

1 **The role of bridging programmes in supporting student persistence**
2 **and prevention of attrition: A UK case study**

3 Anna M Black^{a*}

4 *^a Department of Applied Science, Northumbria University, Newcastle upon Tyne, United*
5 *Kingdom*

6 Ellison Building, Ellison Place, Newcastle upon Tyne, NE1 8ST, United Kingdom,

7 anna.black@northumbria.ac.uk

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3 Social mobility, and in particular, intergenerational mobility, can be driven by
4 increased opportunity for extended education. Movement beyond a family's
5 social class will often see positive changes to overall life satisfaction, however,
6 this movement can introduce feelings of alienation. This in turn can lead to
7 detachment either from the social group or, more likely, from the educational
8 provision. As such, institutions are spending time and resources to investigate
9 strategies for retention. This study looks at the impact of foundation year
10 bridging programmes and the potential they have to increase course retention and
11 persistency of students. A retrospective statistical analysis of seven academic
12 years (using chi square) highlighted that completion of a foundation year
13 bridging programme before a traditional undergraduate degree increased the
14 likelihood of persistency and decreased the attrition rate of students from low
15 participation neighbourhoods. These findings, when considered alongside
16 seminal theoretical frameworks such as Spady, Pascarella, and Tinto, confirm the
17 role which family and social background, must play in a student's ability to
18 complete an undergraduate degree. Family and other social support networks are
19 known to play a role in the provision of a supportive environment for students
20 and the undertaking of a bridging programme allows time for the adaptation and
21 development of new friendship groups and increase a family's familiarity with
22 the pressures of higher education. Higher education providers may, therefore, be
23 able to begin to tackle attrition and improve their course retention through family
24 education and through the encouragement of social integration via bridging
25 programmes.

1 Keywords: attrition; retention; socioeconomic; bridging programme; social
2 mobility;

3 **Introduction**

4

5 In the United Kingdom, there is a strong drive within government practice and
6 policy to create a fairer society with equal opportunity for all (Brown 2013). This
7 equality of opportunity is justified by concepts of increasing human capital and social
8 mobility, benefitting the national economic state, and from a moralistic perspective
9 (Hale 2006). One way in which this equality is sought is through education and
10 opportunity of education for all. Post-secondary education, in particular Higher
11 Education (HE), was once a reserve of the elite but massification of HE has led to more
12 individuals being able to access such an education (Knight 2019). The perceived equity
13 of this massification has two dimensions. One which looks at the equity of access and
14 the second which looks at the equity of outcome. Inclusive, equitable education is a
15 process which eradicates barriers to both participation and success (Ainscow 2020).
16 This equity of success is as, if not more important than the equity of access.

17 One avenue which allows for the successful massification of HE is introductory
18 courses such as UK style Foundation Years (FYs) or international foundation degrees or
19 bridging programmes such as those seen in South Africa, United Arab Emirates (UAE)
20 and India (Machika 2007, Aluvalu 2016, Ashour 2020) . The work of Strayhorn (2011)
21 is indicative of the success of such programmes in which it was found that students
22 having taken such a course developed the self-identity and academic skills required for
23 higher education seen especially in underrepresented student groups including mature
24 students, ethnic minority groups. These FYs and bridging programmes are designed to

1 prepare students for academic study and in the case of the UK they are for students who
2 have missed the required grades needed for entry onto an undergraduate programme or
3 those students who have taken a non-traditional route of entry such as those students
4 returning to study as mature students (classed as 25 years or over) or those who have
5 come from alternative qualifications which do not have the traditional and nationally
6 accepted benchmarked grades. The students on these courses are as diverse in
7 sociological background as the traditional undergraduate student body and undertake
8 the course to achieve a qualification, or a set of skills, both academic and subject
9 specific, which makes them ready for undergraduate study. Academically they perform
10 as well as their traditional straight entry counterparts and they are indistinguishable
11 from other students upon graduation despite their non-traditional entry qualifications.
12 However, there is limited evidence as to the impact these studies have on other elements
13 of student success such as integration and persistence as measured by attrition or ‘drop
14 out.’

