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Student Retention in UK Higher Education: Exploring the Link between Entry Grades and Attrition Trends

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Abstract:

Retention and entry grades are closely linked with each other and with the widening participation agenda. Until now some stakeholders have been focused on increasing student numbers and diversity. The purpose of this paper is to explore the relationship between non-continuation and entry grades in the context of the UK higher education.

Based on secondary data and focused primarily on UCAS tariff points and F/T undergraduate students, data has been extracted and analysed from HESA performance indicators. The data has been re-tabulated to illustrate relationships between student retention and entry grades. Several further research themes have been identified.

The developed figures indicate a clear relationship between entry grades and non-continuation for young entrants, while for mature entrants other forces are also at work, such as family pressures and finance. Exploring the relationships between low entry grades and student retention, at a UK nationwide level, useful inform is given to assist decision-making for policymakers, academic and admin university staff, students, and other HE stakeholders. A more structural approach should be incorporated in university policies attrition activities. Additional tools such as induction checklist, support from day one, improved teaching, tailor-made support for individual student segments such as - young and mature students,

activities to increase participation, new funding opportunities to help students cope with increasing costs, pre-arrival orientation programmes, and in general to be able to support an increasingly more diverse student population in a fast changing HE environment. An important part on any action could be part-time academics and pre-university courses.

Key words: Student retention, entry grades, attrition trends, UK, higher education

Introduction

Regardless of the philosophical perspective scholars agree that student retention is extremely important. While thus far many aspects related to this phenomenon have been widely investigated the relationship between entry grades and non-continuation has not been the focus of considerable nationwide research in the UK. Particularly while qualifications on entry are mentioned in many studies their focus has rather been on individual universities and other related issues (such as student support, academic progression, socioeconomic background, gender, disability issues, etc), specific regions or population groups, but largely not the UK as a whole and certainly not with a clear focus on the relationship between retention and entry grades (Andrews and Clark 2011; Andrews et al. 2012; Arulampalam et al. 2007; Braxton et al. 1988; Bryson 2004; Callender 2008; Crosling et al. 2009; Dodgson and Bolam 2002; Duty 2011; Hall 2001; Hixenbaugh et al. 2012; Thomas 2002; Martinez 2001; McChlery and Wilkie 2009; McCourt and Carr 2010; Thomas et al. 2002; Trotter 2006; Wade 2009; Wilcox et al. 2005; Wood 2012; Yorke and Longden 2004; Yorke and Thomas 2003).

While there is no equation of retention with attrition, there are clearly parts of the same broader theme. Although the aim of the paper is not to provide definitions, neither is to prove or disprove any one approach or term (this could be the focus of future research), it will be useful to include some views from the literature and the authors perspective. Besides 'the

potentialities of contributions' of the fastest growing employee category at UK HE 'the part-time teachers' will bring a unique point of view into the discussion.

Moxley et al. (2001, 37) defined retention as "the process of helping students to meet their needs so that they will persist in their education towards the achievement of the educational aims they value." McChlery and Wilkie (2009) argue that using simply the definition of 'at-risk' could be related only to student withdrawals. Moreover according to minutes of evidence from the House of Commons Select Committee on Education and Employment (2001) "There are no nationally or internationally agreed definitions of non-completion, and a wide range of possible constructions and interpretations exist."

Thus, in addition to non-continuation, other frequently used terms to describe and signify the student retention theme are: retention, exits, drop-out, attrition, withdrawal, failure, interruption of study, leaving early, non-achievement, non-completion, non-persistence, departure, stop-out, non-survival, suspension, non-progression, walk away, wastage, etc (Longden 2002; Yorke and Longden 2004). Consequently different scholars and stakeholders might use diverse terms to describe what is broadly the same subject matter, but could potentially approach the issue from a different theoretical viewpoint. In the UK, universities usually use the term 'retention' while other stakeholders such as HEFCE use the term 'non-continuation'.

This paper will approach 'retention', 'non-continuation', or 'attrition' from the clear point (in relation to pre-university grades and/or university entry grades) that signifies retention activities as the phenomenon where universities attempt to create policies and activities to stop learners exiting higher education (HE) without gaining or achieving their intended outcomes. That is, graduating with the qualification or degree in question. Thus the use of any of the above terms will imply non-continuation and/or student attrition trends.

