

Article

Local authority district case studies of student populations in DPM pilot areas: 20 January 2023

Student and total population estimates in local authorities with large or complex student populations, by ages 18 to 30 years in 2020 to 2021.

Contact:
Sarah Lynch
pop.info@ons.gov.uk
+44 1329 444919

Release date:
20 January 2023

Next release:
To be announced

Table of contents

1. [Overview](#)
2. [Selection criteria and included local authorities](#)
3. [Case studies](#)
4. [Glossary](#)
5. [Data sources and quality](#)
6. [Future developments](#)
7. [Related links](#)
8. [Cite this article](#)

1 . Overview

Highly mobile populations, such as students, are traditionally difficult to measure. For some local authorities (LAs), where students make up a high proportion of the population, this can result in lower levels of accuracy measuring the total population of the LA. The coronavirus (COVID-19) pandemic has also posed an additional complication to the estimation of student populations.

The Office for Statistics Regulation's (OSR) [review of population estimates and projections](#) in 2021 included a recommendation to ensure that future population statistics are based on sound methods and suitable data, and to complete detailed case studies on cities with large student populations. Our [update on research and plans for population estimates and projections](#) described our plan for meeting this recommendation.

In November 2021, we published [analyses of administrative data on health and higher education](#) to ascertain how well the data highlights student moves in and out of student accommodation. This review mainly focused on Personal Demographics Service (PDS) and Higher Education Statistics Agency (HESA) data. The analysis revealed that 57% of students in England and Wales were registered with healthcare services in their term-time LA. Furthermore, there is variation in the timings of when students choose to update administrative data records upon the start of the academic year and following graduation, making it challenging to identify student households.

This article builds on these findings by providing case studies for 14 LAs comparing different sources of data relating to students for aged 18 to 30 years. They are part of our work in transforming population statistics for England and Wales. Also published today are our Census 2021 estimates of students by single year of age for all LAs for users to conduct their own comparisons. The official Census 2021 estimates of students by LA are also available within [our labour market topic summary in our Economic activity status, England and Wales, Census 2021 bulletin](#). The estimates released alongside this article are by single year of age between the ages of 18 and 30 years and are not directly comparable with the estimates depicted in the labour market topic summary because of differences in data routing and definitions of student.

Before the publication of these case studies we published [the plans for rebasing and reconciliation of our mid-year-estimates](#). We have also published [pilot outputs of the Dynamic Population Model \(DPM\) for the same 14 LAs](#). The DPM explores model-based population estimates for the same LAs investigated in these student population case studies, as part of our work to transform population statistics.

2 . Selection criteria and included local authorities

This article will explore the population estimates for students and people aged 18 to 30 years in eight local authorities (LAs):

- Cambridge
- Ceredigion
- Guildford
- Manchester
- Swansea
- Westminster
- Coventry and Warwick

We collated and compared estimates from four data sources to provide a more complete picture of the trends and changes in younger adult population age groups: the Census 2021, 2021-based mid-year-estimates (MYEs), Higher Education Statistics Agency (HESA) data for 2020 to 2021, and Statistical Population Datasets (SPDs) for 2020.

Not all individuals between the ages of 18 and 30 years are students, and some students are over the age of 30 years. However, the 18 to 30 years age group was explored as it is a peak age for university students.

Each of these eight LAs fall under one of the following pre-defined selection criteria:

- LAs that have a relatively high proportion of students
- LAs that have large absolute numbers of student populations, even if they also have a large population in general
- LAs that have shown a rapid change in the number of students over recent years (from 2015 to 2021)
- LAs where neighbouring areas have indistinct geographical boundaries between large student populations, for example, where large students populations are not living in the same LA as the attended university, but may instead travel to it from a neighbouring district

To designate LAs to each category in the criteria, we calculated the proportion and absolute numbers of students for all LAs with at least one university in England and Wales using HESA data between the years of 2015 and 2021, and Census data. Where there are several LAs in each category, we sorted them by proportion of the population estimated to be students. We also noted areas that have indicated a relatively rapid change in the number of students over recent years. Finally, we reviewed the initial selection of LAs by considering the [uncertainty measures that accompanied the 2020-based MYEs](#), to ensure that we include areas that have a high level of uncertainty regarding their student population. For areas with indistinct geographical boundaries between large student populations, we analysed each area alongside the other and have presented them together in this article.