15 **Literature review**

16 *Non-traditional students*

17 Massification of HE has been driven in part by universities widening participation plans
18 which seek to address the disparity between ‘traditional’ and ‘non-traditional’ student
19 balance (Giannakis and Bullivant 2016). This redress is, in turn, anticipated to affect
20 social mobility and make changes to an individual’s class (Carreira and Lopes 2021).
21 Thanks to this widening participation, students who would be less likely to attend
22 university are encouraged and supported in their education. The term non-traditional or
23 ‘underrepresented’ encompasses mature students (older than 25 years), young adult
24 carers, black and minority ethnicity (BAME) students, students with a disability, care

1 leavers, and students who have come from an economically disadvantaged background
2 or an area with low HE participation or knowledge (Gill 2021).

3 Students from lower socioeconomic backgrounds are often thought to be
4 underrepresented in HE due to financial pressures but research also suggests that it is
5 the result of a lack of familiarity with the system of higher education within their family
6 (Frempong, Ma et al. 2012). It is likely that the non-traditional, low socioeconomic,
7 first generational student will need to undertake paid work to support themselves
8 through university. They will also likely need to change their social norms to 'fit in', to
9 adopt the identity of a university student whilst retaining their competing 'working
10 class' identity (Reay, Crozier et al. 2010) . All non-traditional students are more at risk
11 of attrition (Kezar, Hypolite et al. 2020) and require specific interventions to support
12 their transition to university life (Gilardi and Guglielmetti 2011). Interventions and
13 strategies for widening participation have been successful in increasing recruitment
14 amongst these underrepresented students, but once enrolled, the non-traditional student
15 can face significant issues such as culture shock and alienation (Oldfield 2007, Loeb
16 and Hurd 2019). Students must navigate these issues quickly or they run the risk of
17 dropping out and HE must consider the best way to support students from
18 underrepresented groups (Cotton, Nash et al. 2017).

19 ***Social mobility***

20 Social mobility defined by Breen (2004) as the movement of individuals or
21 groups through social classes, can be considered as a link between an individual's
22 financial and occupational status and that of their parents/guardians (Breen and Breen Jr
23 2004). Movement is most often guided and influenced by a person's socioeconomic
24 status or background and typically occurs in a vertical manner whereby one would

1 move up or down from one class to another usually by education and subsequent
2 employment (Nazimuddin 2015). Linked to this vertical movement is intergenerational
3 mobility which refers to the social movement that a child has independent of their
4 parents (Breen and Breen Jr 2004). A university education is thought to be an important
5 step in this intergenerational mobility due to the financial payback which comes from
6 having a university degree (Haveman and Smeeding 2006, Banerjee 2018). Life choices
7 improve upon completion of a university degree with increased career prospects,
8 prospect of a better salary and self-satisfaction and esteem (Grebennikov and Shah
9 2012, Mok and Neubauer 2016).

10 Despite this, young people from lower socioeconomic backgrounds are less
11 likely to attend university with approximately 73% from professional background (most
12 often observed as an immediate family member holding a degree in an management
13 position) attending HE whilst only 13% from unskilled and manual backgrounds will,
14 suggesting a limitation on the prospect of social mobility (Lewis 2002, Crawford, Gregg
15 et al. 2016). In the UK, a measure of a person's socioeconomic background can be
16 inferred from their 'POLAR' quintile. POLAR (Participation of Local Areas) classifies
17 UK postcodes into one of five groups or 'quintiles.' All locations in the UK are
18 assigned a quintile and it is based on the historical participation of 18- and 19-year-olds
19 in HE which is calculated as percentage of the total young people in a given
20 geographical area. Within these quintiles the participation rate differs; within quintile 1
21 less than 16% of young people go onto university whilst in quintile 5 it is observed to
22 be as high as 43% and upward (Harrison and McCaig 2015). This is in part related to
23 the deprivation in their area of residence but is also contributed to by the lack of family
24 background in HE and an unfamiliarity or drive to attend. For the purpose of this study,
25 the role of social class and associated deprivation has been considered as a contributing

1 factor to the POLAR quintile in which a student sits. POLAR is the most common
2 measure used to describe a student as disadvantaged however it is not the sole measure
3 of disadvantage available and forms part of a bigger picture (Richardson, Mittelmeier et
4 al. 2020). POLAR doesn't try to explain why there are variances across the postcodes
5 and whilst it is a purely geographical measure of disadvantage in HE it can serve as a
6 useful indicator of socioeconomic status, social background and the likelihood of a
7 student being first generational (the first in a family to attend university) (Waller,
8 Ingram et al. 2017, Martin 2018).

