

# Projected completion and employment from entrant data (Proceed)

Updated methodology and results

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# Summary

- In December 2020, the OfS published an experimental new measure (previously referred to as 'projected entry to professional employment')<sup>1</sup> to bring together projected data for full-time first degree students who complete their studies (completion rates) and the progression of recent graduates to employment, further study and other activities (graduate outcomes).
- 2. Following feedback received on the publication, and taking into account representations received from providers, we present an update to the measure, now named Projected completion and employment from entrant data (Proceed). Non-anonymised data by provider, subject within each provider, and subject across the sector has been included. We believe there to be a strong public interest in this information, particularly in informing the choices for prospective students and consider publishing this data an important step in evaluating its utility for this purpose.
- 3. We have updated the measure to take account of the most recently available datasets and have refined the approach to statistical uncertainty to improve understanding of the statistical reliability of the data. Changes to the treatment of travelling, caring and retired graduate activities and to the treatment of students who leave their original provider and commence first degree, or higher, level study at another have been made to make the measure more inclusive of potentially positive student outcomes.
- 4. The updated data is presented in Tables 1-3 in the accompanying workbook. As a result of the updated methodology, the Proceed rate for the majority of providers has increased since the previous publication. In a small number of cases, the rate has decreased as a result of a decrease in the projected completion in the most recent year's data.

We are publishing this update as experimental statistics to obtain further feedback on the methodology and on the measure's utility for applicants considering their options in higher education.

We are actively seeking feedback for this measure. If you have any comments, thoughts or suggestions, or if you require any further information or details, please contact <u>providermetrics@officeforstudents.org.uk</u>.

<sup>&</sup>lt;sup>1</sup> Developing an understanding of projected rates of progression from entry to professional employment, Office for Students, 18 December 2020, <u>www.officeforstudents.org.uk/publications/developing-an-</u> <u>understanding-of-projected-rates-of-progression-from-entry-to-professional-employment/</u>.

# Introduction

- 5. The OfS's regulatory objectives reflect what matters most to students: high quality courses, successful outcomes, and the ongoing value of their qualifications. We believe that when making choices about higher education, students should have access to personalised, high quality and accurate advice about these things to inform what, where and how they study.
- 6. Providing prospective students with an understanding of student outcomes across the whole student lifecycle, in a way that is both reliable and timely, is a challenge. Information about separate stages of the lifecycle, for example completion rates, or employment rates for graduates from a particular course, is currently available. These measures, however, do not give prospective students a complete picture of how likely they would be to complete a course and achieve a positive outcome: employment rates, for example, only provide information about those students who graduated successfully.
- 7. To provide the true rate of student progression from entry on a course to professional employment or other positive outcome, it would be necessary to track a starting cohort through their study and into their final destinations. Such a method in practice would require following a cohort for around 10 years after their first enrolment to allow for the whole cohort to complete their studies and transition into the workplace. The outcomes of students who started their courses around a decade earlier than the cohort of prospective students making their choices today could be very different as a result of the provision on offer to them, their experiences in higher education and the labour market prospects they face on graduation. Student tracking is also problematic where data collection methods change (for example, the move from the Destinations of Leavers from Higher Education (DLHE) to Graduate Outcomes (GO) survey), as the data will not be comparable for different leaving cohorts.
- 8. In a research report published in December 2020,<sup>2</sup> the OfS produced a set of experimental statistics that attempted to produce a single measure of the likelihood that an entrant into higher education would achieve their award and then go on to professional employment, using the most recent data available. The method (previously referred to as projected entry to professional employment) drew on existing indicators to project the proportion of students that would achieve a degree, based on the most recent patterns of student retention, and then used the most recent patterns of graduate employment to estimate the number of entrants that would go on to professional employment.
- 9. The anonymised data in the original report was subject to representations from those providers within scope of that publication. We have taken account of that feedback together with that received via a series of roundtables with sector stakeholders and professionals working with prospective students. This has led to a number of improvements and refinements to the methodology, which are presented in this updated report.
- 10. The changes to the methodology outlined below have been made to ensure the measure is more inclusive of graduate outcomes that do not represent professional-level employment, but

<sup>&</sup>lt;sup>2</sup> Developing an understanding of projected rates of progression from entry to professional employment, Office for Students, 18 December 2020, <u>www.officeforstudents.org.uk/publications/developing-an-</u> <u>understanding-of-projected-rates-of-progression-from-entry-to-professional-employment/</u>.

which students themselves may still class as positive. We have also made use of the most recently available data and made refinements to improve the statistical reliability of the results.

- 11. The OfS is publishing this updated measure, now named Projected completion and employment from entrant data (Proceed), because we consider that there is a strong public interest in publishing information about outcomes for students who start higher education courses. We consider it appropriate at this stage in the development of the measure to publish the data in a non-anonymised form, to encourage its use more widely by prospective students and to obtain further feedback on its utility, presentation and contextualisation.
- 12. In publishing this report, we have taken account of our general duties in section 2 of the Higher Education and Research Act 2017. These require that we have regard to the need to promote quality, choice and opportunities for students, as well as encourage competition between English higher education providers in connection with the provision of higher education. We judge that publishing new, innovative measures, intended over the longer term to improve the information available about student outcomes, is consistent with these duties.
- 13. As a producer of official statistics, the OfS is committed to releasing our data in a manner that promotes public confidence, and to complying with the Code of Practice for Statistics.<sup>3</sup> Introducing a potential new measure of projected completion and employment outcomes through this publication of experimental statistics allows us to involve users and stakeholders at an early stage in assessment of their suitability for the intended purposes.
- 14. By publishing this report, we hope to continue a discussion with providers, students and other stakeholders about the accuracy, purpose and utility of the measure, and allow us to continue to refine the methodology and presentation of the measure. We are alert to the likelihood that wider changes in the higher education data landscape will cause us to keep this methodology under review as understanding of, and approaches taken to using that data, develop.
- 15. We welcome further feedback on these experimental statistics, which can be provided via email at <u>providermetrics@officeforstudents.org.uk</u>. We particularly welcome feedback about:
  - the feasibility of extending the coverage of this methodology to other cohorts (for example, to part-time students)
  - whether there exist alternative statistical approaches that could more effectively communicate the levels of statistical uncertainty than those selected here
  - the utility of the data for prospective students, and whether alternative presentation would improve its interpretation and usefulness.
- 16. The OfS has no current plans to use this data for our regulatory purposes, although the indicators we will use in future to regulate quality and standards are subject to consultation. We do anticipate that we will publish a further update to this measure in 2022 to continue its development and provide further up-to-date information to students. This will be subject to further feedback received as a result of this publication and will also take account of the results of future consultations on the metrics we use as part of our ongoing monitoring of registered providers.