Over the years a number of researchers have looked at the theme of student retention, which has become the 'Achilles

heel' of HE worldwide. In the UK the drop-out rates for full-time HE courses are approximately at 20%, varying from 1-2% for 'Oxbridge universities' and up to 35% for institutions following less exclusive student entry policies (Simpson 2005; Downie 2010; Soilemetzidis 2010; Smith and Naylor 2001; Johnes and McNabb 2004; Garner 2008; Shepherd 2008; Parmar and Trotter 2004).

As expected key stakeholders including students, institutions, employer and the state (the state interests are represented by agencies such as: UCAS, HEA, HESA, HEFCE, British Council, etc) are extremely concerned and have a vested interest to help improve retention rates (Yorke and Longden 2004; Longden 2002). While governments want efficiency in HE, not only for reasons related with labour market considerations but also because of accountability issues in relation to public funding (Yorke and Thomas 2003), high student drop-out rates is a global problem, and it is at the end an unnecessary waste of resources. Johnes (1990, 95) concur that "the influence of academic ability on student wastage deserves further investigation". In contrast Simpson (2005, 34) argued that "Higher education is a strange business. No other form of manufacturing would take in tested components (new students) and produce a final product (graduates) with a wastage rate of 20% or more. Or at least if such a business existed then it would very rapidly go bankrupt".

Thus the consequences of non-continuation can be major both for individuals (loss of employment opportunities and better life chances) and societies, since resources wasted on students that will never graduate, results in other projects in education and training, and elsewhere in the society and economy not materialising (Crosling et al. 2009; Soilemetzidis 2010). Simpson (2005) estimated that the cost of student drop-out in the UK is approximate £7.8 billion.

Since attrition creates unnecessary costs for HE, the economy, the society and individuals, any fresh study, approach and interpretation that could lead to suggestions which

potentially could help tackle non-continuation rates and improve graduation rates is vitally important. The 'novelty' of this paper is to view issues via the relationships between low entry grades and student retention, at a UK nationwide level, only examining undergraduate students, and only reviewing prior research conducted in a UK context and with countrywide data extracted from official national agencies publications such as HESA Performance Indicators rather than by individual researchers based in a single or a number of institutions.

Using secondary data and statistics from HESA performance indicators (Higher Education Statistics Agency), the aim of this paper is to explore the relationship and interdependence between entry grades (focused on UCAS tariff points) and non-continuation in UK HE.

The key questions are:

What is the relationship between entry grades and student retention?

Is the relationship between entry grades and attrition trends the same for young and mature entrants to full-time first degree courses?

What could be some of the actions to aid retention?

Literature review

Student retention, the issues and consequences of non-continuation and attrition, is a vast subject area. As such in the context of this article it will not be possible to refer to all aspects and viewpoints or review all literature related with each of the possible specific issues. Besides since the main focus is on the relationship between entry grades and attrition and not the differences between traditional and non-traditional qualifications one should not expect any substantial reference to that.

Most scholars agree that there is a direct link between entry grades and student retention. But most see retention from the point of view of their own institution or discipline, and

few had previously examined the relationships between entry grades and non-continuation, none focused only at a UK national level.

In terms of entry grades, students with lower grades are often ill prepared for academic life. A number of scholars agree that entry qualifications and academic success are closely linked, and students with higher grades usually need less academic support and other resources (Hixenbaugh et al. 2012; James 2010). Moreover, inadequately prepared students could face extra difficulties with their studies. Lowe and Cook (2003) found that those facing study challenges to be more likely to exit HE. Wood (2012, 33) also argued that the relationship between entry grades and student drop-out is quite obvious “with the high withdrawal rates amongst those with unknown qualifications or no formal entry qualifications”.

However, other research indicates (Andrews and Clark 2011; National Audit Office 2007; Andrews et al. 2012; Thomas 2002) that students from non-traditional backgrounds can cope as well as those from traditional routes. Others found that the existing relationship between widening access, and therefore low entry criteria and non-completion could not be separated. Besides diverse student populations mean that those from non-traditional routes can sometimes find challenging to integrate and cope with established teaching and learning environments. They also have different expectations about the kind of learning settings and support offered (McCourt and Carr 2010).

While Walker (1999) claims that the widened access agenda meant that universities are now open to non-traditional students which are less well qualified. Further arguing that the best way to forecast student success is their entry qualifications which can influence knowledge; level of incentive; mind-set, focus and capability; scholarly issues; and programme selection.

In terms of young versus mature students, Yorke and Longden (2008) present some main differences regarding the difficulties that they face. The most important is that, young

learners select courses less effectively and therefore are more often discontent with the location and setting of their student life. While mature students can be more judgmental about their HE experience, have bigger money difficulties and concerns with their dependants' requirements. Walker (1999) agrees that young students face usually less challenges. That could be because they may stay with their parents, typically have no dependants and their money circumstances are generally not as grave as for mature students.