9 *Social stratification*

10 Social stratification has long been discussed and the most prevalent voice in the
11 mid-1800s was Marx with his political composition *The Communist Manifesto*. Within
12 his writings, Marx identified different social classes or stratifications and attributed it to
13 property ownership (Kerbo 2006). Functionalism proponents such as Weber approached
14 the notion of stratification quite differently. Instead of considering a dichotomy of
15 ownership, Weber defined stratification from three dimensions: economic class, social
16 status, and political power (Pyakuryal 2001).

17 Both Marx and Weber identified class as a product of inequality between groups
18 within societies. This inequality may, in the case of Marx, be an inequality in property
19 or, more nuanced in the case of Weber, with an inequality in power or status. It is this
20 inequality of opportunity between social classes and the notion of capital (skills,
21 honour, prestige) which make education a key driver for change within one's social
22 capital (Haveman and Smeeding 2006). Not only does it increase materialistic assets
23 such as knowledge and skills, but it also provides symbolic assets of having been
24 awarded recognition of effort. The acquisition of such allows for a redress of an

1 individual's position in field and aids in an individual's social mobility (Dika and Singh
2 2002).

3 These historic theories and posits surrounding the notion of class and
4 stratification are, by some, thought to blind us from current issues in society yet, the
5 division of societies into the long-determined categories is advancing, not diminishing
6 (Reay 2006). One of the most problematic categories for mobility within social class
7 systems is the inequality in educational provision and acceptance within. The
8 introduction of education for all meant that all social classes would be educated and
9 should have, in theory, an equal opportunity to a complete education which would
10 facilitate their movement through social classes. However, there still exists a division,
11 with schooling undertaken by those students from working class backgrounds being
12 seen as inferior to that taken by middle- and upper-class students. This inferiority is the
13 result of poor aspirations, lack of motivation and exogenous factors such as the
14 requirement to enter the job market early (Reay 2017). This is most notably seen in
15 post compulsory further and higher education (Crawford, Gregg et al. 2016). Working
16 class children are less likely to undertake a post compulsory education and in such
17 perpetuates the notion of class. This reluctance or inability to undertake post
18 compulsory education, especially at a tertiary level, often arises from financial
19 implications, a feeling of rejecting their roots, a fear of non-belonging and from failing
20 exams needed prior to undertaking such educational routes. (Reay 2001, Stephens,
21 Hamedani et al. 2014, Crawford, Gregg et al. 2016, Reay 2017).

22 ***Theoretical frameworks of attrition***

23 The study of student retention has been a lengthy process and is still actively
24 progressing (Nicoletti 2019). Reviews of theoretical frameworks demonstrate that

1 although earlier models were developed, most of the work began in the late 1960's and
2 early 1970's. Influenced by Durkheim's suicide theory, Van Gennepe's investigation of
3 the rites of passage in tribal societies, and Price's concept of labour turnover, the
4 models of drop out or persistency are largely focussed on both the social and academic
5 aspects and influences (Aljohani 2016). There are several theoretical frameworks on
6 which to analyse the factors affecting dropout and importantly for this study, the impact
7 that social background has on the dropout decision.

8 Spady's Model of the Dropout Process (MDP) (1971) considers both the
9 academic and sociological determinants of dropout decision making (figure 1) and is
10 largely influenced by Durkheim's suicide model. Family and social background supply
11 an environment where academic success is to be expected and is nurtured and normative
12 congruency of an individual; the degree to which a person's beliefs, attitudes and
13 interests match the collective norm of, in this case, higher education, are seen to be vital
14 in success. What is also of interest is the concept of institutional commitment, the
15 notion that a student would become invested in their HE institution of choice and to feel
16 a sense of commitment to it, is a variable which can influence a student's persistence.
17 This is influenced by the progressive development of a community among likeminded
18 individuals within the HE institution and the integration which this brings. This
19 community develops over time and a bridging programme is likely to facilitate its
20 establishment.