<sup>&</sup>lt;sup>3</sup> See <u>www.officeforstudents.org.uk/data-and-analysis/official-statistics/</u>.

# Method

- 17. The principle of the Projected completion and employment from entrant data (Proceed) combined measure is to provide prospective students with an indication of how likely new entrants on a higher education course are to achieve successful outcomes over the whole lifecycle of their studies. The measure aims to project the proportion of students likely to achieve a degree, based on the most recent patterns of student progression through first degree programmes, and then estimates the proportion of these who will have successful outcomes after their studies, based on recent patterns of graduate employment.
- 18. The combined measure is constructed from two metrics, drawing on established methods from the Higher Education Statistics Agency (HESA) UK performance indicators (UKPIs), that describe outcomes from two relevant stages of the student lifecycle:

#### • The projected completion measure

The proportion of students projected to obtain a first degree at their original provider. The projection is based on the patterns of student retention and completion observed in one year using the most recently available student data, rather than tracking a single cohort over time.

#### • The graduate progression measure

Defined as the proportion of Graduate Outcomes survey respondents in professional employment or any type of further study, or retired, travelling or caring for someone 15 months after completing their course.

19. The Projected completion and employment from entrant data (Proceed) composite measure is derived by multiplication of the projected completion and graduate progression component measures. The resulting statistic represents a measure of how likely new entrants will complete their course and achieve a successful outcome following their studies.

### **Feedback received**

- 20. We have tested the measure in discussions with careers advisers and with our OfS student panel. Generally, it was felt that the measure would be useful to prospective students and their advisers, though appropriate presentation and contextual information would be important to improve understanding of the data.
- 21. In provider representations and subsequent roundtables a number of respondents noted the personal nature of judging a 'positive' outcome for a student. We have identified scope to adjust the definitions used in the graduate progression measure to be more inclusive of 'other' graduate destinations.
- 22. Respondents also highlighted the potential issues with counting student transfers as negative outcomes with respect to a student's original provider, particularly where providers are moving towards enabling more flexible provision across the sector. The potential for interim study occurring in the 15-month period between graduation and the census date of the Graduate Outcomes survey was also raised.

## Summary of changes

- 23. Accounting for the feedback received above, the following methodological changes have been made in this iteration of the measure:
  - Where it can be identified that a student has left their original provider and commenced first degree, or higher, level study at another we have removed them from the projected completion measure at the original provider. They will continue to count towards the completion measure at the second provider. References to 'student transfers' below refer to these transfers in particular. Where a student leaves one provider and commences a lower level of study elsewhere, they still count as a negative outcome for the original provider.
  - Several updates to the treatment of Graduate Outcomes survey data have been implemented which broaden the number of outcomes that count as positive for the purposes of the graduate progression measure.
    - The method now takes into account all activities reported by the survey respondent, not just the activity that the students selected as their 'main' activity. Student outcomes are counted positively if any of their outcomes are positive. For example, a graduate whose main activity is 'doing something else', but also reports part-time professional employment, would count as a positive outcome.
    - Graduates who report taking time out to travel, caring for someone or retired are also counted as positive outcomes for the purposes of the graduate progression measure.
  - Additional contextual information has been provided to aid interpretation of the data, including additional data on interim study undertaken by graduate outcomes respondents and sector-adjusted benchmarks for the component and composite measures.
- 24. The population used for the graduate progression measure has been linked with the subject of their earliest available record, to associate their outcome with the subject they originally entered higher education to study. This approach is now consistent with that used for the projected completion data.
- 25. Following the original publication in December 2020, the 2019-20 HESA student and student alternative data records have become available. We have therefore rolled forward the projected completion measure by one year (to project completion for 2018-19 starters) to use the most up-to-date data in the public domain. We have also incorporated any recent amendments to records (as of January 2021) to ensure the input datasets are as current and accurate as possible.
- 26. Refinements have also been made to our approach to the statistical uncertainty in the component measures to improve our assessment of the statistical reliability of the data.
- 27. Further details of these changes are detailed in the technical notes below.

## Advantages and drawbacks

- 28. We consider that this experimental measure has a number of advantages as a source of information for prospective students:
  - The measure accounts for the whole student lifecycle, from entry to final destination, and provides an overall picture of the outcomes a student can expect when embarking on a course in higher education. It describes the cumulative effect of student retention and graduate outcomes, which taken separately can mask a student's overall chances of success.
  - The measure allows the use of the most recently available data on student retention and graduate outcomes to provide a current picture of provider performance, that minimises the risk of changes to provision and data collection impacting the metric. This provides prospective students with the most relevant information to their inform decision-making, that more closely reflects their potential experience.
  - Publishing the refined measure in a non-anonymised form will enable the data to be used by prospective students and their advisers to inform their choices.

29. Combining the two measures in this way, however, does have drawbacks:

- Although individual students will define their success beyond graduation in relation to their own goals and motivations, creating the Projected completion and employment from entrant data measure requires a judgement as to whether the outcomes graduates are achieving are consistent with the higher education qualification they have started and aim to complete. We believe that it is appropriate to look at rates of completion of the qualification intended, and rates of progression into employment and further study destinations commensurate with the qualification they have completed. We expect that the updates to the methodology outlined above will reduce the number of outcomes that students may consider as positive that are excluded from the measure.
- Some students may progress into professional employment or further study without qualifying with a first degree at their original provider (for example after qualifying with a lower-level award), but these paths are not counted positively by the compound measure.
- As a result of excluding students who transfer from our starting population, the compound measure is projecting outcomes for students who start on a full-time first degree course and do not go on to transfer to a different provider, rather than all of the starting cohort. Without further information on the outcomes of these transferred students we have considered this to be the most appropriate way to treat them for the purposes of this report, but have included information on the number of transferring students excluded to mitigate this drawback.
- The projected completion rates are reported for students starting their first degree in 2018-19, and the employment rates are reported for a cohort of students who achieved their qualification in 2017-18. The cohorts of students considered by the two measures are therefore non-overlapping and could differ in a way that could create misleading results if cohorts have changed over time. For example, if the provider has become more selective

this may improve both retention and employment rates, but employment rates would still reflect the composition of earlier cohorts.

- There is a degree of variation within provider, by subject and also by entry qualifications, on students within the cohort. It can be seen in the accompanying data, for example, that some providers have a range of over 50 percentage points between their subject areas with the best and worst outcomes on the Proceed measure.
- 30. Having considered these advantages and drawbacks, in conjunction with feedback we have gathered on the potential utility of the data, we have taken the view that the benefits for potential students and other stakeholders from having this information available through the non-anonymised Proceed combined measure, significantly outweighs the drawbacks.

