

Office for
Students



ABCS: Associations Between Characteristics of Students

Part-time continuation measure

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Publication date 30 September 2022

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Introduction to ABCS

1. Associations between characteristics of students (ABCS) provides a set of measures which aims to improve our understanding of the outcomes different groups of people are likely to experience across the student lifecycle. We define groups of people by looking at a set of characteristics so that we can determine the effect of not just one characteristic on an outcome, but the effect of multiple characteristics. ABCS part-time (PT) continuation is one of these measures.
2. This report builds on the core ABCS methodology document, which outlines the methodology that underpins all ABCS measures.¹
3. To accompany this report, an interactive dashboard is provided to allow the user to explore the results for the ABCS PT progression measure.²

What does ABCS PT continuation measure?

4. ABCS PT continuation measures the proportion of part-time undergraduate higher education entrants who have a successful outcome one year and 15 days after their commencement date. The definition matches that used for the continuation indicator as detailed in the description of student outcome and experience measures definitions document.³ Student data is obtained from the Higher Education Statistics Agency (HESA) and the Education and Skills Funding Agency's (ESFA) Individual Learner Record (ILR), as outlined in the ABCS methodology document.

Population

5. The ABCS PT continuation measure is based on entrants to part-time undergraduate study; the precise definition can be found in the cohort tracking section of the description of student outcome and experience measures definitions document. We further restrict to UK-domiciled students at English providers. We have used five cohorts of entrants, from academic years 2014-15 to 2018-19. This allows us to measure students' outcomes two years later, with the last cohort continuing in the third year of their course in 2020-21 (the latest student data currently available). We have combined five cohorts to ensure that there are sufficient students in each of the characteristic groups to allow us to carry out analysis regarding their continuation behaviour. This also allows us to maximise the number of students that we can derive ABCS PT continuation quintiles for.
6. Postgraduate students and apprenticeship students are not included in the modelling data. For postgraduate students, this aligns with other OfS analysis and regulatory approaches, recognising that a number of the student characteristics that represent those experiencing disadvantage or who are underrepresented in higher education are not available, or otherwise not meaningful, in respect of postgraduate students. Our approach also results from the very

¹ See www.officeforstudents.org.uk/data-and-analysis/associations-between-characteristics-of-students/.

² See www.officeforstudents.org.uk/data-and-analysis/associations-between-characteristics-of-students/.

³ See www.officeforstudents.org.uk/data-and-analysis/student-outcome-and-experience-measures/documentation/ (Description of student outcome and experience measures used in OfS regulation: definitions and methods used).

different behaviours and outcomes we observe for postgraduate students compared with undergraduate students. For apprenticeship students, our approach recognises that the potential for conducting the appropriate statistical modelling is more limited, on account of the more limited spread and characteristics of apprenticeship students across the sector. When considered at the level of detail necessary within the ABCS models, there are insufficient student numbers for those models to be robust (in technical terms, the models do not converge when constructed for apprenticeship students only).

Successful outcomes

7. Continuation outcomes are measured by identifying a cohort of entrants to higher education qualifications at the provider and following them through the early stages of their course to track how many continue in active study, or qualify, in subsequent years. Successful continuation outcomes are identified in the description of student outcome and experience measures definitions document.⁴

Selection of characteristics

8. In selecting the factors for use in the PT continuation model, as well as having good availability of data, we were looking for characteristics that should not influence a person's likelihood of continuing their course, but where the evidence showed that they did.
9. The eight characteristics used in the PT continuation model are as follows: age group, ethnicity, disability, income deprivation affecting children index (IDACI), index of multiple deprivation (IMD), local or distance learner status, sex and adult HE quintile. For details of these characteristics, see the characteristics section in the ABCS methodology document.⁵
10. Due to small numbers, we combined students with sex 'Other' with 'Male', as this group had the closest continuation rate. Similarly, we combined those with age missing or unknown with those in the group aged 51 and over. We also combined those students in the 'Gypsy or Traveller' ethnic group with those in the 'Black or black British - Caribbean' group.
11. Analysis showed that continuation rates for students in age groups between 26 and 50- years old were similar enough to warrant combining them into a single group. This has the advantage of increasing the model's stability, without losing valuable differentiation between student groups.
12. The model includes data on 386,595 students, 245,210 of whom had a successful continuation outcome. Table 1 shows the categories within each of the characteristics used for the model, and the number and proportion of students who are in each of these categories.

⁴ See www.officeforstudents.org.uk/data-and-analysis/student-outcome-and-experience-measures/documentation/ (Description of student outcome and experience measures used in OfS regulation: definitions and methods used).

⁵ See www.officeforstudents.org.uk/data-and-analysis/associations-between-characteristics-of-students/.

