on measuring academic and wider educational gains is therefore concentrated more explicitly on assessments within academic disciplines, although the provider submission does not give any additional detail about how assessments are designed in such a way that educational gains that go beyond discipline knowledge are measured.

University of Cambridge (PS p20) 'In designing its approach, the University has ... considered whether the exceptionally high prior educational attainment of students on matriculated courses makes the measure of educational gains more challenging. We note too, the literature advocating that educational gains are better defined and measured within academic disciplines (Arico *et al.*, 2018), which recognises the importance of Tripos curricula and experiences (including supervisions) in generating educational gains. Thus, the University's approach to educational gains is multi-dimensional in nature, including discipline knowledge alongside cognitive, metacognitive, social, communication and self-awareness skills.'

128. As we have seen, providers often articulate the task of measuring educational gains as triangulating across a range of data points, some explicitly measure distance travelled and some foreground the curriculum. Some providers focus more explicitly on a particular approach that tracks the development of individual students. For example, DCG (Derby Colleges Group) focuses its measuring of educational gain on academic coaches.

DCG (PS p12) 'Academic Coaches monitor educational gain in the form of measuring higher level skill development. Coaches and students track their progress, identify skill gaps and are able to work on improvement strategies in order to facilitate improved assignments, employability skills and life skills overall. Student feedback on the impact of one-to-one tutorials and workshops was very positive.'

129. Many providers frame their approaches as being in development, in line with expectations expressed in the TEF guidelines.

The approach to assessing educational gain in the TEF 2023 is intended to enable providers to demonstrate a clear articulation of their ambitions for educational gain, credible approaches for delivering this, and *where possible* evidence that it is delivered in practice. (Regulatory advice 22 p11)

130. The following section highlights some of the ways in which providers say they are planning to develop their approaches to measuring educational gains.

5.3 Providers' plans for educational gains

131. Provider submissions articulate a range of plans for developing their approaches to educational gains. These are often plans for building on work that has already begun.

132. The University of Exeter explains that it is building on published and ongoing research in the field of educational gain, including the former HEFCE/OfS pilot projects, and planning to roll out an approach already used by one of its schools. It is also building on its existing Data Foundations Project to make ongoing improvements to its whole data infrastructure.

University of Exeter (PS p24) 'Since 2016 the Business School has operated an Assurance of Learning process, as required by the accreditor AACSB, in which wider graduate attributes that extend beyond normal module or programme requirements are assessed. Interventions are made each year the wider educational gain is not being met for a particular group or programme.... [We are planning] a renewed focus on how education and student experience data is captured, stored and managed; the development of integrated and readily accessible student data analytics to facilitate focused student support including interventions to close attainment and awarding gaps; and the development of analytics to support the whole student journey, academically and pastorally'.

133. The University of Lancaster's focus for the future is on triangulating existing data and developing more holistic monitoring of outcomes.

The University of Lancaster (PS p22) '[W]e anticipate the need to triangulate information from existing systems (e.g. NSS optional questions, GO survey data, UK Engagement Survey, internal student experience surveys) that can baseline, track and measure the educational gains being made by our students. We envisage this dovetailing with our institutional focus towards programme-focused educational experiences more generally, for example

refinement of how we monitor end of level student experience and outcomes more holistically.'

134. The Royal Central School of Drama's plans include monitoring student entry profiles as well as their differential attainment.

The Royal Central School of Drama (PS p21) 'Examples of this developing approach to evaluating educational gain include the monitoring of student entry profiles, reviewing student degree attainment (including differential attainment), alongside the use of attendance data to monitor and sustain ongoing learner engagement.'

135. LSE explains how its approach to measuring educational gains could be developed in collaboration with its students and alumni.

LSE (PS p23) 'We are currently working with The Brilliant Club to explore whether their validated survey scale could be used to track student development over time to enhance our measures of learning gain. ... We will continue to include regular questions in the LSE Alumni survey asking our former students to reflect on the most valuable aspects of their LSE education and engage with employers to reconcile our strategies with their needs and requirements.'