Moreover whilst both mature and young students can struggle financially, personal circumstances can be very unique, so learners need tailor-made support which universities may not be able to offer, for example family breakup influences mature students more since "it is a divorce from their partner rather than the divorce of their parents" (Page 1996, 162) as it is in most such cases for young students. While family issues can influence mature students withdrawal, financial problems are by far the most considerable reason, and Trotter (2006) reports that with the rise in the numbers of mature students in UK HE institutions funding will become more vital. Besides, according to Yorke and Longden (2008) due to the rising cost of HE, recruitment of mature students will intensify. But their requirements will need to be better met. So HE providers will need to offer more support and class schedule options to meet the needs of mature students and to ease the sentiment that pre-university courses offer more personal support compared with university courses.

Methodological approach

While various scholars have studied the theme of student retention making significant contribution to the theoretical approaches when researching student attrition (Tinto 1975; Braxton et al. 1988; Stage 1989; Johnes 1990; Mallette and Cabrera 1991; Walker 1999), probably the most comprehensive description about possible theoretical

approaches to student retention was provided by Walker (1999) outlining three approaches: 'theoretical' or 'philosophical', 'descriptive' and 'prescriptive' approach.

The 'philosophical' or 'theoretical' approach identifies the complexity of the problem and focuses largely on longitudinal studies, focus is mainly on the level of social and academic integration of the student with the HE community, including students interactions with university staff and their peers. The 'descriptive' approach focus on what students can bring to the university, how they spend their time on campus and what are the reasons for their departure - primarily a view point that focuses on identifying problems. The 'predictive' approach seeks to predict if students will persevere or leave using correlations between different factors such as entry qualifications and progression or retention. In this study we will mainly employ the 'predictive' approach.

Generally correlation can address three queries about two variables. If there is a connection between them we can investigate the bearing of that association, and afterwards the scale (Cohen et al. 2010). This can be enhanced by segmentation, for example examining two distinctive groups, such as young versus mature entrants to full-time first degree courses.

After evaluating available data a decision was made to use the official statistics of HESA. To ensure that this study could be verifiable, reliable, consistent, dependable and repeatable, only accessible and freely available statistics without any restriction access or barriers, such as the need to login or pay a fee, were used. Confidentiality and anonymity was granted to the communication with the relevant stakeholders, and data was securely stored.

The findings in this research are based on data publicly available via the HESA website. HESA produce and publish performance indicators and benchmarks for UK HE on behalf of a number of relevant stakeholders such as: Higher Education Funding Council for England (HEFCE), Higher Education

Funding Council for Wales (HEFCW), Scottish Funding Council (SFC), Department for Employment and Learning, etc, and under specifications determined by the Performance Indicators Steering Group (PISG). Membership of the group is drawn from government departments, the funding councils and representative bodies (HESA 2013).

Secondary data has been used because such nationwide data can only be collected and made available via national agencies. For example in the UK HESA is the only authorised authority to collect, accumulate, store, produce and publish nationwide statistics on behalf of all HE stakeholders including all major gatekeepers that contribute to that process. Other researchers have followed a similar approach (Arulampalam et al. 2007). Moreover secondary data enables studies over a longer timeframe and allows the examination of existing data by using a different approach or a form of analysis (Barker and Alldred 2012). As well some scholars, for example Wood (2012, 29), when comparing his primary data with data available from HESA, admits that his data is a much simpler assessment of student status, not equivalent with the one HESA generates.

Since HESA occasionally adjust the methods, technical terms, and statistical techniques used to develop non-continuation rates and other table and statics (For example Super Profiles method, POLAR2, POLAR3 method, COMDATE, DATELEFT, ENDDATE, etc.), an effort was made to take this into consideration and to group the data with that in mind.

Spreadsheets, tables and figures were developed with data selected, extracted and re-tabulated from spreadsheets (categories) SN1 and SN2. The information was available in Microsoft® Excel® format. HESA Performance Indicators Index, available at: http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=2064&Itemid=141 (accessed 3 June 2013).

Only UK countrywide information was extracted. Each spreadsheet represents one year and contains other information which was deemed to be irrelevant for this research and

excluded, such as: subject of study. Using Excel® and extracts from spreadsheets categories SN1 and SN2 (20 in total, covering about a period of ten years) four Excel® worksheets were created with four tables. The information they include are: years, UCAS tariff points (or equivalent only) and percentage of non-continuation, figures 1 to 4 were developed from those tables.

