



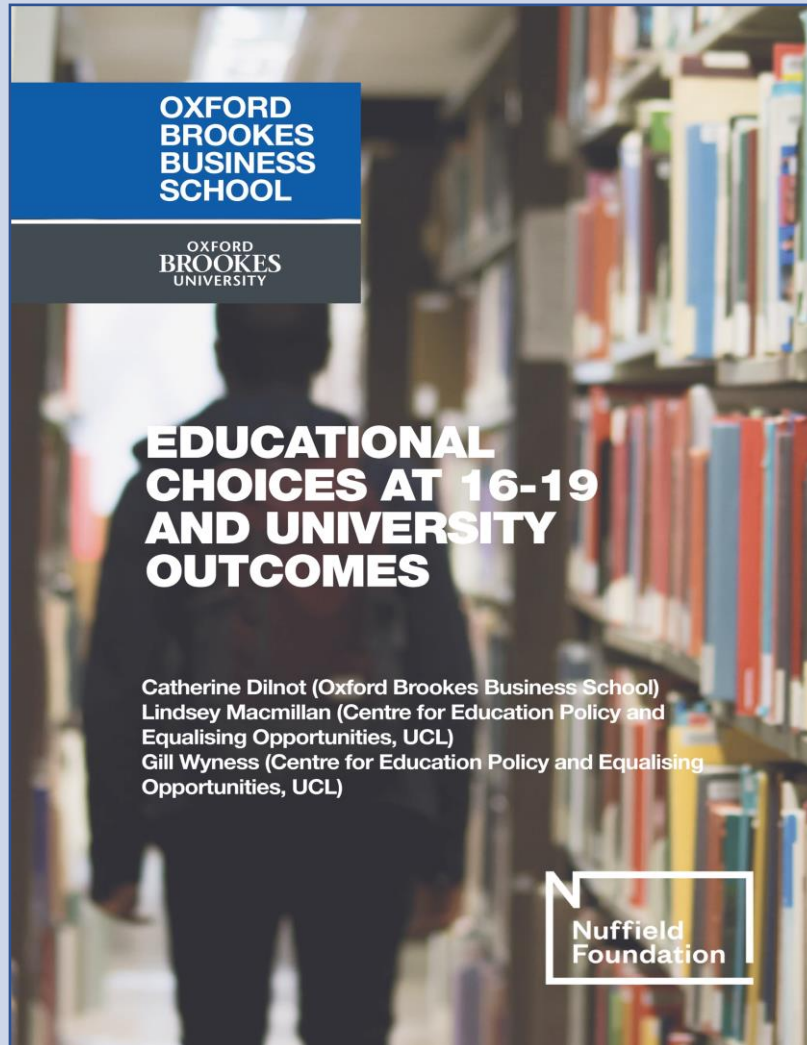
How does having BTECs rather than A-levels relate to student dropout, repetition and graduating below a 2:1?

‘Exploring ‘vocational’ and ‘academic’ routes into higher education

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Background to this research project



Motivated by:

Literature on university outcome gaps by **L3 qualification type** and **SES**

Facilitated by:

Availability of linked data for students back to both L2 and L3

Relevant to:

DfE L3 review proposals

Why might we want both ‘academic’ and ‘vocational’ routes into HE?