To be consistent with the Dynamic Population Model (DPM), we will also include the following LAs that the DPM pilots explored:

- Blackpool
- Boston
- Gwynedd
- Islington
- Newham
- North Norfolk

Because of the relatively small student populations residing in these areas, we will only explore the total population counts by age as reported by the MYEs and the SPDs.

Differences between any of the data sources at any age does not mean that one or more of the data sources are incorrect in its estimate of student or total population counts. Each of the data sources may be measuring different things or may have been collected at varying points in an academic year, resulting in a timing effect.

3 . Case studies

Cambridge

Cambridge is a non-metropolitan district in the east of England. The two largest university campuses, [University of Cambridge](#) and [Anglia Ruskin University](#), report approximately 30,500 students between them. Both the University of Cambridge and Anglia Ruskin University are affiliated with the Cambridge Theological Federation, which enrolls roughly 300 students in addition.

Figure 1: The Census estimated that 89.20% of Cambridge's 20-year-olds were students in 2021

The percentage of the total population of Cambridge who are students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of students include full-time undergraduate or postgraduate students in full-time education. The university may or may not be located in Cambridge.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

As defined in the data sources and quality section, the Census estimated that in Cambridge, 3,675 out of 4,120 20-year-olds were students, or 89.20% of the population in 2021. HESA reported a very similar number of 20-year-old students in Cambridge compared with the Census. HESA estimated that there were 3,710 students aged 20 years in Cambridge, only 35 more than estimated by the Census.

Figure 2: The highest percentage difference in student population estimates between HESA and the Census in Cambridge was 37.50% at age 18 years in 2021

Percentage differences in Cambridge between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020 to 2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-based Population Estimates Version 3 (ABPEs v3) in other Office for National Statistics (ONS) publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between HESA and the Census was 37.50% at age 18 years. The lowest percentage difference was 0.95% at age 20 years. In the pilot outputs of the [Dynamic Population Model \(DPM\) released in November 2022](#), Cambridge had the biggest overall difference in estimates produced between the DPM and the Census in 2021.

For the total population in Cambridge, the highest percentage difference between the SPDs and the MYEs was 14.20% at age 18 years. The lowest percentage difference in total population counts was 2.21% at age 29.

Ceredigion

Ceredigion is a unitary authority located in the west of Wales. Ceredigion is home to [Aberystwyth University](#) and [University of Wales Trinity Saint David](#), which between them report over 18,700 students. University of Wales Trinity Saint David has two additional campuses in Carmarthen and Swansea.

Figure 3: The Census estimated that 76.69% of Ceredigion's 20-year-olds were students in 2021

The percentage of the total population of Ceredigion who were students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of university students include full-time undergraduate or postgraduate students enrolled in a university. The university may or may not be located in Ceredigion.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

The Census estimated that in Ceredigion, 1,250 out of 1,630 20-year-olds were students, or 76.69% of the population in 2021. HESA reported a slightly higher number of 20-year-old students in Ceredigion compared with the Census. HESA estimated that there were 1,525 students aged 20 years in Ceredigion, 275 more than estimated by the Census.

Figure 4: The highest percentage difference in student population estimates between HESA and the Census in Ceredigion was 127.27% at age 28 years in 2021

Percentage differences in Ceredigion between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020/2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-Based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-Based Population Estimates Version 3 (ABPEs v3) in other ONS publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between HESA and the Census was 127.27% at age 28. The lowest percentage difference was 4.35% age 24.

For the total population in Ceredigion, the highest percentage difference between the SPDs and the MYEs was 34.01% at age 21. The lowest percentage difference in total population counts was 0.42% at age 29.