Data presented only covers the groups of young and mature full-time undergraduate students. Due to the fact that HESA adjusted the method and statistical techniques used, for each of the two groups (young and mature) the following four figures represent two periods (2002-8 and 2008-11) for each age group. Spreadsheets SN1 refer to young entrants to full-time first degree and SN2 to mature entrants to full-time first degree courses. Young students, those who are age under 21 - mature students are those who are age 21 or over.

Findings and discussion

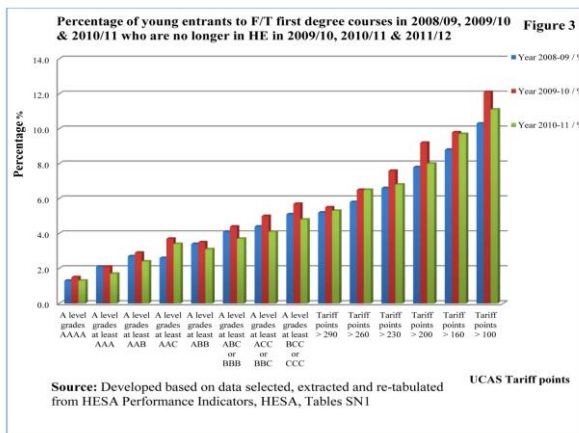
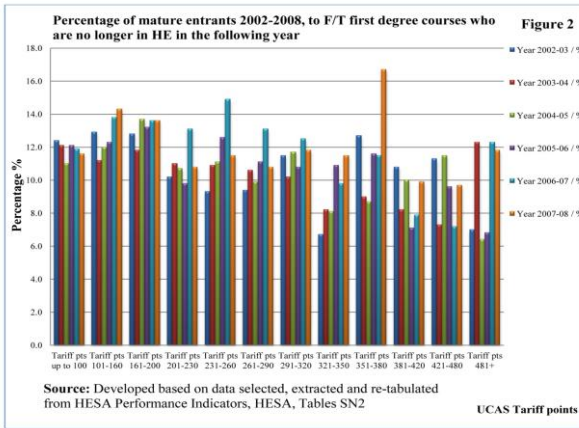
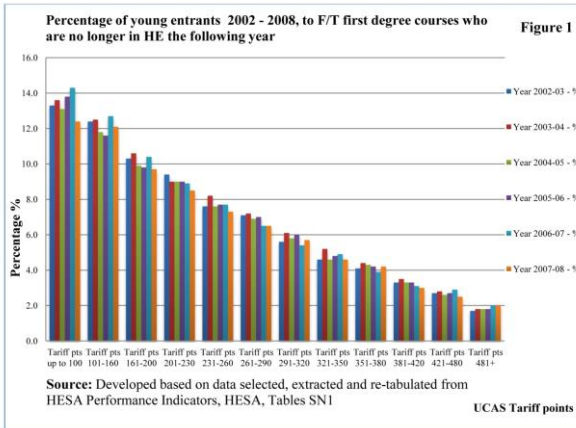
Following email communication with key stakeholders (HEA, UCAS, HESA) to increase reliability, a decision was made to use data covering approximate 10 years - academic year 2001-2 to 2010-11. The data refers to undergraduate full-time first degree entrants. Taking into account changes in statistical methods and categories and in some cases terminology, to facilitate truthful and direct comparison, findings are presented over two figures, one for each period 2001-2008 and 2008-11. The findings are supported in literature by a number of institutional, regional and sector focused reports (HEFCE 2013; Hall 2001; Thomas et al. 2002; House of Commons Committee of Public Accounts 2008; Dodgson and Bolam 2002; Davies and Elias 2003). Results are presented in two student segments, young full-time first-degree entrants and mature.

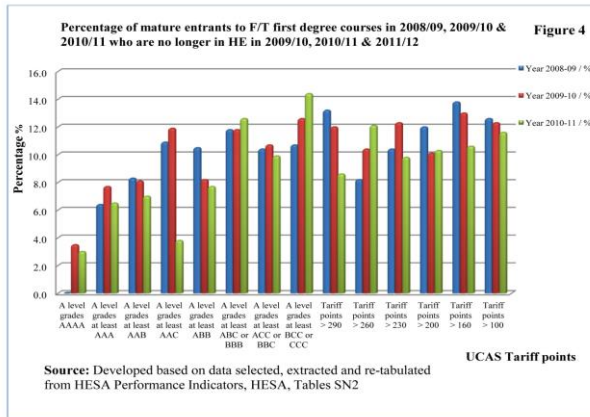
As illustrated in Figures 1 and 3 representing attrition of young entrants for a period of approximately 10 years, there

is a direct correlation between entry grades and non-continuation. For example, while those entering HE with more than 481 UCAS tariff points have attrition rate of less than 2%, students with 250 tariff points have three times higher drop-out rates at more than 6% and those with less than 100 points, six times higher at more than 12%. The findings are similar and consistent throughout the decade.