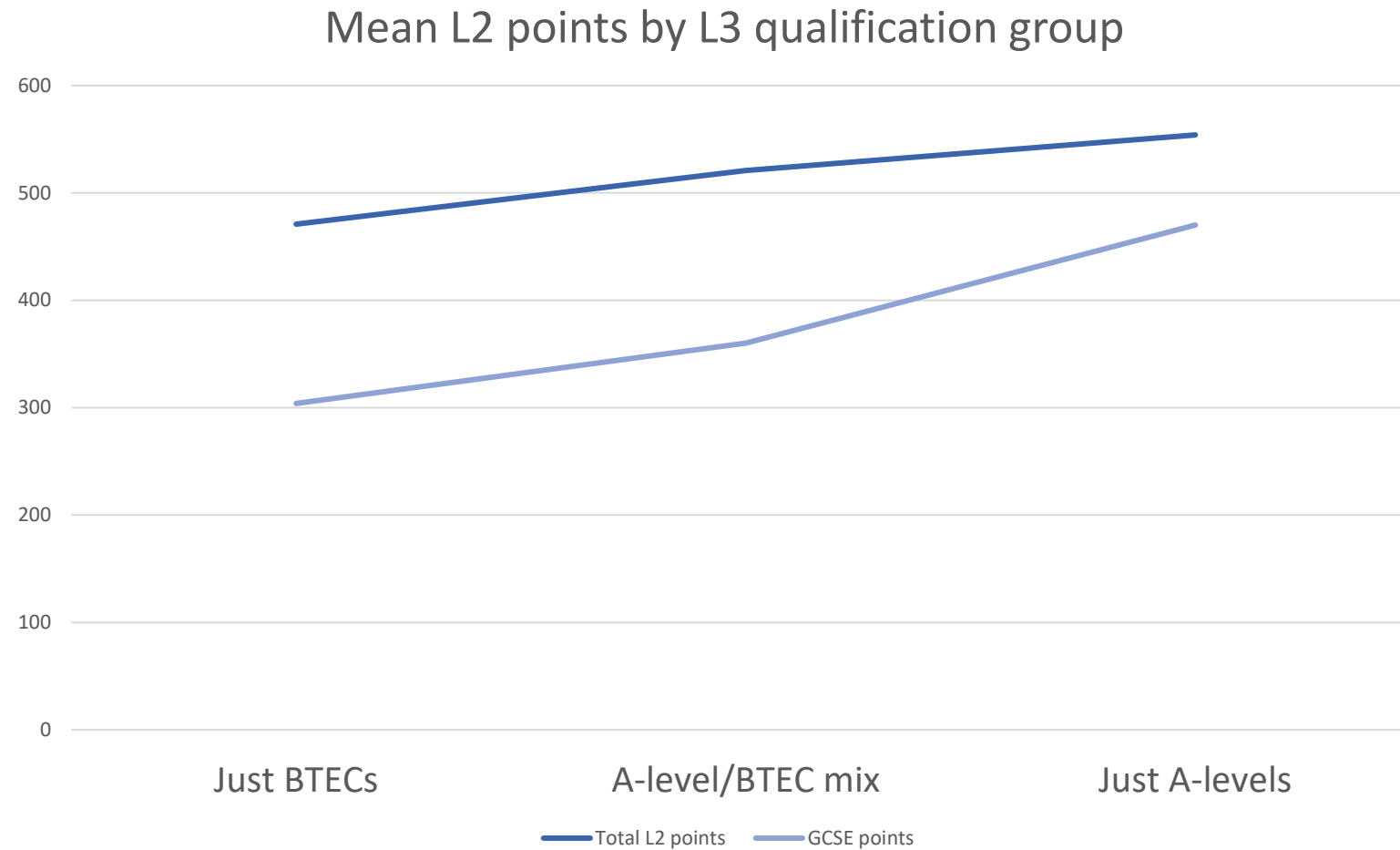
- Why is related to ‘who’
- Widening participation

	Just BTEC entrants	A-level/BTEC mix	Just A-level entrants
Mean SES quintile	2.5	2.7	3.5
Non-White	35%	30%	24%
Male	51%	44%	43%
Number	115,850	54,530	518,710

Has admitting students with BTECs widened participation?

- Significant increase in uni entrants with BTECs or BTEC/A-level combinations compared with A-levels in last decade or so (ratios of 18 year old entrants)
 - 2008 1:7
 - 2021 1:3
- During this period not much increase in proportion of 18 yo cohort entering with A-levels
- So BTECs credited with progress in widening participation over past years

Different academic profiles, on average..