21 [Figure 1 here]

22 Tinto and Cullens (1973) conceptual schema (figure 2) was influenced by
23 Spady's work and further developed the theoretical understanding of the drop out
24 process. In this model, integration is preceded with the concept of goal commitment.
25 This goal commitment sees students focussing on and being driven by the goal of their

1 degree completion. Much like Spady, Tinto's model also has the added variable of
2 institutional commitment This notion of belonging will influence a student's decision to
3 drop out as much as academic integration and success.

4 [Figure 2 here]

5 Again seen in Pascarella's framework of dropout (Pascarella 1980), student
6 background can be seen to have an impact on the persistency or withdrawal decision of
7 students (figure 3). Pascarella's model shows that student background is intricately
8 linked with other college experiences. This may be in the form of having attended open
9 days or having prior experience of higher education through the completion of summer
10 schools, higher education led school activities and preparatory programmes. This prior
11 exposure will allow for development of familiarity with the system and lead in part to
12 increased normative congruency.

13 [Figure 3 here]

14 Bean and Metzner's model (1985) further investigated and posited new ideas on
15 the dropout process of those students who would be class as atypical or non-traditional.
16 These included commuter students, mature students (those students over the age of 25
17 when first enrolled on an HE programme), and first generational students (those whose
18 parents did not attend HE). It can be seen in figure 4 that several exogenous variables
19 influence a student's attrition, notable academic factors, social factors, and
20 environmental factors. All these factors ultimately impact on the socialisation, or
21 community building, of a student and their persistency.

22 [Figure 4 here]

23 From a review of the conceptual frameworks of retention it is seen that in all
24 presented models the family and social background, characteristics, and history have an
25 influential role to play in student attrition or retention. This can be attributed to the

1 embodied culture capital which one owns, the dispositions that make an individual
2 suited to a particular field. These variables are likely to influence social and academic
3 integration and commitment which in turn leads to normative congruence and a feeling
4 of satisfaction in students making them more likely to persist even in adverse
5 conditions. However, the institution also has a role to play in supporting these students
6 towards that integration and this can be helped in several ways, this includes the
7 development of a supportive community which foundation years or bridging
8 programmes can facilitate. These additional programmes can provide the safe space and
9 time to mature into an undergraduate.

10 ***Methodology***

11 A quantitative statistical analysis methodology was selected as the research
12 focused purely on the numerical nationally constructed deprivation status of individuals
13 rather than personal reported status. Personal reported status could potentially be
14 skewed by unintentional bias and as such would reduce the statistical significance of the
15 result. The selected design allowed for a quantitative approach comparing quintile as a
16 dependant variable and the dropout rate as an independent variable.

17 Data pertaining to student POLAR4 quintile, route of entry (Foundation Year
18 versus Traditional Entry) and the degree award they achieved, was mined from central
19 registry deposits at the named institution. Data were selected from the years 2013-2020,
20 anonymised by allocation of identification number and totalled 1654 complete
21 individual student records. Students were defined as having ‘dropped out’ if they failed
22 to be awarded a full degree (of any classification) and instead were awarded a lower
23 award (such as an Undergraduate Certificate or Diploma). Data was analysed through a
24 chi-square analysis to determine if the difference in observed attrition rates of different

1 quintiles were significant between the entry routes. A probability value of 0.05 was used
2 in all analyses. Microsoft Excel was used to conduct all analyses and calculations.

3 **Results**

4 *All entry routes.*

5 To first understand if attrition is a significant problem within the identified
6 department, all student records irrespective of the route of entry were analysed for
7 attrition based on POLAR4 quintile (tables 1a and 1b). The hypothesis is that there is a
8 significant difference in attrition rate between POLAR4 quintiles.

9 [Table 1a and Table 1b here]

10

11 The corresponding null hypothesis that there will be no significant difference in
12 attrition rate between POLAR4 groups was tested and generated a p value of 0.002 and
13 chi square value of 16.71. Such a small p value, when compared to 0.05, would show
14 that there is a significant difference, and the null hypothesis can be rejected. Scrutiny of
15 the data shows that quintiles 1-3 all have higher attrition rates than would be expected,
16 whilst quintiles 4 and 5 have lower attrition rates than expected.