136. The University of Cambridge is developing its approach to measuring educational gains by developing a new skills framework whereby students will periodically assess their own abilities.

University of Cambridge (PS p20) 'The University is developing an undergraduate skills framework to supplement academic course study and supervisions at the University, and the knowledge developed directly through these. The University's approach to educational gains is in part based on a validated learning gain framework developed by the University through research (Vermunt *et al.*, 2018). Students will self-assess their abilities against the framework upon entry to the University and can do so again at periodic intervals throughout their studies. The self-assessment will identify to students where they might extend their skills. ... The data will capture how and when students are developing their skills, and the skills portfolio with which they enter and exit the University.'

137. Blackpool and the Fylde College is also focusing on students' perceptions of their development.

Blackpool and the Fylde College (PS p24) 'Students' perceptions of their development will be evidenced through Skills Reviews going forward, which will enable comparisons of individual educational distance travelled, followed by repetition at future points in their course. Awareness of their own starting points, development and barriers are then triangulated with internal data related to risk, assignments submissions, grades and engagement facilitating proactive, evidence-based support and interventions. '

138. This provider is planning to exploit further the 'positive impact of predictive analytics', using dashboards to measure students' engagement and progress. It explains that it will enable them to gain insights into the needs and progress of both of individuals and groups, and plan workshops to support academic development, personal development and work-readiness (PS p24). It also notes the potential of artificial intelligence (AI) for the future.

Blackpool and the Fylde College (PS p24) 'Our future view of educational gains will be aided by machine learning and artificial intelligence, and – rather than a discrete area of practice – this data will be inserted into business-as-usual to unlock better student-centred decision making, and allow enriching evidence-based learning conversations with our students.'

139. Approaches such as using learner analytics to enhance the measurement of educational gains offer great potential. They are also arguably very open ended in terms of what becomes possible and raise complex ethical challenges that need to be addressed by each provider, and by the higher education sector more broadly, especially given ongoing developments in AI. This in turn raises issues of time and resource. Liverpool John Moores University, which is planning a range of measures with the social mobility index at their centre, highlights the importance of ensuring that measuring educational gains remains manageable such that it 'avoids additional burden on students and academic teams' (PS p24). This is important for the whole sector.
140. There is undoubtedly a great deal of thought and action being put into the whole area of educational gains, and although individual providers' approaches differ in emphasis, we see here some detailed and promising actions for future development.

6 Concluding discussion

141. The illustrations above of how providers are articulating educational gains, supporting students to achieve them, and measuring them, provide a springboard for further discussion and development in the higher education sector. Analysis of the submissions has led to the following conclusions:

- Students' educational gains are core to providers' missions and stated values. They benefit both individual students and communities more broadly.
- Articulations of educational gains can include, but are not limited to, a set of core graduate skills and attributes, and these remain dynamic in the context of rapid changes in society, technology and the workplace.
- Educational gains are broader than learning gains. They include additional benefits, such as building new networks and personal, cultural and careers-related opportunities.
- The focus on educational gains can be on those that are comprehensive (gains shared by all); targeted (for example, at a specific demographic group); and personalised (curated for individual students). These are not mutually exclusive.
- The knowledge, skills and attributes developed through core academic and professionally orientated programmes of study remain central. These include both disciplinary and interdisciplinary gains.
- Curriculum design, pedagogic approaches and resources are all of central importance in maximising students' learning outcomes.
- Co-curricular and extra-curricular activities, including connecting with alumni, employers and civic society, provide a rich menu of opportunities for students to extend their educational gains.
- Students and student groups are differently situated with respect to their opportunities to achieve gains, and providers are committed to offering support in a range of areas, including finances and mental health and wellbeing.
- Measuring educational gains is complex. Where a clearly defined set of gains is foregrounded, such as a particular set of skills, appropriate metrics can be selected that act as proxies for those gains. However, students' actual gains will be broader.
- Measuring the distance travelled by students is highly complex. In some, but not all, contexts it can be estimated through proxy measures.
- Students can have a proactive role in articulating, curating, tracking and measuring their own educational gains, both within and beyond the curriculum.
- A provider's stakeholders, including employers and their representatives, can make a meaningful contribution to both articulating and measuring educational gains.

