Developing a Management Model and Performance Framework for Improving Student Retention

Helen James

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ABSTRACT

This research will be of interest to global higher education policy makers, researchers and practitioners engaged in student retention, widening access and managing strategic interventions to deliver step improvements in performance.

Widening access policies continue to have contemporary relevance. Effectively and efficiently reducing student non-continuation rates, without compromising widening access performance, remains a challenge for many HEIs.

A new system level *Management Model for Improving Student Retention Performance* and its supporting performance framework is derived from empirical data gathered from a longitudinal instrumental case study and informed by the literature. They have specific validity for HEIs with strong widening access performances and general applicability to others. The dominant theoretical model informing the research is Tinto's longitudinal model of institutional departure (Tinto, 1993).

The *Management Model for Improving Student Retention Performance* is presented around three primary categories: *students, faculty* and *institution*. Each interacts with each other and operates within individual and mutually inclusive environmental systems. There is also a supporting *Improving Student Retention KPI Framework* and *Improving Student Retention Performance Monitoring Information System* to provide the mechanisms and tools that influence the effective and efficient application of the model to deliver a step improvement in student retention. Evidence of considerable improvements [50%] in student retention performances[1] for widening access students is evidenced by the case institution which is not shared by comparable HEIs in Wales.

Two new performance indicators are also derived: the *Specific Widening Participation Indicator (SWPi)* and the *Multiple Widening Participation Index (MWPi).*

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[1] HESA 2010. Young, full-time entrants in 2007/08 from LPN

These support a new paradigm for understanding widening access and student non-continuation performances and challenge the algorithm used to calculate institution non-continuation benchmarks. They are included in the new performance framework and inform the third primary research contribution which exposes the significant discrepancies between the funding allocations made by HEFCW, the demands on HEIs relating to widening participation policy and the extent of their *MWPi>0* and retention performances. Incongruence between HEFCW funding methodology and Welsh policy is evidenced.

LIST OF ABBREVIATIONS

CAT	Credit Accumulation and Transfer
C&CT	Computing and Communication Technology (School of)
CERT	Certificate
DEL NI	Department of Employment and Learning
CF areas	Community First areas (areas identified by the 'Welsh Index of Multiple Deprivation' as eligible to apply for Communities First funding)
DSA	Disabled Students' Allowance
E&C	Education and Community (School of)
ELLI	Effective Lifelong Learning Inventory
FE	Further Education
FEI	Further Education Institution
FT	Full-Time
FTE	Full-Time Equivalent
HE	Higher Education
HEA	Higher Education Academy
HEFCE	Higher Education Funding Council of England
HEFCW	Higher Education Funding Council for Wales
HEI	Higher Education Institution
HESA	Higher Education Statistics Agency
HESES	Higher Education Students Early Statistics Survey
HEW	Higher Education Wales
HSCSES	Health, Social Care, Sport and Exercise Sciences (School of)
IMG	Institute Managers Group
KPI	Key Performance Indicator
LTAC	Learning, Teaching & Assessment Committee
LPN	Low Participation Neighbourhood
Moodle	Modular Object-Oriented Dynamic Learning Environment
MWPi	Multiple Widening Participation Index
NAO	National Audit Office
NEWI	North East Wales Institute of Higher Education
NS SEC	National Statistics Socio-economic Classification

NSS	National Student Survey
NUS	National Union of Students
OMG	Operational Managers Group
ON	Other Neighbourhoods
PDP	Personal Development Planning
PEQ	Programme Experience Questionnaire
PES	Programme Experience Survey
PGR	Post Graduate Research
PI	Performance Indicator
POLAR1	Participation Of Local Areas, Basis 1 (superseded 2005/06)
POLAR2	Participation Of Local Areas, Basis 2 (used since 2005/06)
PT	Part-Time
QA	Quality Assurance
QAA	Quality Assurance Agency
QAF	Quality Assurance Framework
SBS	Student Barometer Survey
SRSTFG	Student Retention Strategy Task and Finish Group
S&T	Science and Technology (School of)
SFC	Scottish Funding Council
SID	Student Information Desk
SIHE	Swansea Institute of Higher Education
SITS	Strategic Information Technology Services' academic, student and course management database system
SMS	Short Message Service *(text messaging)*
SQC	Standards and Quality Committee
SWPi	Specific Widening Participation Indicator
TC&S	Technology, Computing & Science (Academic Directorate of)
THE	Times Higher Education (publication)
UCAS	Universities and Colleges Admissions Service
UG	Undergraduate
UMG	University Management Group
UWB	University of Wales, Bangor
UWIC	University of Wales Institute Cardiff
WP	Widening Participation
WPARC	Widening Participation, Admissions and Retention Committee