17 *Traditional Entry versus Foundation Year routes*

18 To assess if the observed attrition rate is isolated to Traditional Entry or
19 Foundation Year entry, further chi square tests were performed on the students' award
20 following Traditional Entry and Foundation Year entry independently (tables 2a, 2b ,3a
21 and 3b). For each of the tests the hypothesis is that there will be a significant difference
22 between observed and expected attrition rates across the different quintiles.

1

2 [Table 2a and 2b here]

3

4 The null hypothesis, stating that there will be no significant difference between
5 observed attrition rates of different POLAR4 quintiles and what would be expected was
6 tested and generated a p value 0.010287 and a chi square of 13.21. With a p value less
7 than 0.05 and a chi square value greater than the critical value at d.f. 4, we can, with
8 95% confidence, reject the null hypothesis and conclude that within the Traditional
9 Entry group there is a significant difference in attrition rates when compared to
10 POLAR4 quintile. Quintiles 1-3 have higher attrition rates than would be expected.

11

12 [Table 3a and 3b here]

13

14 The null hypothesis, stating that there will be no significant difference between
15 observed attrition rates of POLAR4 quintiles and what would be expected was tested
16 and generated a p value 0.558367 and a chi square of 2.602. With a p value greater than
17 0.05 and a chi square value less than the critical value at d.f. 4, we can, with 95%
18 confidence, accept the null hypothesis and conclude that within the Foundation Year
19 Entry group there is no significant difference in attrition rates when compared to
20 POLAR4 quintile. All quintiles had attrition rates in line with the expected values.

21 ***Discussion***

22 Capital, as defined by Bourdieu (Edgerton and Roberts 2014), are the resources which
23 allows navigation of a specific space or field. An individual has their own makeup of
24 cultural and social capital and these can both be influenced by parental factors (Aragon

1 and Kose 2007) but that is not to say that it cannot be acquired. Exposure to and
2 undertaking of different experiences will allow the adjustment of the embodied cultural
3 and social capital and make an individual slowly change to fit the associated field and
4 habitus (Aragon and Kose 2007). The field in this case is education and the habitus is
5 the ability to operate within the norms of language, assessment and institutional
6 requirements (Gale and Parker 2017). Movement beyond a parent's education, known
7 as educational mobility, will in turn influence social mobility in both capital and habitus
8 (Gofen 2009). Most often those student seeking social mobility are first generational
9 students; those whose parents have no post-secondary education or students of those
10 with post-secondary education but without a degree (Bettencourt, Manly et al. 2020).
11 They are typically from a lower socioeconomic background and are more likely to be a
12 race minority (Atherton 2014, Younger, Gascoine et al. 2019). The student body in UK
13 higher education is more likely to be middle class, white and second generational, and,
14 for students who are not represented by this group, the move into an HE institution can
15 be unsettling (London 1989, Gofen 2009). The impact of socioeconomic disadvantage
16 in compulsory education is well known but this impact is continued through to post
17 compulsory HE due to early overarching parental attitudes and behaviours towards
18 education itself (Crosnoe, Mistry et al. 2002, Seay, Lifton et al. 2008). Coupled to this
19 there is a perception that being working class and being clever are exclusive of one
20 another, that students are required to be actively scholarly whilst in an educational
21 setting but also maintain their 'status' amongst their working class peers (Reay 2017)
22 and that the cultural deficits an individual has, is largely responsible for the lower
23 academic ambitions and attainment of such individuals (Ingram 2011). These students
24 often face a monumental task in undertaking HE, as there is a strong link between a
25 child and a parent's educational attainment (Gofen 2009, Toutkoushian, Stollberg et al.

1 2018) and a crucial indicator of likelihood to persist is the educational level of a
2 student's parents (Próspero and Vohra-Gupta 2007). The limited cultural and social
3 capital that first generational students possess makes commencement and adjustment to
4 HE much more difficult (Soria and Stebleton 2012, Martin, Miller et al. 2014, Ivemark
5 and Ambrose 2021).