Examining the category of young students (figures 1 and 3) in comparison with the corresponding figures for mature students (figures 2 and 4) although the trend is somewhat similar the percentage of attrition from year to year and over the decade are fairly irregular for mature students. The figures of mature student attrition (figures 2 and 4) indicate that the influence of their prior qualifications in relation to retention is less important. For mature students the variation between different UCAS tariff points groups in relation to attrition is much greater and less year to year consistent, when compared with the corresponding young students group (figures 1 and 3). Moreover, a higher percentage of mature students withdraw from their courses, which signifies that in HE, mature students face some unique challenges not always linked with their entry grades.

So even though entry grades do significantly influence the drop-out rate for both young and mature students, other factors are present and influence the relationship between prior qualifications and drop-out rates for each segment. These issues could be related with social integration, good student practices, feeling homesick, etc for young students and things like prior work experience, family, work related training and so on for mature students. Both categories might be also influenced by matters such as money worries, coping with the workload, tutoring support and so on (Walker 1999; Wilcox et al. 2005; Duty 2011; Wade 2009; Hixenbaugh et al. 2012; Martinez 2001).





Implications of the study

The findings of the research imply some useful directions to aid retention and areas for future exploration. From the findings (figure 1 to figure 4) and the reviewed literature there is a clear trend that those students with higher entry grades are better prepared, face fewer academic challenges and are less likely to withdraw from their studies.

While this study focused on student retention via the viewpoint of exploring the link between entry grades and attrition trends, with the continued implementation of the widening participation agenda, challenges in the economy and increases in fee levels the number of non-traditional students both in terms of their background and range of their entry grades, and prior qualifications is expected to rise (McCourt and Carr 2010; Wood 2012; Dodgson and Bolam 2002; House of Commons Committee of Public Accounts 2008). UK HE providers focused their attention on lowering the barriers to allow access to HE to more students especially those from underprivileged backgrounds, consequently the outcomes of those learners after they entered university was largely uncared for (Callender 2008). This directly affected retention and lead to higher attrition rates. Besides, the admission of a

large number of 'weak' students puts pressure on universities support systems (James 2010).

Based on these findings, a number of practical solutions to facilitate better retention could be proposed. Firstly, the induction period is critical. Initial impressions matter and since induction is very stressful for students, simple tools such as an induction checklist provided to every student to ensure that the necessary information has been received (James 2010) could make significant difference during the first crucial period of university life. Prevention is essential hence student induction should focus on student engagement and include staff involved in retention initiatives providing services such as: comprehensive student advice services, peer mentoring activities, academic skills sessions and so on (Wade 2009). The initial period of study is very important and according to James (2010) appropriate support such as a comprehensive induction to HE life could retain survival rates. Also, accurate pre-university preparation and pre-enrolment information is vital. Thus pre-university summer schools programmes can be another tool to tackle attrition (Walker 1999). Furthermore, pre entry courses may generate greater commitment from students. Evidence suggests (Yorke and Longden 2008; Walker 1999) that weaker students can greatly benefit and increase their continuation rates by participating in pre-university courses.

Secondly, personal circumstance is another factor that we need to consider when designing retention activities. For example, both young and mature students could face financial difficulties and their departure might be linked with that reality. Page (1996) reveals that young students do not know the real cost of autonomous life and when faced with money challenges could choose to withdraw from their studies and seek employment. Whereas mature students have other personal circumstances and 91% of those that drop-out resides with their parents.

Thirdly, HE institutions have an obligation to their students and need to work not only towards raising aspirations

at university, but also providing support to future students prior to enrolment and during their studies. Thomas et al., (2002) maintains that universities need to help student to develop their less prominent skills. And academic skills could be a specific issue for mature students that have not been in official education for a while. This could include “credit bearing career choice programmes, student mentors and pre-arrival (summer) orientation programmes, skills support and extended counselling services” (Duty 2011, 59).