Are outcomes for similar students the same whether they've entered with BTECs or A-levels?

- **Dropout** before the start of the second programme year (including after repeating a year)
- **Repetition** of the first year in the same subject at the same HEI
- **Graduating** below the level of a first or upper second class degree, of those who graduate

...if we take into account their different academic profiles and other characteristics?

Caution.....

Correlation \neq Causation

- We quantify **relationships** between qualifications and outcomes
- We can't argue that the qualifications **cause** the outcomes..
-because there may be factors which effect both whether a student has a particular qualification/subject and the chances of one of these outcomes happening that we can't measure
- **But** our rich set of controls helps

Data

- Linked NPD HESA ILR (via ONS SRS) administrative data
- 3 cohorts of joiners to 14/15-16/17 and 3 cohorts of leavers 15/16-17/18
- English domiciled, young, full-time UG degree
- 743,900 joiners
- 614,580 leavers
- **Note** these cohorts predate reformed BTECs

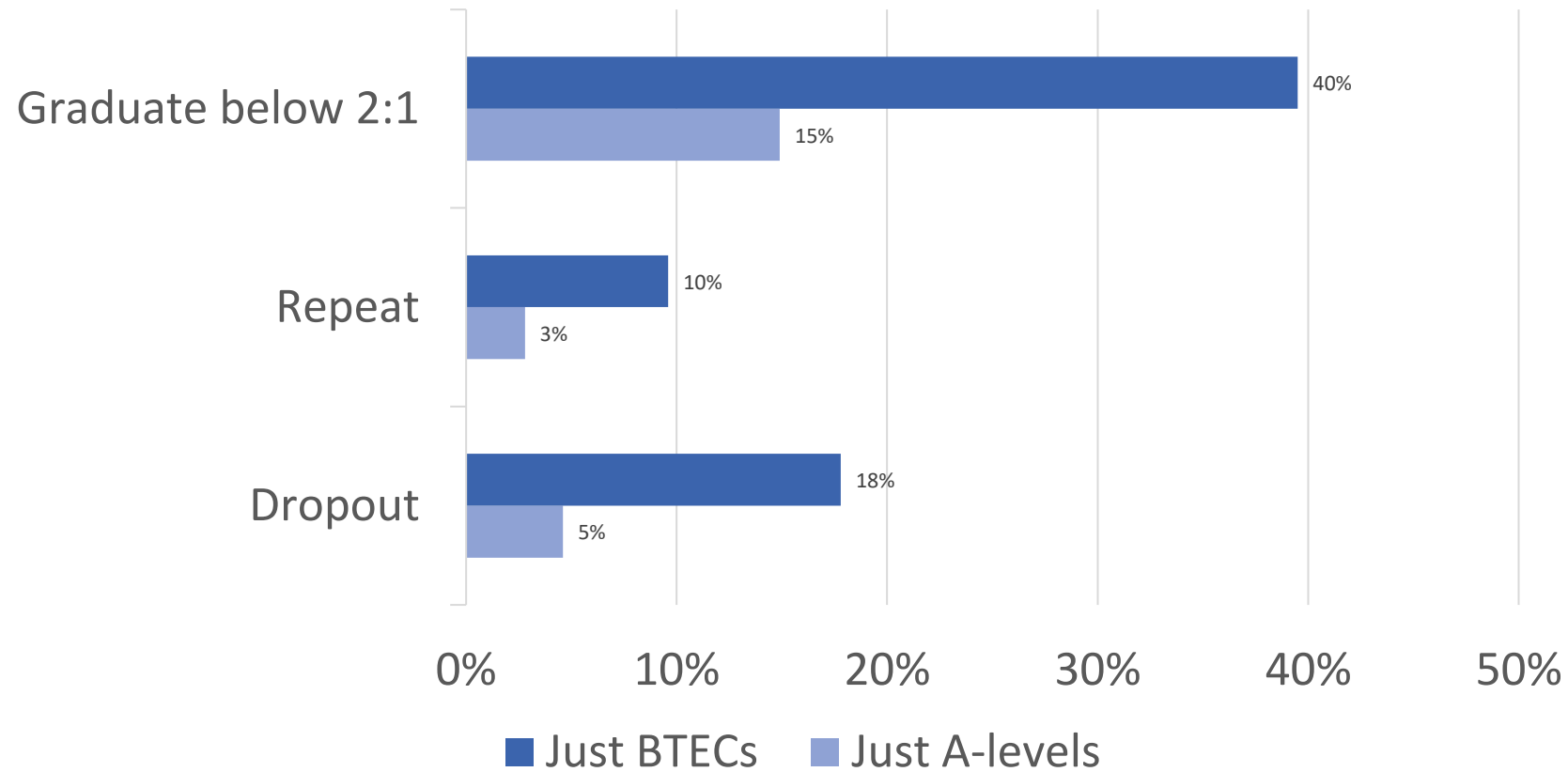
ONS SRS Disclaimer

"This work was produced using statistical data from ONS. The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates."

Methods – comparing ‘average’ students with BTECs and A-levels

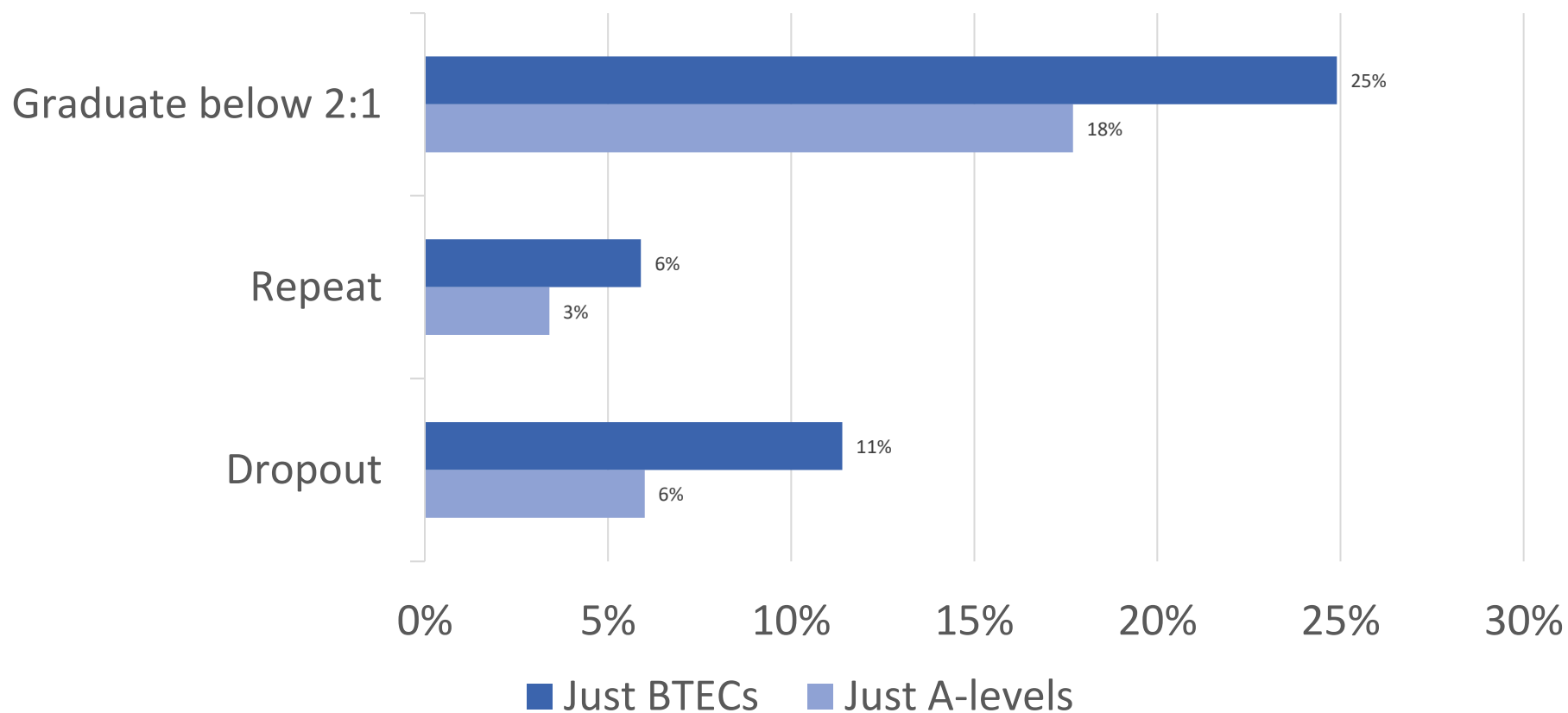
- Aim to estimate the difference in probability of experiencing each outcome for students with different entry qualifications
- We compare students with same SES, educational profile to age 16, demographics, doing the same degree subject at the same university
- Dichotomous outcomes so logit models, adding variables to see what accounts for the gaps in outcome
- Random effect models to take into account clustering at the level of degree subject and university
- Use correlated random effects (including cluster means of individual variables) to take account of context

