Higher Education Academy

TRANSFORMING TEACHING
INSPIRING LEARNING

Undergraduate student retention and attainment

Phase two overview report

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1. Introduction

The Higher Education Academy's (HEA's) *Undergraduate retention and attainment across the disciplines* report (Woodfield 2014) shows that students from a variety of backgrounds perform very differently against the key indicators of retention and attainment within diverse disciplinary contexts. That report provides the first systematic and quantitative overview of these issues, drawing on 2010-11 Higher Education Statistics Agency (HESA) data for all UK undergraduate students across 30 disciplines. The report emphasises that the composition of the student body varies considerably across disciplines. Students who differ by key background characteristics – for example, age, ethnicity, gender and disability – are distributed unevenly across the disciplinary spectrum. The report also demonstrates that not only are there differences across disciplines with respect to retention, achievement and progressions rates, but that within disciplines different groups of students are more or less likely to be vulnerable to non-continuation and lower achievement, and that they record very different reasons for non-continuation. The report's findings signpost the need to further explore curricula, cultures and practices at the disciplinary level, and how these interact with student characteristics, in order to better understand the identified diversity in retention and attainment rates.

In 2015, the HEA commissioned a second phase of research into disciplinary differences in retention and attainment, and the underpinning reasons for the identified variations. It commissioned six short reports, listed below (see reference section), each focused on a distinct discipline. These were designed to engage with the contextual overview and critical questions raised in the 2014 report and to move towards a richer understanding of how different student groups experience different disciplines, to better grasp how disadvantage plays out within different disciplinary contexts. These reports were designed to be syntheses of qualitative evidence and research in each of the disciplinary areas examined.

The selection of the six broad disciplinary areas for further investigation was undertaken on the basis of the analysis presented within the 2014 quantitative report. Each had been identified in that report as an area of potential further interest because its student cohort and/or its retention or attainment pattern was atypical for the higher education (HE) sector in some respect; an attempt was also made to represent both the Art and Science disciplines within the final selection. A short summary description of retention and attainment in each of the six disciplines follows:

Computer Science – this discipline was relatively large and accounted for approximately 4.2% of the student body in the sample. It was identified as worthy of further investigation because of its skewed student population. Computer Science has long been identified as one of the most male-dominated of disciplines and it was among the most ethnically diverse. Computer Science also had quite a high proportion of students whose pre-university address was within 30 miles of their university. Computer Science was one of several 'newer' disciplines identified in the original *Undergraduate Retention & Attainment Across the Disciplines* report and these were associated with more ethnic diversity in the student body, but also with greater proportions of students studying at 'local' institutions. In terms of retention and attainment, this discipline also had a relatively high rate of students withdrawing from their studies for reasons of academic failure, and had a relatively low rate of upper degree achievement.

Philosophy and Religious Studies – this discipline was relatively small, accounting for approximately 0.9% of the student body. By contrast to Computer Science, Philosophy and Religious Studies (PRS) was identified as an 'older' discipline, with many of the student body characteristics that we associate with the more established areas of study. This included its comparatively low percentages of Black and Minority Ethnic (BME) students, of students from socio-economic classes three to nine, and of students whose pre- university address was within 30 miles of their university. The discipline was dominated by

students domiciled in the UK before starting their undergraduate degrees, and had a comparatively high percentage of students securing an upper degree.

Education – this is a large discipline, accounting for approximately 6.5% of the student body. Unusually, the majority of its students are mature. It was among the most female-dominated disciplines, had a comparatively large proportion of students studying part-time, and a comparatively large proportion of students who were domiciled in the UK (and within 30 miles of their university) before commencing their studies. It was also among the most 'White'. It had a comparatively small percentage of students from socio-economic classes one and two. Education enjoyed sector-average retention rates, and had a comparatively low percentage of students leaving for reasons of academic failure. It had, however, below average levels of achievement of upper degrees among those students whose degrees were subject to classification (less than 50% of qualifying students in the case of this discipline).

Business and Management – this is the second largest discipline area, accounting for approximately 7.5% of the student body. It mirrored the sector as a whole in terms of its age balance, and was among the most gender balanced of all disciplines. This discipline also had a comparatively high percentage of students who were domiciled outside of the UK before commencing their undergraduate courses. Business and Management had a retention rate that matched the sector average but a comparatively low rate of achieving upper degrees.

Veterinary Medicine – this was the smallest discipline, accounting for approximately 0.6% of the student body. Its student body was among the most 'White', comparatively 'young', had higher than average percentages of students from socio-economic classes one and two, and was female-dominated following a sharp gender turnaround over the past decades. Veterinary Medicine enjoys a slightly higher than average retention rate and, of those students whose degrees were classified (less than 50% of qualifying students in the case of this discipline), its students achieve upper degrees at the same rate as the rest of the sector.