For any actions, funding and information dissemination is crucially important and support services departments need to receive appropriate resources to be able to promote themselves and their services (Wade 2009). Motivation and inspiration could be a key part of retention activities. Johnes (1990) maintains that high scholarly goals can play a vital role to retain students since they are the key for perseverance. But inspiration is not only an academic issue and student services have a significant role to play, by offering reasonably priced accommodation, social space and facilitate student networks, thus balancing the lack of personal and family networks (Thomas et al. 2002).

Fourthly, is the provision of effective personal tutoring. To be more effective, efficient and traceable, personal tutor meetings should be scheduled proactively and in the first semester. Retention activities need to be balanced and while individual personal circumstances need to be understood, participation should be strongly supported, and non-attendance needs to be followed up. James (2010, 42) considers that tutor meetings need to happen “at least once per semester” and the plan of the meeting ought to include other actions such as individual study arrangements, or discussion and reflection about evaluation marks. Wilcox et al., (2005) points out that not all academic see personal support and retention activities as part of their role thus a number of students withdraw because they face challenges with inadequate tutor support.

Furthermore, James (2010) research suggests that students highly value when they are able to contact staff when they needed to. Tutoring can be difficult and time consuming and because professional progression is largely linked with research and management tasks, teachers are focusing less on student support. Accordingly institutional focus on support and the appointment of retention tutors or graduate interns is important (Duty 2011; Wade 2009). Inculcating a greater sense of belongingness amongst students is crucial in HE. According to Leathwood and O'Connell (2003) the modular structure and large student intakes can result so that students do not know each other and tutors do not know their students. But to improve the sense of community we need to achieve a higher level of academic and social assimilation of learners, and this can be better done in small classes (Trotter 2006) and through effective personal tutoring.

Fifthly, is the realignment of the view of traditional and non-traditional students. The research suggests that good students from non-traditional background can cope as well as their counterparts from traditional routes, and face similar drop-out trends (Andrews and Clark 2011; National Audit Office 2007; Andrews et al. 2012). Johnes (1990) mentions that those with work experience could be more enthused and consequently have higher likelihood to graduate in comparison with those without prior work experience. Pathways and support systems to help all students at risk to succeed should be created, regardless of how they access HE. Evidence suggests (Universities UK 2002) that learners from non-traditional routes costs more to recruit, teach and hold, and at times costs are not presented precisely. Thus more resources are needed to allow HE establishments to anticipate and cover the dissimilar requirements of the increasingly more diverse student body.

Sixthly, is the chronic lack of resources, the use of large numbers of part-time staff and particularly part-time lecturers, which are poorly supported and underutilised (Grove 2012).

Good teaching is very important in retaining students. Page (1996) suggested that while teaching involves large numbers of part-time academics and is less centralised, it is not greatly appreciated especially when compared with admin and various revenue making activities. Part-time academics deliver - depending the university - between 5% and 50% on all academics offerings (Bryson 2004; Tait 2002; BMAF and HSAP 2009). Thus, part-time academics are a crucial factor in the effort to provide good teaching and appropriate support, but are currently mostly neglected without the necessary integration and empowerment strategies that could boost significantly retention activities and help to bring down attrition rates while improving the teaching and learning experience for all.

Research limitations and future research

It is acknowledged that the study is based on secondary data, focusing primarily on full-time undergraduate students at UK level and mostly centred on UCAS tariff points. Further research could explore the entry grade profile and attrition rates of students in other country contexts. Also further research could explore the attrition trends of students resuming their studies after a year or more out of HE, the retention of part-time students and the attrition of students transferring to other universities. Additionally, the impact of staff student ratio on student retention and the contribution of part-time staff to retention activities could also be explored.

Conclusion

It can be concluded that entry grades have significant influence on non-continuation rates for both young and mature students. Despite the fact that this influence is less important in the case of mature students, mature students have significantly higher attrition rates and thus are more at risk of leaving HE, this is due to other factors and difficulties that they

may encounter, such as work, family, finance and so on. Widening participation strategies have enhanced pressure on retention and on university services. To address attrition modern universities need to be flexible and fast evolving organisations. Induction and integrating of new students is vitally important for a positive start and tutoring and monitoring student attendance is paramount. Financial worries and family issues will increasingly play a bigger role in student withdrawal decisions and universities need to invest in adequate support systems, including tutoring, good teachers and peer support networks. Part-time academics and mandatory pre-university courses could potentially play a positive role in the effort to enhance teaching and learning, improve support and services, and the student experience offered to all students, regardless their entry routes, and hence help to lower attrition and increase retention rates.

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