Differences between BTEC and A-level students: raw outcomes



Results – gaps reduced but not eliminated

Modelled predicted chance of outcome for an 'average' student with just BTECs compared with just A-levels



Context

- These are large gaps compared with other characteristics (apart from prior attainment)
- No other characteristic had such a large association with dropout in our full model
- Only the gaps for students of Black heritages and some Asian heritages (baseline White) were bigger for the graduation outcome.
- For repetition, Black heritage students and those with self-declared mental health problems were the only gaps bigger than the BTEC v A-level gap.

Drilling down further into BTECs

Gap between A-level only and..	..BTEC/A-level mixture	..BTEC only
Grad below 2:1	3.4pp	7.2pp
Repeats	1.0pp	2.5pp
Dropout	1.7pp	5.4pp

Does size of BTEC make a difference (amongst those doing just BTECs)?

- Dropout – entrants with ‘large’ (size 12) BTEC slightly more likely to drop out than those with same ‘size’ in total but made of up smaller BTECs – 0.7pp
- No significant difference for repetition or graduation

Clues as to why the gaps remain from 'individual university' data including module scores?

- We have unlinked data from 3 individual HEIs with module scores (1 RG, 2 post-92)
- Module scores account for remaining gap in dropout
- For one post 92 university for which we have assessment method data, BTEC students do worse on exam assessments than coursework assessments on average – not found for A-level students

Why are there still gaps we can't account for in our models? Either or both of these reasons...

The relationship is 'causal'

- The BTEC qualifications themselves (subject content? assessment methods?) are less good preparation for university studies

The gaps are caused by other things that we can't observe in our data

- Institutional differences at L3 between those doing BTECs and A-levels (per capita spending? nature of academic support?)
- How students select into (or are selected into) BTECs or A-levels by mechanisms other than their L2 attainment
- Individual differences - eg academic confidence?

What might this mean for those concerned with widening participation?

Actions at different levels of the framework

- Post 16 choices
 - IAG about the gaps?
 - How do students choose entry qualifications? Or are they chosen for them?
- At admission
 - Monitoring what happens if 'large' BTEC route to HE is mainly removed
- At universities
 - Data on outcomes by entry qualification route?
 - For WP evaluators
 - For teaching staff
 - To identify any changes for post reform BTECs

Link to our report

<https://www.brookes.ac.uk/research/units/obbs/projects/educational-choices-at-16-19-and-adverse-outcomes/>