Art and Design – this is a comparatively large discipline, accounting for 5.8% of the student body. It had comparatively low percentages of mature students, a comparatively high percentage of students from socio-economic classes one and two, was comparatively 'White', and was among those disciplines reporting greater percentages of students with disabilities. Smaller percentages of Art and Design students achieved an upper degree than the sector average while the discipline had retention rates that matched the sector average; of particular interest here was the fact that disabled students performed as well as those without reported disabilities in terms of retention.

2. Curriculum, culture and custom – overview of phase two reports' findings

Across the six reports, a number of generic, headline findings emerged as well as some interesting findings that were more specific to the individual disciplinary context. Even in the latter case, the suggested association between relatively idiosyncratic cultural differences, and retention and attainment rates itself points to a more generalisable finding about the overall influence of disciplinary context on student experience and on key performance indicators.

It is worth noting here that some of the phase two reports stressed the diversity of different subject areas that fall beneath the general disciplinary umbrella headings, for example, within Philosophy and Religious Studies and Veterinary Medicine, and the difficulties that arise from this in terms of treating the entire discipline as an homogenous whole. Even in such cases, however, it was noted that often the

areas sitting underneath the broad disciplinary headings share some characteristics and can be treated as units with a 'family resemblance'.

Many of the discussion issues that emerge as key foci in the phase two reports point to the importance of student preparedness for their studies, and the close link between academic preparedness and the ability to engage overall with the higher education experience. Part of ensuring that students are academically prepared is managing their early expectations about the higher education curriculum. While this task is part of the crucial process of managing the school to higher education transition for all disciplines, it is clear that in some disciplines students start a university course without having taken a prior qualification in that precise subject area, and that this raises particular issues for them in relation to their expectations of course content and their ability to manage the work. For instance, the Computer Science report refers to difficulties that new students might experience in their first year of studying the curriculum if they are ill-prepared for the demands of the course content – students in this context may struggle with the mathematics or coding skills required to pass their first year. This report highlights the importance of assessing students' preparedness early on in their HE courses, with a view to identifying suitable pathways or material for their future studies.

Moreover, the importance of understanding and managing student motivation for both selecting a discipline, and continuing within it, is highlighted in the reports. The Veterinary Medicine report attributes its very high retention rates partly to the fact that their students' career choice has often been made at an early age, for very specific reasons, and that there is but one route to this career: "the vocational nature of the discipline and the human–animal bond that is unique to the profession." Relatedly, the direct and evident 'relevance' of the curriculum within the Education discipline was cited as a factor in its retention record. The Philosophy and Religious Studies report highlights the challenge faced by disciplines where a vocational trajectory is less obvious, and where disciplines, therefore, perhaps need to more carefully consider the positioning of their course content in relation to students' motivations and expectations. This report suggests that its degrees might be better understood if the "role of the PRS disciplines in higher education as cultivation of global citizenship" was made clearer.

Both Philosophy and Religious Studies and Business and Management refer to 'threshold concepts' that students encounter and should familiarize themselves with before they can fully engage with the course content. Both the reports on these disciplines suggest that engagement with key threshold concepts can improve cognitive adjustment to the curriculum, overall experience and retention rates. In their most simple, and yet often most challenging, form such 'threshold concepts' can refer to the ability to view texts and ideas through a systematically critical lens, which is required in many Arts and Social Sciences areas. It is obvious that there needs to be further work around the role played by 'threshold concepts', and that disciplines need to work toward identifying them clearly and effectively to enculturate students into the demands of a disciplinary curriculum rather than disciplinary tastes; the Art and Design report suggests that students can fail to flourish when such critical elements of disciplinary knowledge remains tacit: "If they were at odds with the tutor's aesthetic they often left their own ideas and followed the guidance of the tutor."

Some reports point to elements within the disciplinary culture that are related to elements within the student and staff cohort composition, whether this be past or present, that impact on the present context for incoming students and their education. For instance, the Veterinary Medicine, Philosophy and Religious Studies and Computer Science reports all refer to artefacts in their culture that result from the discipline's past or present male-domination. In the case of Veterinary Medicine, despite the student cohort currently being female-dominated, the discipline remains principally led by men, leading to a lack of diversity in senior role models for new students. In the case of Art and Design, the notable lack of BME staff is highlighted as an issue for the diverse student body, but also for the future diversification of the disciplinary culture. This report highlights the paradox of an inclusive ethos

pervading Art and Design as a discipline alongside the exclusionary impact of a staff body lacking in diversity.