Guildford

Guildford is a non-metropolitan district located in the south east of England, with two main university campuses ([University of Surrey](#) and [University of Law](#)), which report over 24,000 students between them. The University of Law has 17 additional campuses across the UK and one in Hong Kong.

Figure 5: The Census estimated that 76.74% of Guildford's 20-year-olds were students in 2021

The percentage of the total population of Guildford who were students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of university students include full-time undergraduate or postgraduate students enrolled in a university. The university may or may not be located in Guildford.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

The Census estimated that in Guildford, 2,425 out of 3,160 20-year-olds were students, or 76.74% of the population in 2021. HESA reported slightly fewer 20-year-old students in Guildford compared with the Census. HESA estimated that there were 2,310 students aged 20 years in Guildford, 115 fewer than estimated by the Census.

Figure 6: The highest percentage difference in student population estimates between HESA and the Census in Guildford was 82.35% at age 29 years in 2021

Percentage differences in Guildford between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020 to 2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-based Population Estimates Version 3 (ABPEs v3) in other Office for National Statistics (ONS) publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between HESA and the Census was 82.35% at age 29 years. The lowest percentage difference was 2.16% at age 18 years.

For the total population in Guildford, the highest percentage difference between the SPDs and the MYEs was 16.78% at age 18 years. The lowest percentage difference in total population counts was 0.30% at age 30 years.

Manchester

Manchester is a metropolitan district located in the north west of England, with five main university campuses ([University of Manchester](#), [Manchester Metropolitan University](#), [University of Salford](#), [University of Bolton](#) and [University of Law](#)), which between them report over 70,000 students.

Figure 7: The Census estimated that 80.23% of Manchester's 20-year-olds were students in 2021

The percentage of the total population of Manchester who were students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of university students include full-time undergraduate or postgraduate students enrolled in a university. The university may or may not be located in Manchester.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

The Census estimated that in Manchester, 11,100 out of 13,835 20-year-olds were students, or 80.23% of the population in 2021. HESA reported a considerably fewer number of 20-year-old students in Manchester compared with the Census. HESA estimated that there were 10,100 students aged 20 years in Manchester, 1,000 fewer than estimated by the Census.

Figure 8: The highest percentage difference in student population estimates between HESA and the Census in Manchester was 52.54% at age 29 years in 2021

Percentage differences in Manchester between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020 to 2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-based Population Estimates Version 3 (ABPEs v3) in other Office for National Statistics (ONS) publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between the HESA and the Census was 52.54% at age 29 years. The lowest percentage difference was 3.10% at age 19 years.

For the total population in Manchester, the highest percentage difference between the SPDs and the MYEs was 13.53% at age 22 years. The lowest percentage difference in total population counts was 0.09% at age 24 years.

Swansea

Swansea is a unitary authority located in the south west of Wales, with two university campuses ([Swansea University](#) and [University of Wales Trinity Saint David](#)), which between them report over 33,500 students. Swansea University has two main university campuses in Swansea.

Figure 9: The Census estimated that 69.00% of Swansea's 20-year-olds were students in 2021

The percentage of the total population of Swansea who were students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of university students include full-time undergraduate or postgraduate students enrolled in a university. The university may or may not be located in Swansea.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

The Census estimated that in Swansea, 3,005 out of 4,355 20-year-olds were students, or 69.00% of the population in 2021. HESA reported a slightly higher number of 20-year-old students in Swansea compared with the Census. HESA estimated that there were 3,210 students aged 20 years in Swansea, 205 more than estimated by the Census.

Figure 10: The highest percentage difference in student population estimates between HESA and the Census in Swansea was 56.36% at age 27 years in 2021

Percentage differences in Swansea between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020 to 2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-based Population Estimates Version 3 (ABPEs v3) in other Office for National Statistics (ONS) publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between HESA and the Census was 56.36% at age 27 years. The lowest percentage difference was 1.48% at age 23 years.