## Results

- 31. The Proceed composite measure and each of the component measures calculated using the updated methodology are published in the accompanying workbook. Proceed data is presented by provider (Table 1), subject within each provider (Table 2) and by subject across the sector (Table 3). Contextual information is presented alongside the data, whilst Tables 4-9 contain underlying data relating to the calculation of the component measures.
- 32. Where data is based on small numbers of students or is otherwise unreliable it has been supressed, in line with the strategy detailed in the technical notes. The measures are presented alongside relevant contextual data to allow users to understand the statistics and consider their utility.
- 33. The key findings observed in the December 2020 iteration of the method are still broadly applicable to the updated data. Below we have presented an analysis of the impact of the changes to the methodology since the previous publication.

## Impact of methodology changes

#### Impact of treating transfers as a neutral outcome in the completion projections

34. Figure 1 shows the difference in provider-level projected completion rates caused by treating transfers to new providers as neutral rather than negative outcomes, by removing them entirely from the starting population. It shows that this change results in a larger projected completion rate for all but one provider, with most providers seeing a modest increase. Some providers have higher proportions projected to transfer so have benefited disproportionately from this change.

# Figure 1: Projected completion rates with transfers considered as neutral outcomes compared to with transfers considered as negative outcomes, by provider



**Notes:** The diagonal yellow line marks y=x. Providers with no starters projected to transfer would fall on this line. Only providers with projected completion rates that meet our reliability tests are included in this figure.

#### Impact of changes to graduate progression measure

35. To illustrate the impact of the methodological changes to the graduate progression measure discussed above, Figure 2 shows how the provider-level graduate progression rates have changed since the release in December 2020. For the majority of providers, the graduate progression rate has increased as a result of the refinements made to the method of assessing outcomes, as indicated by their data points lying above the diagonal line. This is in line with expectations, as the changes allow a broader range of graduate activities to be included as positive outcomes.

# Figure 2: Updated graduate progression measure plotted against graduate progression measure in the December 2020 release, by provider



**Notes:** The diagonal yellow line marks y=x. Providers with no change in their graduate progression rates would fall on this line. Only providers with response rates of 50% or higher have been included in this figure.

#### Impact of all changes on the composite measure

- 36. Figure 3 demonstrates how the updated Proceed measure has changed since the release in December 2020 for each provider. As the methodological changes applied since December 2020 have been designed to create a more inclusive Proceed measure, the Proceed rates have increased for most providers, as indicated by their data points lying above the diagonal line.
- 37. There are two providers with data points below the diagonal line indicating a decrease in their Proceed rate. Given the impact of counting transfers as neutral rather than negative outcomes (Figure 1) and the trends observed in the graduate progression rates (Figure 2), these decreases are likely to have resulted from the rollover of the projected completion data to the latest year, rather than any methodological changes.

# Figure 3: Updated Proceed composite measure plotted against the measure in the December 2020 release, by provider



**Notes:** The diagonal yellow line marks y=x. Providers with no change in their Proceed measure would fall on this line. Only providers with a reliable Proceed measure in both cases have been included in this figure.

# **Technical notes**

38. The analysis that underpins the Projected completion and employment from entrant data (Proceed) measure relies on a number of definitional assumptions and has a series of known limitations. These are explained in the technical notes that follow.

## General notes about the data

- 39. The analysis is limited to providers returning HESA Student and Student Alternative data. Individualised Learner Record (ILR) data from further education colleges has not been used, as this data set does not contain sufficient information to allow assessment of transitions to construct the projected completion measure. The Graduate Outcomes responses from graduates of these providers have therefore not been used either. Only full-time, UK-domiciled<sup>4</sup> students on first degree<sup>5</sup> level courses at English providers registered with the OfS on 23 October 2020 are considered.
- 40. The completion projections are based on transitions from 2018-19 to 2019-20 and project the outcomes of starters in 2018-19, whereas the graduate outcomes data is based on responses to the Graduate Outcomes survey of 2017-18 graduates. Both are based on the most recent data available.
- 41. The subject groups used for the subject-level rates are the Common Aggregation Hierarchy level 2 groupings (CAH2). Where students were studying across multiple CAH2 groups, their data is attributed partially to each of the subject groups by a full person equivalent (FPE) count.
- 42. To derive the projected completion and employment rate, the proportion of starters projected to obtain a first degree at their original provider (projected completion rate) is multiplied by the proportion of Graduate Outcomes respondents in professional employment, further study of any type or retired, travelling or caring for someone (graduate progression rate).
- 43. Proceed rates are suppressed if either the projected completion rate or the graduate progression rate is suppressed.
- 44. If the Graduate Outcomes response rate is below 50 per cent then both the graduate progression rate and the Proceed rate are highlighted as worth treating with extra caution, due to an increased risk of response bias.
- 45. Throughout, student numbers have been rounded to the nearest 5 and proportions to the nearest 0.1 per cent.

<sup>&</sup>lt;sup>4</sup> Students from Guernsey, Jersey and the Isle of Man are not counted as UK-domiciled.

<sup>&</sup>lt;sup>5</sup> First degree level includes integrated masters' courses and other courses with undergraduate and postgraduate components.

#### **Updates since December 2020**

- 46. The data published in this experimental statistics release differs to that published in the research report 'Developing an understanding of projected rates of progression from entry to professional employment'<sup>6</sup> in December 2020, due to the following changes and methodological updates:
  - The HESA Student and Student Alternative data used includes the latest signed-off amendments available to the OfS as of 11 January 2021.
  - Projected completion data has been calculated for starters in 2018-19, rather than 2017-18 starters, using transitions between 2018-19 and 2019-20.
  - A new test, based on both the number of starters and the number of 'enders' (students entering end states) has been used to assess the reliability of the projected completion rates.
  - Student transfers, where they leave one provider and start at a new provider at first degree or postgraduate level, are no longer considered as having a negative outcome in the projected completion rates. Instead, starters projected to transfer in this way are excluded from the calculation, so the projected completion rate gives the rate of completion among starters not projected to transfer.<sup>7</sup> References to 'student transfers' below refer to these transfers in particular.
  - To improve alignment with the completion population, the following refinements have been made to the Graduate Outcomes population:
    - Earliest full-time, first degree records have been identified for the Graduate Outcomes population and subjects have been taken from these records.
    - o Part-time apprenticeship students have been excluded.
    - Those qualifying at first degree level but returned as aiming for credits or something else at other undergraduate level have been excluded.
  - The graduate progression measure has been calculated on the basis of all activities in the week of the Graduate Outcomes survey, rather than just the graduate's self-reported most important activity. The activity that gives the most positive outcome is selected over any other activity regardless of whether it's the main activity or not.
  - The graduate activities of retired, travelling, and caring for someone are now considered as positive outcomes.
- 47. The following are additions that have been made since December 2020:

<sup>&</sup>lt;sup>6</sup> See <u>www.officeforstudents.org.uk/publications/developing-an-understanding-of-projected-rates-of-progression-from-entry-to-professional-employment/</u>.