142. Each student, when they complete their studies with a provider, will have their own set of recollections of their experiences – as Loughborough University's submission (PS p22) puts it, they will ideally 'leave with memories that encourage them to become responsible and

authentic ambassadors for the future'. The educational gains students have made on graduating are central to an individual's future opportunities, both to their personal success (however construed) and to the contribution the individual can make to wider society.

6.1 Educational gains' place in the TEF process

143. Discussion in the higher education sector has reasonably queried whether educational gains should be part of the TEF assessment, given the apparent impossibility in the research literature of reaching a single definition of 'learning gain' (see, for example, Arico et al. 2018; Kandiko Howson 2019 and Vermunt et al. 2018). In the run up to the TEF 2023, Kandiko Howson (2022), for example, referred to learning gain as being 'like dark matter' – out there somewhere, but impossible to pin down. However, the TEF focus on the wider framing of educational gains has been highly generative. It appears to have encouraged providers to focus on important questions, including:
- What kinds of educational gains are the specific focus of *this* provider, given its context and mission?
 - How is the provider empowering all stakeholders (both internal and external, and of course including students themselves) to have a voice in framing the desired gains?
 - To what extent is the provider's strategic planning joined up in such a way that all relevant sections of the organisation can meaningfully articulate intended educational gains, within and across different academic and professional departments, and support students to achieve them?
 - How is the provider's approach to data gathering and analysis taking into account the rapidly changing possibilities of new technologies such as AI, enabling all stakeholders to measure or evaluate educational gains made by individual students and groups of students?
 - How are students empowered to understand gains they are making, maximise those gains, and communicate their educational gains effectively to others, including future employers?
144. These and other questions are included in the Annex at the end of this report, which comprises a set of prompts for providers as they take forward their thinking and practices with respect to educational gains.
145. There is no evidence, either from the TEF submissions explored here or from published literature on learning gain, that any meaningful single measure of learning gain, or educational gains, could feasibly be applied to a very diverse sector with its even more diverse student body. Does this weaken the role of educational gains as part of the TEF assessment? If there were no associated comparative measures, that might arguably be the case, but the assessment of educational gains sits alongside the three other 'features of excellence'. The 'outstanding' definitions of these in the TEF are as follows (Regulatory advice 22, Annex A p77):

SO1. The provider deploys and tailors approaches that are highly effective in ensuring its students succeed in and progress beyond their studies.

SO2. There are outstanding rates of continuation and completion for the provider's students and courses.

SO3. There are outstanding rates of successful progression for the provider's students and courses.

146. The assessment of these is underpinned by published OfS data on student continuation, completion and progression. The datasets are broken down by course and student characteristics, and they are benchmarked, allowing reasoned comparisons to be made.

Benchmarking is the method we use to take account of the mix of courses and students at a provider and indicate how well that provider has performed compared with performance for similar types of students on similar types of courses in the higher education sector as a whole. (Regulatory advice 22, p53)

147. These datasets enable TEF assessors, and providers themselves, to see the percentages of students who are continuing, completing and progressing over time, giving valuable insights into relative outcomes. While these measures do not directly assess specific sets of educational outcomes, they provide a logical and useful corollary to the more differentiated, qualitative and exploratory work being done on educational gains within the contexts of different providers. The quantitative datasets are valuable but they cannot tell the full story; the richness and variety of educational gains attained by students individually and collectively can only be captured through illustrations, examples and explanations of what can meaningfully be measured in a given context.
148. Overall, the TEF 2023 focus on students' educational gains, underpinned by comparative, benchmarked indicators for student continuation, completion and progression, has been highly generative as a way of showcasing strategic and creative work being done by the full range of providers in this area. There is potential between now and the next TEF assessment for greater sharing of excellent and innovative practices across the sector, particularly in the light of new technologies. There are also opportunities for providers to refine their articulations of educational gains in relation to the purposes of higher education, their wide range of benefits to individuals and their vital contributions wider communities. In the next iteration of TEF, the OfS may wish to refine its focus on educational gains, but the recommendation here is that students' educational gains should remain at the core of the Student Outcomes 'aspect of excellence'.