For the total population in Swansea, the highest percentage difference between the SPDs and the MYEs was 16.71% at age 21 years. The lowest percentage difference in total population counts was 1.18% at age 29 years.

Westminster

Westminster is a London borough and an area of Central London, with several university campuses (including [University of Westminster](#), [Imperial College London](#), [King's College London](#) and [London School of Economics and Political Science](#)), between them reporting over 74,000 students. There are several university campuses outside of Westminster, where students living in Westminster may also commute to. Students enrolled in universities within Westminster may also choose to live in other London boroughs.

Figure 11: The Census estimated that 78.41% of Westminster's 20-year-olds were students in 2021

The percentage of the total population of Westminster who were students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of university students include full-time undergraduate or postgraduate students enrolled in a university. The university may or may not be located in Westminster.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

The Census estimated that in Westminster, 2,415 out of 3,080 20-year-olds were students, or 78.41% of the population in 2021. HESA reported a slightly higher number of 20-year-old students in Westminster compared with the Census. HESA estimated that there were 2,615 students aged 20 years in Westminster, 200 more than estimated by the Census.

Figure 12: The highest percentage difference in student population estimates between HESA and the Census in Westminster was 46.34% at age 28 years in 2021

Percentage differences in Westminster between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020 to 2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-based Population Estimates Version 3 (ABPEs v3) in other Office for National Statistics (ONS) publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between HESA and the Census was 46.34% at age 28 years. The lowest percentage difference was 6.61% at age 21 years.

For the total population in Westminster, the highest percentage difference between the SPDs and the MYEs was 22.91% at age 18 years. The lowest percentage difference in total population counts was 0.62% at age 22 years.

Coventry and Warwick

Coventry is a metropolitan district located in the West Midlands in England, with two university campuses ([Coventry University](#) and [University of Warwick](#)), which between them report over 67,000 students. As University of Warwick is on the outskirts of Coventry, students enrolled here may choose to live in either Coventry or Warwick. Therefore, we have presented these LAs together in one figure.

Figure 13: The Census estimated that 73.31% of Coventry's 20-year-olds were students in 2021

The percentage of the total population of Coventry and Warwick who were students by age 18 to 30 years, Census 2021

Notes:

1. Values are rounded to the nearest 5.
2. Number of university students include full-time undergraduate or postgraduate students enrolled in a university. The university may or may not be located in Coventry or Warwick.
3. Student estimates are based on respondents being in full-time education, so may include individuals in further education and not university.

Download the data

[.xlsx](#)

The Census estimated that in Coventry, 5,685 out of 7,755 20-year-olds were students, or 73.31% of the population in 2021. HESA reported a considerably higher number of 20-year-old students in Coventry compared with the Census. HESA estimated that there were 6,725 students aged 20 years in Coventry, 1,040 more than estimated by the Census.

In Warwick, the Census estimated that 2,130 out of 2,770 20-year-olds were students, or 76.90% of the population in 2021. HESA reported a very similar number of 20-year-old students in Warwick compared with the Census. HESA estimated that there were 2,115 students aged 20 years in Warwick, 15 fewer than estimated by the Census.

Figure 14: The highest percentage difference in student population estimates between HESA and the Census in Coventry was 105.82% at age 23 years in 2021

Percentage differences in Coventry and Warwick between data sources for the student population and the total population by age 18 to 30 years, 2021

Notes:

1. Data from HESA and the Census are rounded to the nearest 5.
2. Census 2021 data is compared with HESA 2020 to 2021 data for students. Any percentage difference valued as larger than 0 should be interpreted as the HESA estimate being larger than the Census estimate.
3. The SPDs for 2020 are compared with the 2021-based MYEs for the total population. Any percentage difference valued as larger than 0 should be interpreted as the SPDs being larger than the MYEs.
4. The SPDs for 2020 may be referred to as Admin-based Population Estimates Version 3 (ABPEs v3) in other Office for National Statistics (ONS) publications.

Download the data

[.xlsx](#)

The highest percentage difference in student counts between HESA and the Census in Coventry was 105.82% at age 23 years. The lowest percentage difference was 16.76% at age 19 years.