<sup>&</sup>lt;sup>7</sup> Transfers to lower levels of study are still counted negatively in this approach.

- Standard deviations have been provided for the projected completion rates, the graduate progression rates, and the composite Proceed rates.
- Benchmark values have been provided for the projected completion rates, the graduate progression rates, and the composite Proceed rates.

#### Contextualising the data

- 48. To aid interpretation of the Proceed data, we have produced sector-adjusted averages based on existing benchmarking methodologies.<sup>8</sup> For the purposes of this report, this application extends only to the calculation of the sector-adjusted average proportions<sup>9</sup> for each of the components contributing to the Proceed rate. We have not calculated the size of the differences between the sector-adjusted averages and the observed absolute indicators or attempted to assess the statistical significance of these differences. References throughout to benchmark values should be taken to refer only to these sector-adjusted averages.
- 49. Benchmark values have been calculated separately for the projected completion rates and the graduate progression rates.<sup>10</sup> Mirroring the calculation of the Proceed rates, these benchmark values have been multiplied together to create a composite sector-adjusted statistic. The approaches taken to benchmarking each of the two components of the Proceed data are described below, in paragraphs 66 to 68 and 92 to 93.

#### Statistical uncertainty

- 50. Standard deviations have been calculated for each of the two component measures, and for the composite measure (Proceed). In all cases, these are standard deviations of the absolute measures themselves; they do not relate to the benchmark values or the difference from these benchmark values. Further detail of the calculation of these standard deviations is available below in paragraphs 69 to 71 and 95 to 100.
- 51. If you have any feedback on the approaches taken to contextualising or assessing statistical uncertainty in the Projected completion and employment from entrant data measure, please contact <u>providermetrics@officeforstudents.org.uk</u>.

<sup>&</sup>lt;sup>8</sup> Information about the approach the OfS takes to benchmarking is available at: <u>www.officeforstudents.org.uk/data-and-analysis/benchmarking/</u>.

<sup>&</sup>lt;sup>9</sup> References to sector-adjusted averages should be taken as inclusive of the weighted sector projections which are equivalent in the case of the completion measure.

<sup>&</sup>lt;sup>10</sup> The benchmark values have been derived using classifications defined within the 2021 core algorithms document at <u>https://www.officeforstudents.org.uk/data-and-analysis/institutional-performance-measures/technical-documentation/</u>

## Projected completion data: technical notes and known limitations

- 52. The methodology from Table T5 of HESA's UK Performance Indicators (UKPIs)<sup>11</sup> has been used to estimate completion rates at provider level, subject level across the sector, and subject level within each provider.
- 53. Starters and individual student transitions have been identified consistently for both the provider and subject-level outputs. In both outputs, completion of a full-time first degree is projected at the original provider. Transfers to other providers are included as separate outcomes, with transfers to first degree study or higher reported as a distinct outcome from transfers to lower levels of study. However, no distinction is drawn between students transferring to a new provider and then qualifying with a first degree and students transferring to a new provider and then becoming absent with no qualification.
- 54. Projected transfers to first degree study or higher at a new provider are subtracted from the starting population; the other projected outcomes are calculated as a proportion of this adjusted population. In this way, the transfers are treated as neither positive or negative outcomes and the projected completion rate gives the proportion projected to obtain a first degree at the original provider among starters not projected to transfer.
- 55. There is no consideration given to whether students will end up completing in their original subject area in the subject-level projections.
- 56. Completion projections are suppressed if they fail the reliability tests described in paragraph 64.

#### **Populations**

- 57. The starter populations are identified from students registered at English higher education providers in 2018-19. Only students at providers registered with the OfS on 23 October 2020 have been considered.
- 58. To identify the transitions of students, HESA Student and HESA Student Alternative data from 2017-18 through to 2019-20 has been used. UK-domiciled students registered at English higher education providers make up the base population; student-level data from providers in Wales, Scotland and Northern Ireland has only been used to inform the transfer states in the transition matrix.

#### Adaptations to the methodology

59. The following adaptations to the original HESA T5 methodology have been made:

<sup>&</sup>lt;sup>11</sup> Technical detail about this methodology is available at <u>https://www.hesa.ac.uk/data-and-analysis/performance-indicators/outcomes/technical</u>.

- Students are associated with their earliest full-time first degree record at the provider and attributed the subjects from that record, regardless of subsequent subjects of study.<sup>12</sup> This facilitates projected completion rates of starters in a subject group.
- Intercalation has been introduced as a new state in the transition matrix.<sup>13</sup>
- Where a student has qualified from full-time first degree level study in years prior to 2018-19, records for that student at that provider from before the qualification are ignored when identifying starters and assigning subjects to students.
- The 1 December census date has been replaced by a bespoke date for each student, based on their start date. A full-time first degree student is considered in the base population if they have been active for at least 14 days after commencing their course (rather than active after 1 December) and transitions are identified with reference to the anniversary of this 14-day point in subsequent academic years.
- As discussed in paragraph 54, starters projected to transfer have been removed from the starter population before calculating the final projected outcome proportions. In this way, transfers to first degree or postgraduate study at a new provider are treated as neither a positive or negative outcome and the projected completion rates are given as a proportion of starters not projected to transfer. This adaptation allows us to retain consistency with our population used for the graduate progression measure, without counting these transfer outcomes negatively.
- 60. A full list of the states used in the transition matrix, incorporating the adaptations described above, is included at Appendix C.

#### **Reliability of the projections**

- 61. The following issues can lead to potentially unstable, unreliable or misleading projected outcomes:
  - Discontinuities in the transition matrix that is, where there are students entering a (transition) state but no students leaving.
  - Small numbers of students in particular states, leading to the outcomes of a few students having a large impact on the final results. This is particularly problematic where there are many students entering a state but only a few leaving.
  - Outcomes of students in later years no longer being representative of the likely outcomes of starters.

<sup>&</sup>lt;sup>12</sup> The new methodology looks as far back as 2014-15 to find this earliest record. This will not be early enough for all students but should be for a large majority of those contributing to the transition matrix.

<sup>&</sup>lt;sup>13</sup> Refinements have been introduced to ensure a consistent approach to the treatment of intercalating students when intercalation occurs within the same provider or involves a different provider, which has a positive impact on the outcomes reported for the medicine and dentistry subject area for providers with this provision. While this refinement results in projections that are more representative of these students' outcomes, in looking at the underlying student data we have observed anomalies in data reporting practices related to intercalation periods, which may mean that medicine and dentistry rates remain understated.