All of the reports identify disciplinary-specific practices around the pedagogical relationship between students and lecturers that impact either positively or negatively on both retention and attainment. The Business and Management report suggests the discipline faces both tensions and possibilities in needing effectively to connect students to both scholarly curricula and orienting them to their 'future-self' of work. The report from Computer Science provides a particularly interesting example in this regard as cultural elements within the IT occupational sector can be recognised in problematic pedagogical practices within higher education. In what is referred to as 'student syndrome', this report describes how such practices are co-created in the higher education context to students' detriment, that is, the "tendency to work to deadlines", to "leave work until a deadline is imminent, then to work on it at the last minute." While a feature of some areas of occupational computing, in the context of assessments, this approach is concerning as "it removes the scope for any safety margin … [and] is especially problematic with high stake assessments – typically large single pieces of coursework or end of course exams – where students can fail without an easy recovery pathway."

The role played by student 'culture', 'community' and 'peer integration' was recognised in a number of reports – for example, Computer Science and Education – as an element of the higher education experience that is critical to student engagement, retention and attainment. Effective engagement with other students was highlighted as taking various forms, from students collaborating in group-work, to students learning to value diverse student identities and experiences through critical reflection on their own and peers' experiences as part of the curriculum, through to students feeling embedded socially in extra curricula activities.

The importance of better scaffolding – the processes whereby students begin to feel they belong to a course and discipline – was highlighted as a key theme in the reports, with the first year of university being critical in this process.

3. Gaps and areas for future research

Most of the phase two reports noted the paucity of data, research and discussion related to retention and attainment issues specifically focused on their particular disciplinary areas, and highlight the importance of establishing a better body of evidence and information for exploring the significance of the disciplinary context further. For most, there was little or no evidence base from which they could explore the experience and performance of diverse groups within their particular discipline. The reports made a general call for more research explorations to shed light on what is happening within disciplinary contexts and how to address particular challenges.

This finding echoed that of the phase one *Undergraduate retention and attainment across the disciplines* report and underscored the need for further work at the disciplinary level on the experience of different groups of students, and the circumstances within which they are better retained and achieve more.

Further research was identified as particularly necessary in relation to:

- identifying how disciplines are perceived by students selecting their HE courses and then once they are studying within them;
  - understanding how these perceptions link to past and future student selves (in terms of employment and general citizenship);

- exploring, using a range of qualitative approaches, the nature of the disciplinary cultures as experienced by a diverse body of staff and students;
- how staff and systems identify and support students at risk of failing or leaving their courses;
  - understanding more specifically what is meant when students leave their courses for 'personal' or 'academic' reasons;
- understanding the impact of homogenous and diverse staff bodies on the student experience and disciplinary cultures and practices;
- identifying and sharing the practices that produce the best results within disciplinary contexts and being prepared to diversify these practices for the diverse student body;
- identifying ways of improving student engagement both inside and outside of the learning environment;
  - exploring the impact of specific pedagogies on retention and attainment;
    - exploring specifically the role of technologies in improved pedagogical relationships;
  - exploring the role of 'threshold concepts'.

4. Recommendations

The most frequently cited and important recommendations were:

- to strengthen the commitment to embed equality and diversity initiatives within all levels of HE;
- to improve the management expectations of students prior to commencing their courses and during its early stages. Work with schools, discipline bodies and higher education staff to achieve this;
- to improve the management of students' transitions to their courses through improved targeted group and individual support;
- to improve use of existing resources, transferrable research, policies and interventions including:
  - institutional and national (discipline) diversity data;
  - international research and learning to augment current understanding of the UK context;
  - research and lessons from other disciplines to augment understanding of particular disciplinary contexts;
- better transfer of lessons to policy and practice;
- better nesting of diversity policies into strategic goals;
- better evaluation of policies in relation to the key indicators of retention and attainment and overall student experience.

5. Conclusion

Conclusions drawn from these *Undergraduate retention and attainment across the disciplines* phase two reports contribute further to the ongoing debate around retention and attainment within HE, as well as the role played by disciplinary context in this already complex picture. Of most relevance to discipline practitioners is the exploration of how disciplines themselves exert an independent influence on student outcomes: for example, disciplinary ways of being, the type of staff that inhabit those disciplines, and the peculiarities of disciplinary assessments and exam systems (in short disciplinary culture) that can have a profound impact on student engagement and success. The issues the reports raise enhance established understanding and raise new topics for discussion; their clear focus on disciplinary cultures highlights a space for academic staff, subject leaders and discipline bodies to contribute leadership in the ongoing efforts of higher education providers to secure better retention and progression across the whole student life-cycle. It is to be hoped the reports will stimulate further inquiry and reflection within and across disciplines.

6. References

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