For the total population, the highest percentage difference between the SPDs and the MYEs was 49.18% at age 23 years. The lowest percentage difference in total population counts was 4.50% at age 18 years.

The highest percentage difference in student counts between HESA and the Census in Warwick was 60.76% at age 18 years. The lowest percentage difference was 0.00% at age 25 years.

For the total population, the highest percentage difference between the SPDs and the MYEs was 49.53% at age 19 years. The lowest percentage difference in total population counts was 0.45% at age 21 years.

The following local authorities (LAs) were selected to align with the areas included in the Dynamic Population Model (DPM) pilots. As the student counts for these areas are very small, only the percentage differences between the mid-year-estimates (MYEs) and the Statistical Population Datasets (SPDs) for individuals aged between 18 and 30 are given.

Boston, Gwynedd and North Norfolk

Figure 15: The highest percentage difference in population estimates between the Census and the SPDs was 21.51% in Boston's 26-year-olds in 2021

Percentage differences in Boston, Gwynedd and North Norfolk for the total population by age 18 to 30 years, 2021

Notes:

1. Any percentage difference valued as higher than 0 should be interpreted as the SPDs being higher than the MYEs.
2. The SPDs may be referred to as Admin-Based Population Estimates Version 3 (APBEs v3) in other ONS publications.

Download the data

[.xlsx](#)

The MYEs estimated that in Boston, there were 655 20-year-olds in 2021. The SPDs reported a similar number of 20-year-olds in Boston compared with the MYEs, at 668 20-year-olds. Both highest and lowest percentage differences are seen in the 18 to 24 age group. The lowest percentage difference in population estimates for Boston was 0.92% at age 22 years, whereas the highest percentage difference was 22.67% at age 23 years.

For Gwynedd, apart from for 18 and 30-year-olds, the SPDs were consistently larger than the MYEs. The SPDs estimated that there were 2,018 20-year-olds living in Gwynedd in 2021, whereas the MYEs reported 1,892. The highest percentage difference in population counts for Gwynedd was 23.32% at age 23 years. The lowest percentage difference was 0.06% at age 19 years.

In contrast, the SPDs estimated a fewer number of 20-year-olds compared with the MYEs. The SPDs estimated that there were 596 20-year-olds living in North Norfolk in 2021, compared with 653 as reported by the MYEs. The highest percentage difference in population counts for North Norfolk was 11.36% at age 21 years. The lowest percentage difference was 0.24% at age 23 years.

Trends across Boston, Gwynedd, and North Norfolk show that at age 24 years, there is less of a difference between the MYEs and SPDs than at ages 23 and 25 years in Boston and Gwynedd, with the MYEs reporting higher estimates of 24-year-olds in North Norfolk compared with the SPDs.

Blackpool, Newham and Islington**Figure 16: The highest percentage difference in population estimates between the Census and the SPDs was 38.43% in Islington's 23-year-olds in 2021**

Percentage differences in Blackpool, Newham and Islington for the total population by age 18 to 30 years, 2021

Notes:

1. Any percentage difference valued as higher than 0 should be interpreted as the SPDs being higher than the MYEs.
2. The SPDs may be referred to as Admin-Based Population Estimates Version 3 (ABPEs v3) in other ONS publications.

Download the data

[.xlsx](#)

The MYEs estimated that in Blackpool, there were 1,307 20-year-olds in 2021. The SPDs reported a similar number of 20-year-olds in Blackpool compared with the MYEs, at 1,286 20-year-olds. The highest percentage difference in population counts for Blackpool was 19.29% at age 26 years. The lowest percentage difference was 0.23% at age 19 years.

For Newham, the MYEs estimated a slightly fewer number of 20-year-olds in 2021 compared with the SPDs. The MYEs estimated that there were 4,520 20-year-olds, or 165 less than estimated by the SPDs. The highest percentage difference in population counts for Newham was 20.47% at age 23 years. The lowest percentage difference was 3.19% at age 19 years.