- 62. In some cases, such as when there is a discontinuity in the transition matrix, a non-zero proportion of starters are projected an unknown outcome.
- 63. These issues tend to occur when provision has changed over time and/or the number of students informing the transition matrix is small. For example, where a provider has introduced a four-year degree it may have students entering the fourth year but none qualifying.
- 64. To mitigate this risk, completion projections are suppressed where there are fewer than 70 starters or fewer than 70 'enders', or more than 5 per cent are projected an unknown outcome. In this context, an 'ender' is someone that enters an end state in the transition matrix (those that indicate that a qualification has been awarded, the student has transferred to another provider, or become absent from higher education for two consecutive years). The test of at least 70 starters and 70 enders is similar to the test previously used of at least 250 students informing the transition matrix and catches very similar numbers of providers and subjects. The new test is slightly more refined as it is more likely to identify cases where we do not have enough students in later years of study to make a reliable projection. It also does not have an inherent assumption about course length, so courses of different lengths should be treated in an equivalent way.
- 65. Since the last publication, we have calculated the proportions of starters that are projected to pass through each state in the transition matrix. Interrogating this information alongside the numbers of students informing the transitions out of each state has reassured us that the reliability tests described above are generally sufficient to remove the cases where very few students inform the projections of large proportions of starters. We believe they strike an appropriate balance between the utility of the outputs for their intended purposes and the risk of encountering the issues described in paragraph 61.

#### Contextualising the projected completion data

66. Projected completion benchmark values have been created following HESA's Table T5 methodology. As for the Table T5 outputs, entry qualifications, subject<sup>14</sup> and age on entry are the factors used within the sector-adjusted average calculation. Additionally, ethnicity and POLAR4, an area-based measure of young participation in higher education,<sup>15</sup> have also been used. This combination of factors has been chosen to be as consistent as possible with those used for the full-time continuation metric in the Teaching Excellence and Student Outcomes Framework (TEF),<sup>16</sup> but no bespoke analysis has been conducted to assess the effects of these factors on this measure. See Appendix B: Benchmarking factors for a list of the benchmarking factors used and the groups within them.

<sup>&</sup>lt;sup>14</sup> Here, the subject is the CAH2 subject of the earliest record found for the student. This is consistent with the assignment of subjects for the subject-level data but not with the factor used in HESA's Table T5 benchmarking.

<sup>&</sup>lt;sup>15</sup> Further information about POLAR4 is available at: <u>https://www.officeforstudents.org.uk/data-and-analysis/young-participation-by-area/</u>

<sup>&</sup>lt;sup>16</sup> The TEF benchmarking factors are given in Table 6 of the TEF specification, available at: <u>https://www.gov.uk/government/publications/teaching-excellence-and-student-outcomes-framework-specification</u>.

- 67. The Table T5 methodology produces benchmark values for each of the projected outcomes. As the outcome used to calculate the Proceed rate is the proportions projected to obtain a first degree (the projected completion rate), only the benchmark value for this outcome is presented.
- 68. As the proportion projected to transfer has been removed from the starting population when calculating the projected completion rates, the same approach has been taken to calculating the benchmark values.

#### Statistical uncertainty in the projected completion data

- 69. We have calculated a standard deviation for the projected completion rates following a similar approach to HESA's methodology, which assumes that *n* students have been chosen randomly from a large population of which proportion  $\pi$  obtain a first degree, to give a standard deviation of  $\sqrt{\frac{\pi(1-\pi)}{n}}$ .
- 70. We have made two adaptations to HESA's methodology:
  - To estimate the uncertainty in the projected completion rates themselves, rather than assess the statistical significance of the difference from the benchmark value, we have used the projected completion rate as  $\pi$ , rather than the benchmark value.
  - As the approach does not consider the number of students informing transitions out of each state in the matrix, it is likely to underestimate the true uncertainty of the projections in some cases. To mitigate this risk, we have used the minimum of the number of starters and the number of enders, rather than just the number of starters, as *n*. This should better estimate the uncertainty involved in the projections where there has been growth in the provider or subject over recent years and the number of enders is substantially lower than the number of starters. For this calculation, we have also removed starters projected to transfer and enders who transferred from those populations.
- 71. The benchmark values themselves will also be subject to some statistical uncertainty, but this has not been calculated. Our approach also does not account for variation by benchmarking factors as it assumes that all students have the same probability of completing.

### Graduate outcomes data: technical notes and known limitations

- 72. Qualifiers in the 2017-18 academic year have been linked to their responses to the Graduate Outcomes survey.<sup>17</sup> Graduates are sent this survey roughly 15 months after graduation.
- 73. Graduate Outcomes data has been suppressed where the number of responses is less than 25. We have flagged that greater caution should be taken where the response rate is less than 50 per cent. The response rate requirement adopted here is consistent with that used to determine the reportability of Graduate Outcomes data on the Discover Uni website.

<sup>&</sup>lt;sup>17</sup> Further information is available at: <u>https://www.hesa.ac.uk/innovation/outcomes</u>.

#### **Base population**

- 74. The data is based on UK-domiciled full-time students<sup>18</sup> who qualified with a first degree during 2017-18 and were registered at an English higher education provider, the provider being registered with the OfS.
- 75. Additionally, these students were in the target population for the Graduate Outcomes survey and they had to either fully or partially complete the survey for their responses to have been included in this analysis.<sup>19</sup>
- 76. Students in the base population have been associated with the CAH2 subject areas of their earliest full-time first degree record at the provider.<sup>20</sup> This is now consistent with the approach used in the projected completion data.

#### Activity

77. In the survey, graduates were asked which of 11 possible activities they had been doing during the census week. There was no limit to the number of activities they could say they were undertaking, and they could respond that they were undertaking one, multiple or even all activities. Table 1 shows the 11 possible activities and the resulting activity group the respondent would be reported as belonging to if they were undertaking just this one activity. This activity group categorises their activity and determines whether their response contributes positively or not towards the graduate progression measure.

Activity field	Activity description	Resulting activity group
ALLACT01	Paid work for an employer	Depending on SOC (Standard
ALLACT02	Self-employment/freelancing	Occupational Classification) code, either
ALLACT03	Running my own business	NON PRO EMP (non-professional
ALLACT04	Developing a creative, artistic or professional portfolio	employment) or EMP SOC MISSING (in employment but
ALLACT05	Voluntary/unpaid work for an employer	missing a SOC code)
ALLACT06	Engaged in a course of study, training or research	FURTHER STUDY
ALLACT07	Taking time out to travel – this does not include short-term holidays	OTHER POSITIVE
ALLACT08	Caring for someone (unpaid)	
ALLACT09	Retired	
ALLACT10	Unemployed and looking for work	UNEMPLOYED
ALLACT11	Doing something else	OTHER NEGATIVE

#### Table 1: Activities undertaken and resulting activity groups

<sup>18</sup> This includes full-time apprenticeship students but not apprenticeship students returned as part-time.