The Annex which follows this report provides a checklist of prompt questions relating to educational gains that providers may find useful to discuss, both internally and across the sector, between now and the next TEF assessment.

Annex: Educational gains in your context – prompts for discussion

The following questions are designed to prompt discussion about educational gains within and beyond your institution or organisation. Neither prescriptive nor exhaustive, the questions are designed to generate engagement among all interested groups, including students, academic and professional staff, alumni, and external partners and stakeholders.

A. Articulating educational gains in your context

How in practice are your students' educational gains defined and articulated?

Who has had, and who could have, a voice in articulating these educational gains?

What is the relationship between the educational gains you and your students aspire to and your institutional or organisational mission and values overall?

Are you articulating in some way both the individual gains benefiting each student and the collective gains benefiting communities and societies more broadly?

Are you articulating both learning gains (that is, the knowledge, skills and attributes achieved by students) and wider educational gains that benefit students' futures, such as building new networks and opening doors?

Are you expecting all students to gain a particular set of skills and attributes, regardless of the subject(s) studied? If so, how have you decided upon these?

How is any identified set of skills and attributes kept updated in the light of ongoing developments in research, in relevant professions, in technologies and in wider social priorities?

To what extent are the gains you are focusing on collective, targeted and/or personalised (see 3.2)? Do students, staff, partners and stakeholders understand the rationale for this?

B. Supporting students to achieve educational gains

How are you ensuring, through strategic development, that all relevant sections of your institution or organisation play an appropriate and complementary part in empowering students to achieve educational gains?

Is there a logical relationship between your approaches to curriculum design and maximising students' educational gains? If so, are all students, staff and partners aware of the rationale for this?

Is it useful for you to foreground specific pedagogic approaches, for example enquiry-based or project-based learning, across your provision? If so, are all students, staff and partners aware of the rationale for this in relation to maximising educational gains?

Are students encouraged and supported to engage in an appropriate range of co-curricular and extra-curricular activities?

Is appropriate resource being allocated to different 'enablers' of educational gains, including, for example, learning development support and careers guidance?

Is appropriate resource targeted at removing barriers for students who do not, for whatever reason, have equal access to developmental opportunities?

Are relationships with alumni fostered such that student gains and alumni gains are maximised?

C. Evaluating educational gains

Given your framing of students' educational gains, how might these reasonably be tracked and measured?

Are you able to develop a (clearer) set of selected or proxy measures, that collectively illustrate the breadth and depth of students' educational gains?

Are you keeping abreast of new possibilities afforded by learner analytics and artificial intelligence more broadly, taking into account ethical principles?

Is it feasible to measure 'distance travelled' by students in your context? If so, is there an effective infrastructure and strategy for doing so?

Can students work with you more effectively as partners in tracking and measuring their own educational gains?

Can alumni and external partners, such as employers, work with you more effectively in tracking and measuring educational gains?

D. Communicating educational gains

Are your communication strategies, both internal and external, clarifying and celebrating the definition and value of 'educational gains' in your context?

How are you enabling students to understand the relationship between educational gains made through their curriculum and those made outside the curriculum, and the value of both?

How clear to all students, and how accessible, is the menu of opportunities for maximising educational gains that is on offer to them?

How are you enabling your students to understand the benefits of educational gains made through disciplinary specialisms and through interdisciplinary or cross-disciplinary learning?

How are you working with alumni and external partners to explore and promote your students' educational gains?

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