The MYEs estimated that in Islington, there were 2,981 20-year-olds. The SPDs reported a higher number of 20-year-olds in Islington compared with the MYEs. The SPDs estimated that there were 3,426 20-year-olds living in Islington, or 445 more than the MYEs. The highest percentage difference in population counts for Islington was 37.38% at age 23 years. The lowest percentage difference was 0.52% at age 27 years.

Trends across Blackpool, Newham and Islington indicate that the MYEs are consistently larger than the SPDs for age 23 years, before reducing in difference for age 24 years.

4 . Glossary

Dynamic Population Model (DPM)

The DPM is an approach to producing population estimates that:

- uses statistical modelling techniques to bring together a range of data and demographic insights to estimate the population
- builds on our previous research to develop admin-based population estimates
- can be flexible and adaptive to changing data inputs and include data inputs with known limitations (for example, containing missing data, or with known error)
- can formally include demographic trends to inform the model

Domicile address

A domicile address is defined as a permanent or family home address.

Term-time address

A term-time address is defined as an address that students intended to stay at regularly during term-time in the 2020 to 2021 academic year if they still had a contract to live there. This may include private rented accommodation or a hall of residence.

5 . Data sources and quality

The student population case studies presented in this article focus on the LAs with prominent student populations. Pre-defined selection criteria were employed for the selection of some of the LAs included, to ensure that those with relatively large student populations were included.

We collated and compared estimates from four data sources to provide a more complete picture of the trends and changes in younger adult population age groups.

Census 2021

The Census data were collected in March 2021 via online and paper questionnaires in England and Wales; 89% of the respondents completed the Census online. The Census estimated the total population of England and Wales in 2021 as 59,597,542.

Students filling in the Census were asked to submit both their term-time address and their domicile address. The student estimates from the Census used in this report are students that are enrolled on full-time programmes at either further educational institutions, or universities at undergraduate or postgraduate level in 2021. More information on how students were enumerated in the Census is available in [our Maximising the quality of Census 2021 population estimates methodology](#).

Statistical Population Datasets (SPDs)

The SPDs are produced through data linkage of administrative data to replicate the usually resident population for each local authority (LA) in England and Wales. The latest version of the SPDs (2020) use Pay As You Earn (PAYE) and Tax Credits data, National Benefits Database (NBD) and Housing Benefit (SHBE) data, Child Benefit data, NHS PR and Personal Demographics Service (PDS) data, Higher Education Statistics Agency (HESA) data, English and Welsh SC data and births registrations data. A more detailed overview of the SPDs is available in [our Admin-based population estimates and statistical uncertainty: July 2020 article](#).

The SPDs used in the student population case studies presented in this article may be referred to as Admin-Based Population Estimates (ABPEs v3) in other Office for National Statistics (ONS) publications. The ABPEs are defined as SPDs in the Dynamic Population Model (DPM) to signify that the ABPEs are not a finished estimate and instead are an important contributor to the measure of population alongside other admin-based population estimates. To remain coherent with the definitions used in the DPM model, we will be referring to the ABPEs as SPDs in this article. More information on the DPM can be found in our [Dynamic population model for England and Wales: July 2022 article](#).

Higher Education Statistics Agency (HESA) data

HESA data are produced via higher education providers submitting data to HESA annually in October about their student population in the academic year just passed, [where postcode information is collected at the start of a student's period of study](#). Much of the data are collated through the HESA student record, which collects information on all students studying at universities in the UK.

The data provided by HESA used in the student population case studies are for the academic year of 2020 to 2021. Therefore, students' enrolment in higher education, their location of study and the data provided by universities themselves may have been partially disrupted by the coronavirus (COVID-19) pandemic.

Mid-Year Estimates (MYEs)

The official estimates of the population, the MYEs are produced by updating a census base using the cohort component method and cover the usually resident population. The previous year's resident population is aged on by one year, and then flows are applied to cover births, deaths, immigration, emigration and people entering and leaving "special populations," such as people in prisons or armed forces.