<sup>19</sup> Responses that are complete are indicated by ZRESPSTATUS=04, partially complete responses by ZRESPATUS=03: <u>https://www.hesa.ac.uk/collection/c17072/derived/zrespstatus</u>.

<sup>20</sup> As in the projected completion data, only records from 2014-15 onwards are considered.

- 78. Of all the activities they identified, they were also asked which they felt their most important single activity had been. In the December 2020 release, only the responses to this most important activity question (MIMPACT) were considered in the analysis. For this latest release, however, all of the respondent's activities during the week of the survey are considered to identify all those that could contribute positively to the graduate progression measure, even if they were considered not to be the respondent's most important activity.
- 79. In the derivation of the graduate progression measure, a respondent is considered to have had a positive outcome if they belong to one of the four activity groups PRO EMP, FURTHER STUDY, OTHER POSITIVE or EMP SOC MISSING. In these cases, their response contributes towards the numerator of the graduate progression measure, although in the case of belonging to EMP SOC MISSING only a proportion of their response will contribute, as explained in paragraph 88.
- 80. Conversely, a respondent is considered to have had a negative outcome if they belong to one of the remaining activity groups: NON PRO EMP, UNEMPLOYED and OTHER NEGATIVE. These responses do not contribute towards the numerator of the progression measure.
- 81. As stated in paragraph 77, it is possible that a respondent was undertaking multiple activities in the census week and consequently belongs to multiple activity groups. In these cases, a set of rules is required to identify the one activity group that they are ultimately reported in. In creating these rules, we have designed them to always attribute the most positive outcome possible for a respondent, in order to maximise their contribution towards the numerator of the graduate progression measure. The rules are as follows:
  - If the respondent is identified as being in work but is missing a SOC (Standard Occupation Classification) code and at the same time is undertaking another activity that also counts positively, then they will be placed in the activity group of this other activity. This is because their whole response will then contribute positively towards the graduate progression measure, rather than only a proportion if they were placed in the EMP SOC MISSING activity group (Example 1 in Table 2).
  - If the respondent is identified as being in work but has a missing SOC code and this is their only activity that could count positively, then they will be placed in the activity group EMP SOC MISSING and a proportion of their response will contribute towards the progression measure (Example 2 in Table 2).
  - If the respondent is undertaking multiple activities that would all result in their whole response contributing to the graduate progression measure, then the following approach is taken to assigning the response to an activity group. In practice, this does not impact whether the response contributes positively or negatively to the measure.
    - If one of the respondent's multiple positive activities corresponds to the main activity that they have identified (MIMPACT), then they are placed in that activity group. The same approach is taken if they are undertaking multiple activities that are all considered negative outcomes (Examples 3, 4, 5 and 6 in Table 2).
    - If none of the respondent's multiple positive activities correspond to the main activity they have identified, then their activity group is selected from the ones they are

undertaking according to the following hierarchy: PRO EMP, FURTHER STUDY, OTHER POSITIVE (Examples 7 and 8 in Table 2).

Example	Potential activity group 1	Potential activity group 2	Potential activity group 3	Main activity (MIMPACT)	Resulting activity group
1	EMP SOC MISSING	FURTHER STUDY	-	Disregarded	FURTHER STUDY
2	EMP SOC MISSING	UNEMPLOYED	-	Disregarded	EMP SOC MISSING
3	PRO EMP	FURTHER STUDY	OTHER POSITIVE	06 Engaged in a course of study, training or research	FURTHER STUDY
4	PRO EMP	FURTHER STUDY	OTHER POSITIVE	07 Taking time out to travel	OTHER POSITIVE
5	PRO EMP	FURTHER STUDY	OTHER POSITIVE	01 Paid work for an employer	PRO EMP
6	UNEMPLOY ED	OTHER NEGATIVE	-	11 Doing something else	OTHER NEGATIVE
7	PRO EMP	FURTHER STUDY	-	11 Doing something else	PRO EMP
8	FURTHER STUDY	OTHER POSITIVE	-	11 Doing something else	FURTHER STUDY

# Table 2: Rules for assigning activity group when respondents were undertaking multiple activities

- 82. The survey includes a question as to whether respondents have undertaken any further study during the interim 15-month period between qualifying and the census week. This reported interim study has not been used in the calculation of the progression measure. However, the proportions of the respondents that did not contribute positively to the progression measure but had undertaken interim study are included as contextual data in the accompanying workbook.
- 83. Similarly, the survey includes a question as to whether they are due to start any employment or further study in the next month, but this information has not been considered in this analysis.

#### Employment

84. Whether a respondent in employment is in professional employment or not is determined based on the job details that they have provided. Within Graduate Outcomes, jobs are mapped to the Standard Occupational Classification (SOC 2010) and these codes are then grouped into

10 major groupings (in XEMP2010SOC1 and XBUS2010SOC1, depending on whether this relates to employment or self-employment respectively). Table 3 shows which of these major groupings are classed as professional<sup>21</sup> and which have been classified as non-professional employment.

XEMP2010SOC1 or XBUS2010SOC1 code	XEMP2010SOC1 or XBUS2010SOC1 label	Employment group reported within
1	Managers, directors and senior officials	Professional
2	Professional occupations	employment
3	Associate professional and technical occupations	
4	Administrative and secretarial occupations	Non-professional
5	Skilled trades occupations	employment
6	Caring, leisure and other service occupations	
7	Sales and customer service occupations	
8	Process, plant and machinery operatives	
9	Elementary occupations	

#### Table 3: Mapping of SOC codes to employment group

- 85. In addition to the first three major groupings, veterinary nurses (SOC 2010 unit group 6131) and higher-level teaching assistants (SOC 2010 unit group 6125) have been considered as in professional employment. This is consistent with the reclassification of these unit groups in SOC 2020.<sup>22</sup>
- 86. Just as a respondent may be undertaking multiple activities during the census week, it is possible to have SOC codes associated with both employment and self-employment. Following our approach to always report the most positive outcome, we use a SOC code that is categorised as professional employment wherever possible, regardless of whether this corresponds to the main activity or whether the employment was full-time or part-time.
- 87. The particular mix of provision at some providers, e.g. some with a vocational focus, may mean that their employed graduates are not likely to be considered professional by this classification.
- 88. In cases where details of a graduate's job have not been provided or cannot be mapped to a SOC code, the response is apportioned between both employment groups in the same ratio between professional and non-professional employment that has been derived for that provider. The approach to deriving this weighting has been refined since the December 2020

<sup>&</sup>lt;sup>21</sup> Professional employment may be described a 'highly-skilled employment' in other contexts.

<sup>&</sup>lt;sup>22</sup> See here for more information about the reclassifications in SOC 2020: <u>https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationsoc/soc</u> <u>2020/soc2020volume1structureanddescriptionsofunitgroups</u>.

release, in that now only those responses where the respondent is undertaking no other activity that would contribute positively to the progression measure are considered.