6 Bridging programmes such as summer schools and foundation years have
7 previously been shown to support the transition to higher education for lower
8 socioeconomic classes including those who may be first generational (Grace-Odeleye
9 and Santiago 2019) and this data supports not just the immediate effect of increasing
10 participation but also the long term influence in regards to persistence and completion
11 such as that seen in South Africa (Machika 2007). In a report for the Pell Institute,
12 Engle and Tinto (2008) found that students from disadvantaged backgrounds who
13 enrolled on a four year programme such as those containing a bridging scheme were up
14 to 7 times more likely to earn their bachelors than if they had started directly onto a
15 three year programme. This statistic compounds the idea that the provision of a
16 supportive, preparatory year will be an advantage to student persistence. Most bridging
17 programmes are aimed at removing the academic barriers to success of students from
18 underrepresented groups and foundation programmes are an example of an early
19 intervention which supports such students gain the academic prowess required for
20 tertiary education (Salmi and Bassett 2014).

21 From reflections on the models shown here and in consideration of 19th and 20th
22 century classical social theorists such as Marx, Weber and Bourdieu; social alienation,
23 created by the separation of one from their own natural social setting, creates tensions
24 within the individual. It can also go as far as to create an aversion towards the new
25 positioning in social settings leading to the inevitable dropout seen in undergraduate

1 students (Kerby 2015). Student attrition or tendencies to drop out are multifactorial and
2 form a tight network of factors which each influence the other. Each student has a
3 unique set of problems or barriers to continuation of HE but most notable among studies
4 such as Beer and Lawson (2017) is the role of family background and the impact this
5 can have on intentions to study but also on the support and capital they can provide to
6 maintain enrolment in HE. Previous research has emphasised the impact that family
7 background has on completion of undergraduate study, with families with limited
8 experience of HE perhaps being less emotionally and practically supportive of the
9 student's attendance and engagement (Thomas 2002). This may be due to family caring
10 commitments, family financial position or indeed through family attitudes and
11 behaviours towards education (Aragon and Kose 2007, Reynolds and Cruise 2020). The
12 step into higher education induces a change in social circles in and of itself and this can
13 be both a positive experience, where a student adapts to their new social status and
14 becomes integrated and persistent, or negative, whereby a failure to adapt to the HE
15 social status and ultimately drops out.

16 From data presented here, those POLAR4 quintile 1 students (likely to be first
17 generational) who take a foundation year are less likely to drop out before course
18 completion than those who enter straight onto a degree course. As shown through a
19 review of the literature, first generation students often lack the capital to be able to
20 navigate the field and adapt to the habitus but using a foundation year or bridging
21 programme, they have a minimal risk, light touch exposure to higher education during
22 which they can develop the capital required for success.

23 In conclusion the data and discussion shown here is indicative that students who
24 are from backgrounds less likely to attend higher education and are therefore predicted
25 to be first generational students with limited experiences of the cultural norms, are more

1 likely to complete their studies if they first undertake a foundation year. This year of
2 less intensive academic study will prepare them for higher education with less academic
3 risk and give them time to adapt to and adopt the cultures and societal norms of higher
4 education. It provides both time and experiences, often with a likeminded and similar
5 background group of peers, to develop social and cultural capital allowing for their
6 movement within the habitus and field.

7 Whilst this work is purely quantitative, an interesting avenue for further study
8 would be to investigate the students' perspective via semi structured interviews. This
9 would allow for a thematic analysis of the students' self-reflection on capital acquired,
10 hopefully compounding the conclusions of this study; that the foundation year bridging
11 programme promotes acquisition of necessary capital and norms. It may also highlight
12 that part of the benefit of the foundation year is to 'learn' how to study and how to think
13 effectively as an undergraduate student.

14

15 Disclosure statement

16 The author reports there are no competing interests to declare.

17

18 Acknowledgements.

19 The author would like to acknowledge the invaluable advice and input of Prof Elizabeth
20 Hout.

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- 1 Figure 1. Spady's model of the dropout process (Spady 1971).
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- 4 Figure 3. Pascarella's theoretical framework of dropout (Pascarella 1980).
- 5 Figure 4. Bean and Metzner's model of non-traditional undergraduate attrition (Bean
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- 7 Table 1a. Observed attrition rates in different POLAR 4 quintiles from the whole
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- 9 Table 1b. Expected attrition rates in different POLAR4 quintiles from the whole
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- 11 Table 2a. Observed attrition rates in different POLAR 4 quintiles from the traditional
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- 18 year entry route