Summary of findings

In local authorities (LAs) with large or complex student populations, Higher Education Statistics Agency (HESA) estimates larger numbers of students than the Census in most ages between 18 and 30 years in 2021. However, the Census tends to give higher estimates than HESA for student populations aged between 20 and 22 years, with differences increasing by age. [Research carried out by the Office for National Statistics \(ONS\)](#) has shown that the address information in HESA data becomes less accurate as students move from one year of study to the next, which may explain the differences between HESA and Census data that increase with age at peak undergraduate ages (aged 18 to 22 years).

Furthermore, differences in student population estimates in LAs may reflect students' mobility of residence throughout 2020 to 2021 when national and subnational lockdowns were intermittently imposed throughout the year. For example, with students aged 24 years and over, HESA tends to estimate larger student populations than the Census in 2021. This may reflect the likelihood that during the pandemic, a student's term-time postcode according to HESA may have reflected only where they intended to have been, rather than where they were living on Census Day. Moreover, we may expect fewer 18-year-old students generally. This is because many first-year university students turning 19 years old by Census Day in March, and people turning 18 years old in the same period, would not yet have started university.

For Coventry and Warwick, these differences may also be in part because of HESA only recording postcodes, whereas the Census records full address information. By only recording postcodes, students residing in Warwick University halls of residences with postcodes across Coventry and Warwick are recorded in default as Coventry residents by HESA, rather than Warwick residents as recorded by the Census.

Because of the increased reliance on online learning during the pandemic, fewer students may have chosen to return to a term-time address and not updated their higher education provider, and instead lived elsewhere to study remotely. For more information on the differences between administrative data sources and the Census, see [our Administrative data used in Census 2021, England and Wales methodology](#).

There is consistently better agreement between the mid-year estimates and the Statistical Population Datasets (SPDs) for estimating the total population of LAs than between the Census and HESA for estimating the student population in 2021. Continuation of this work will greatly assist our work on rebasing our population estimates for mid-2011 to mid-2020, to give a coherent back series of population data for these and other areas using the full range of available data sources.

6 . Future developments

Transformation of the population and migration statistics system

These student population case studies are part of our ongoing work in transforming our population, migration and social statistics. This is to meet the need for more timely and frequent statistics that enable us to understand our population and how it changes on an ongoing basis. These case studies, along with the [reconciliation and rebasing of mid-year estimates](#), may also be used to inform the development of population estimates from the Dynamic Population Model (DPM), as it uses a range of data to measure the population and population changes in a fully coherent way.

Providing feedback and staying informed

We welcome any feedback on our student population case studies, population statistics and planned outputs. We have launched our local population statistics insight feedback framework within [our Receiving user insights on local population levels and change, England and Wales: August 2022 article](#). This enables users of population statistics to provide feedback and suggest data sources for us to better understand the quality of our estimates.

If you would like more details about the reconciliation and rebasing projects, or on how we are transforming our population statistics, please contact us. We can also help you to understand which population estimates you should be using at different times. Email pop.info@ons.gov.uk for help and support.

To receive the latest updates and our population statistics newsletter, sign up for [our Office for National Statistics migration and population statistics mailing list](#). For more information on how we process stakeholders' personal data, read our [Privacy information for our stakeholders web page](#).

7 . Related links

[Dynamic population model for England and Wales: July 2022](#)

Article | Released 14 July 2022

The development of new methods to produce near real-time estimates of the population size, using a dynamic population model.

[Update on research and plans for population estimates and projections: May 2022](#)

Article | Released 26 May 2022

Outline of completed, ongoing and future work addressing recommendations in the Office for Statistics Regulation (OSR) review of ONS population estimates and projections.

[Understanding students across administrative data in England and Wales](#)

Article | Released 26 November 2021

Update on our latest research into how the student population of England and Wales appears in administrative data.

8 . Cite this article

Office for National Statistics (ONS), released 20 January 2023, ONS website, article, [Local authority district case studies of student populations in DPM pilot areas](#).