- 89. For example, a provider has 100 respondents that are in employment (with known SOC codes): 35 of these are in professional employment and the remaining 65 are in non-professional employment. They are undertaking no other activities that count as positive outcomes. In this provider there are also 10 respondents in employment and no other activities that count as a positive outcome, but their associated SOC codes are not known. In this case, each of the 10 responses are individually weighted so that each one contributes 0.35 towards the number in professional employment for that provider and 0.65 towards the number in non-professional employment. It should be noted that these same weightings are used to derive the measures by subject, entry qualification and graduate location (see Appendix A), even though the split between professional and non-professional employment for that subject, entry qualification or location will be different to the split by provider.
- 90. There are 4,353 respondents in the base population belonging to the EMP SOC MISSING activity group; for these respondents, their most positive outcome is that they are in employment but their SOC code is missing. This is only 3 per cent of all respondents in the population and these cases do not appear to be concentrated in particular providers or subjects, so the design of the weighting method outlined above should only have a minor impact.

#### **Further study**

91. All study that was being undertaken by a respondent in the census week is counted as 'further study' and contributes to the numerator of the progression measure. This is despite the fact that some of this study will have been at a lower level than the original first degree awarded. Similarly, the mode of study is not considered in this analysis.

#### Contextualising the graduate outcomes data

- 92. Benchmark values for the professional employment or further study rates have been calculated according to the benchmarking methodology used by the UKPIs and TEF.<sup>23</sup> The factors used within the sector-adjusted average calculation match the factors that were used to benchmark the TEF full-time professional employment or further study metric, which was calculated from data from the DLHE survey. No bespoke analysis has yet been conducted to assess the effects of these factors on this measure. Appendix B contains a list of the benchmarking factors used and the groups within them.
- 93. While there are known geographical variations in employment across different areas of the UK, these variations have not yet been accommodated within the TEF benchmarking approach for employment metrics and so are not included in the contextualisation of the statistics in this report. We expect this to be an area for further development of the Projected completion and employment from entrant data measures. Appendix A provides graduate progression rates by

<sup>&</sup>lt;sup>23</sup> Technical detail of this methodology is available at: <u>https://www.hesa.ac.uk/data-and-analysis/performance-indicators/benchmarks</u>.

location of graduates, at county or unitary authority level,<sup>24</sup> to provide contextual information about the potential effect of location on the measure.

94. As stated in paragraph 82, contextual information is provided to show the extent to which respondents have undertaken interim study during the 15 months between graduating and completing the survey. Interim study undertaken does not contribute towards the progression measure, however.

#### Statistical uncertainty in the graduate outcomes data

- 95. We have provided a standard deviation for the graduate progression rates, calculated by assuming that you are selecting *n* respondents at random from a large population, of which proportion  $\pi$  were in a graduate outcome counted positively by the measure. This is consistent with the calculation used to estimate the standard deviation of the projected completion rates and gives a standard deviation of  $\sqrt{\frac{\pi(1-\pi)}{n}}$ , where  $\pi$  is the graduate progression rate and *n* is the number of Graduate Outcomes respondents.
- 96. This estimated standard deviation is a measure of the statistical uncertainty in the absolute graduate progression rate; it is not equivalent to the standard deviations presented in TEF, which related to the difference from benchmark (and therefore considered uncertainty in both the absolute indicator and the benchmark values).

## Statistical uncertainty in the composite measure (Proceed)

- 97. We have estimated the variance of the composite measure, using the following formula:  $Var(XY) = E(X)^2 Var(Y) + Var(Y)Var(X) + E(Y)^2 Var(X)$ , where:
  - X is a random variable of which the projected completion rate is one realisation
  - Y is a random variable of which the graduate progression rate is one realisation
  - Var(X) is estimated as the square of our calculated standard deviation for the projected completion rate
  - Var(Y) is estimated as the square of our calculated standard deviation for the graduate progression rate
  - E(X) is estimated as the projected completion rate
  - E(Y) is estimated as the graduate progression rate.
- 98. Taking the square root of this variance gives an estimate for the standard deviation of the composite measure.
- 99. This approach assumes that the two component measures are realisations of independent random variables. Whilst there may be some covariance between the component measures,

<sup>&</sup>lt;sup>24</sup> This is the location of the graduate's main activity, according to their Graduate Outcomes response, which may not always correspond to the location of the activity contributing to the progression rates. See the HESA derived field XMLOCUC for further detail: <u>https://www.hesa.ac.uk/collection/c17072/derived/xmlocuc</u>.

given that the populations informing each of the measures are distinct, we consider that the likely effect of this is small.

100. The estimated standard deviations for each of the component measures and the composite measure are available in the workbook that accompanies this report.

# Appendix A: Graduate progression rates, by location of graduate

Location of graduate (county or unitary authority level)	Total number of respondents	Progression rate (%)
Bath and North East Somerset	285	80
Bedford	235	77
Blackburn with Darwen	130	81
Blackpool	190	78
Bracknell Forest	200	81
Brighton and Hove	805	73
Buckinghamshire	580	77
Cambridgeshire	1,305	83
Central Bedfordshire	210	75
Cheshire East	425	74
Cheshire West and Chester	365	71
City of Bristol	1,995	79
City of Derby	640	79
City of Kingston upon Hull	305	83
City of Leicester	795	75
City of Nottingham	1,320	79
City of Plymouth	550	77
City of Portsmouth	470	81
City of Southampton	685	79
City of Stoke-on-Trent	275	80
City of York	535	72
Cornwall	430	70
County Durham	440	83
Cumbria	420	73
Darlington	180	74
Derbyshire	555	74
Devon	795	76
Dorset	255	77
East Riding of Yorkshire	215	73
East Sussex	380	78
Essex	1435	76
Gloucestershire	935	77
Greater London	30,010	81

Location of graduate (county or unitary authority level)	Total number of respondents	Progression rate (%)
Greater Manchester	5,815	78
Halton	125	78
Hampshire	1,475	77
Hartlepool	75	81
Herefordshire	135	70
Hertfordshire	1,710	76
Isle of Wight	90	83
Kent	1,595	75
Lancashire	1,275	75
Leicestershire	700	74
Lincolnshire	885	74
Luton	360	74
Medway	205	86
Merseyside	2,310	74
Middlesbrough	255	81
Milton Keynes	630	80
Norfolk	1,040	75
North East Lincolnshire	80	81
North Lincolnshire	80	74
North Somerset	130	74
North Yorkshire	640	75
Northamptonshire	865	77
Northumberland	185	84
Nottinghamshire	585	78
Oxfordshire	1,360	82
Peterborough	340	84
Reading	615	86
Redcar and Cleveland	60	79
Rutland	30	77
Shropshire	225	73
Slough	285	82
Somerset	375	76
South Gloucestershire	375	84
South Yorkshire	2,235	77
Southend-on-Sea	135	78
Staffordshire	800	71