Table 1: Characteristics in the ABCS PT continuation model

Characteristic	Category	Total number of individuals in the five cohorts	Per cent
Adult HE quintile	Quintile 1 (lowest proportion holding HE qualification)	65,405	16.9%
	Quintile 2	69,430	18.0%
	Quintile 3	69,825	18.1%
	Quintile 4	67,930	17.6%
	*Quintile 5 (highest proportion holding HE qualification)	66,205	17.1%
	Unknown or N/A	47,795	12.4%
Age group	18 and under	14,765	3.8%
	19	14,805	3.8%
	20	16,670	4.3%
	21-25	84,580	21.9%
	*26-50	227,150	58.8%
	51+	28,625	7.4%
Disability	Cognitive or learning difficulties	13,465	3.5%
	Mental health condition	10,280	2.7%
	Multiple or other impairments	14,760	3.8%
	*No disability reported	337,080	87.2%
	Sensory, medical or physical impairments	9,570	2.5%
	Social or communication impairment	1,435	0.4%
Ethnicity	Asian or Asian British - Bangladeshi	1,955	0.5%
	Asian or Asian British - Chinese	1,050	0.3%
	Asian or Asian British - Indian	6,720	1.7%
	Asian or Asian British - Pakistani	5,560	1.4%
	Asian or Asian British - other	5,660	1.5%
	Black or black British - African	12,450	3.2%
	Black or black British - Caribbean	6,845	1.8%
	Black or black British - other	1,630	0.4%
	Mixed - other	3,155	0.8%
	Mixed - white and Asian	1,830	0.5%
	Mixed - white and black African	1,200	0.3%
	Mixed - white and black Caribbean	3,500	0.9%
	Other ethnic group	4,155	1.1%

	Refused or unknown	7,710	2.0%
	*White	323,175	83.6%
IDACI	Quintile 1 (most deprived)	66,640	17.2%
	Quintile 2	72,805	18.8%
	Quintile 3	72,265	18.7%
	Quintile 4	68,755	17.8%
	*Quintile 5 (least deprived)	62,625	16.2%
	Unknown or N/A	43,500	11.3%
IMD	Quintile 1 (most deprived)	65,350	16.9%
	Quintile 2	73,075	18.9%
	Quintile 3	71,720	18.6%
	Quintile 4	69,790	18.1%
	*Quintile 5 (least deprived)	63,160	16.3%
	Unknown or N/A	43,500	11.3%
Local or distance learner	Distance	189,825	49.1%
	Local	103,735	26.8%
	*Neither	93,035	24.1%
Sex	*Female	227,685	58.9%
	Male	158,910	41.1%
Total number of individuals		386,595	100%

* Indicates a reference category in the statistical model

The statistical model

13. We have used a binary logistic regression model to predict the probability of completing. We have included all eight characteristics as main effects and used a statistical approach (stepwise) to determine which of the two-way interactions should be included. See the methodology document for details.⁶ This has resulted in the inclusion of the following interactions shown in Table 2.

Table 2: Interactions in the ABCS PT continuation model

Interactions
Age*Adult HE
Ethnicity*Age
Ethnicity*Disability
Ethnicity*Local or distance learner
Ethnicity*Adult HE

⁶ See www.officeforstudents.org.uk/data-and-analysis/associations-between-characteristics-of-students/.

Disability*Age
Disability*Local or distance learner
Disability*Adult HE
Local or distance learner*Age
Local or distance learner*Adult HE
IDACI*Age
IDACI*Local or distance learner
IMD*Age
IMD*Local or distance learner
IMD*Adult HE
Sex*Age
Sex*Ethnicity
Sex*Disability
Sex*Local or distance learner
Sex*IDACI
Sex*IMD

14. The model is:

$$\text{logit}(\pi_i) = \beta_0 + \tilde{\beta}_1 \text{age}_i + \tilde{\beta}_2 \text{disability}_i + \tilde{\beta}_3 \text{ethnicity}_i + \tilde{\beta}_4 \text{IDACI}_i + \tilde{\beta}_5 \text{IMD}_i \\ + \tilde{\beta}_6 \text{local or distance}_i + \tilde{\beta}_7 \text{sex}_i + \tilde{\beta}_8 \text{AdultHE}_i + \text{interactions}$$

Where i is an individual, π_i is a binary response variable which takes the value of 1 if the individual successfully continued their course and 0 otherwise, β represents vectors of different sizes and the interactions are as listed above.

Model results

15. The coefficient estimates for each of the factors and for all the two-way interactions included in the final model can be found in the Excel/CSV.⁷

Derivation of ABCS PT continuation quintiles

16. Using the model's predicted continuation rates for each of the student groups, we then used these predicted rates to split the students included in the modelling into five quintiles. Those student groups with the lowest modelled rates will be in the lowest continuation quintile and those with the highest will be in the highest continuation quintile. Table 3 shows the number and proportion of students in each quintile, as well as the mean, minimum and maximum

⁷ See www.officeforstudents.org.uk/data-and-analysis/associations-between-characteristics-of-students/.

predicted continuation rates. The minimum predicted rates are also the breakpoints, which determine the quintile boundaries.

Table 3: Description of ABCS PT continuation quintiles

PT continuation quintile	Number of students	Proportion of students	Mean modelled PT continuation rate	Minimum modelled FT continuation rate	Maximum modelled FT continuation rate
Quintile 1	77,640	20.1%	49.7%	0.3%*	54.5%
Quintile 2	77,105	19.9%	57.2%	54.5%	59.8%
Quintile 3	77,485	20.0%	62.6%	59.8%	65.3%
Quintile 4	77,025	19.9%	69.3%	65.3%	72.9%
Quintile 5	77,335	20.0%	78.4%	72.9%	99.8%

* This low modelled continuation rate is based on a small group and may not reflect their observed continuation rate.



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