Location of graduate (county or unitary authority level)	Total number of respondents	Progression rate (%)
Stockton-on-Tees	140	83
Suffolk	720	78
Surrey	1,750	79
Swindon	355	82
Telford and Wrekin	135	81
Thurrock	85	75
Torbay	75	83
Tyne and Wear	1,590	77
Warrington	430	82
Warwickshire	755	79
West Berkshire	220	86
West Midlands	5,225	79
West Sussex	970	78
West Yorkshire	4,100	77
Wiltshire	405	76
Windsor and Maidenhead	170	76
Wokingham	220	86
Worcestershire	680	74

# **Appendix B: Benchmarking factors**

## Benchmarking factors for the projected completion measure

Benchmarking factor	Groups
CAH2 subject group of earliest record	Medicine and dentistry   Pharmacology, toxicology and pharmacy   Nursing and midwifery   Medical sciences   Allied health   Biosciences   Sport and exercise sciences   Psychology   Veterinary sciences   Agriculture, food and related studies   Physics and astronomy   Chemistry   General, applied and forensic sciences   Mathematical sciences   Engineering   Materials and technology   Computing   Architecture, building and planning   Sociology, social policy and anthropology   Economics   Politics   Health and social care   Law   Business and management   English studies   Languages and area studies   History and archaeology   Philosophy and religious studies   Education and teaching   Combined and general studies   Media, journalism and communications   Creative arts and design
	Geography, earth and environmental studies
Age on entry	Young (under 21) or unknown Mature (21 and over)
Entry qualifications	HE: Postgraduate HE: First degree HE: Other undergraduate A-levels: AAAA

Benchmarking factor	Groups
	A-levels: AAA
	A-levels: AAB
	A-levels: ABB
	A-levels: ABC/BBB
	A-levels: ACC/BBC
	A-levels: BCC/CCC
	A-levels: CCD/CDD/DDD
	A-levels: Below DDD
	BTEC: DDD and above
	BTEC: DDM and below
	BTEC – lower graded
	BTEC – other
	2 A-levels and 1 BTEC
	1 A-level and 2 BTEC
	International Baccalaureate
	GNVQ/NVQ
	Foundation course
	Access course
	Other Level 3
	No formal qualifications
	Other qualifications (unknown level or below Level 3)
	Unknown qualifications
POLAR4	Quintiles 1 or 2
	Quintiles 3, 4, 5 or unknown
Ethnicity	White or unknown
	Black
	Asian
	Mixed
	Other

## Benchmarking factors for the graduate progression measure

Benchmarking factor	Groups
CAH2 subject group of earliest record	Medicine and dentistry Pharmacology, toxicology and pharmacy Nursing and midwifery Medical sciences Allied health Biosciences Sport and exercise sciences Psychology Veterinary sciences Agriculture, food and related studies

Benchmarking factor	Groups
	Physics and astronomy Chemistry General, applied and forensic sciences Mathematical sciences Engineering Materials and technology Computing Architecture, building and planning Sociology, social policy and anthropology Economics Politics Health and social care Law Business and management English studies Languages and area studies History and archaeology Philosophy and religious studies Education and teaching Combined and general studies Media, journalism and communications Creative arts and design Performing arts Genoraphy, earth and environmental studies
Age on entry	Young (under 21) or unknown Mature (21 and over)
Entry qualifications (broad)	HE-level A-levels: ABB and above None or unknown qualifications Other qualifications
POLAR4	Quintiles 1 or 2 Quintiles 3, 4, 5 or unknown
Ethnicity	White or unknown Black Asian Mixed Other
Sex	Male Female or other
Disability	No reported disability Reported disability

# Appendix C: States used in the transition matrix to calculate the projected completion data

State	Description	Final state (indicates the category in which the student will fall if they are still in that state at the end of the 15-year projection)
Qualify FD	Qualified with first degree	Degree
Qualify SD	Qualified with other undergraduate qualification	Other award
FTFD0	On full-time first degree, year 0 (foundation year)	Not known
FTFD1	On full-time first degree, year 1	Not known
FTFD2	On full-time first degree, year 2	Not known
FTFD3	On full-time first degree, year 3	Not known
FTFD4	On full-time first degree, year 4	Not known
FTFD5	On full-time first degree, year 5	Not known
FTFD6+	On full-time first degree, year 6 or above	Not known
Intercalate	On intercalation year (having previously been on full-time first degree)	Not known
FTSD	On full-time other undergraduate programme (having previously been on full- time first degree)	Not known
PTFD	On part-time first degree (having previously been on full-time first degree)	Not known
PTSD	On part-time other undergraduate programme (having previously been on full- time first degree)	Not known
Transfer FD0	No longer at original provider, on first degree, year 0 (foundation year) at another provider	Transfer: degree or higher
Transfer FD1	No longer at original provider, on first degree, year 1 at another provider	Transfer: degree or higher
Transfer FD2	No longer at original provider, on first degree, year 2 at another provider	Transfer: degree or higher
Transfer FD3	No longer at original provider, on first degree, year 3 at another provider	Transfer: degree or higher
Transfer FD4	No longer at original provider, on first degree, year 4 at another provider	Transfer: degree or higher
Transfer FD5	No longer at original provider, on first degree, year 5 at another provider	Transfer: degree or higher
Transfer FD6+	No longer at original provider, on first degree, year 6 or above at another provider	Transfer: degree or higher

State	Description	Final state (indicates the category in which the student will fall if they are still in that state at the end of the 15-year projection)
Transfer PG	No longer at original provider, on postgraduate programme at another provider	Transfer: degree or higher
Transfer OHE	No longer at original provider, on other undergraduate programme at another provider	Transfer: lower level
Inactive FTFD0	Not currently in UK higher education (having previously been on full-time first degree, year 0)	Not known
Inactive FTFD1	Not currently in UK higher education (having previously been on full-time first degree, year 1)	Not known
Inactive FTFD2	Not currently in UK higher education (having previously been on full-time first degree, year 2)	Not known
Inactive FTFD3	Not currently in UK higher education (having previously been on full-time first degree, year 3)	Not known
Inactive FTFD4	Not currently in UK higher education (having previously been on full-time first degree, year 4)	Not known
Inactive FTFD5	Not currently in UK higher education (having previously been on full-time first degree, year 5)	Not known
Inactive FTFD6+	Not currently in UK higher education (having previously been on full-time first degree, year 6 or above)	Not known
Absent	Absent from UK higher education for at least two successive years	Neither award nor transfer



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