Chapter 1 INTRODUCTION

This research investigates, through a case study methodology, the student retention performance of a Welsh post-1992 university during a period of significant development. The aim is to develop a management model and performance framework for delivering effective and efficient step improvements in student retention that has relevance to the higher education sector, more broadly. In particular, it speaks to those HEIs that have high levels of widening access performances. The case study institution's widening access and non-continuation performances are located within the Welsh Assembly Government's policy and strategy for higher education[2], whilst the performances of the sector are evidenced by the Key Performance Indicator (KPI) data, published annually by HESA[3]. The research is directly located within the student retention and widening access literature and informed by the broader context of strategy, performance and audit literature.

Higher Education Institutions (HEIs) and systems around the world are increasingly being held to account by governments as they strive to ensure their investment is both efficient[4] and effective[5]. This is evidenced by the growth in national frameworks which scrutinise specific outputs to the systems[6], with reference to chosen inputs, including the plethora of performance indicators[7] that capture the performance of individual HEIs. It is not only the monitoring of performance that has increased but also the 'reach' of scrutiny. It has been extended beyond the traditional application of audit recognised within financial auditing (Harrison, 1989; Power, 1997) into

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[2] For an insight into the higher education policies of Wales see www.hefcw.ac.uk or for an insight into the education policies in Wales, see http://wales.gov.uk/topics/educationandskills/?lang=en.

[3] HESA is the central source for the collection and dissemination of statistics about publicly funded UK higher education.

[4] Efficient-working well with minimum waste of money or effort ("Compact Oxford English Dictionary", 2005 p.317).

[5] Effective-producing a desired or intended result ("Compact Oxford English Dictionary", 2005 p.317)

[6] The Research Excellence Framework (REF) is the new system for assessing the quality of research in UK higher education institutions (HEIs).

[7] For an introduction into performance indicators in higher education in the UK, see Cave, Hanney, Kogan & Trevett (1988).

standards and quality assurance[8] and more specific policy agendas, such as widening access[9] (National Audit Office, 2002b,2008) and student retention (National Audit Office, 2002a, 2007). The failure of undergraduate students to complete their studies is not only a financial cost to the public purse in respect of direct investment into the institution but also in maintenance and bursaries payments direct to students. When students discontinue their studies, either through involuntarily[10] or voluntary departure, it could be constructed as 'inefficiency' and it is therefore in the interests of government to ensure student 'non-completion' is minimised. It is perhaps not so surprising therefore that the National Audit Office (NAO) should undertake audits on the sector to confirm the 'value for money' of the Government's investment. The Quality Assurance Agency (QAA) is also interested in student retention (QAA, 2006, 2008) and shares good practice across the sector from institutional audit (QAA, 2010). In particular, the audit reports (QAA, 2006, 2008) evidence how institutions gather and analyse student progression and completion statistics and then make use of the analysis to inform their work. The emphasis on enhancing quality through the audit process is an important distinction and difference between the financial auditing process described in Power (1997) and that adopted by the QAA.

The concept of delivering effective and efficient improvements in student retention is at the heart of this research and, as such, has close synergy with the principles of audit i.e. accountability, evidence of performance, testing of processes and systems and closure of actions. The audit context also has particular significance in this research since the case institution was subject to audit for eight years, including throughout the duration of the research. In addition to the statutory annual financial auditing processes, the case institution, from 2000, was subject to constant audit and scrutiny: firstly, HEFCW and then by the QAA, for Subject Audit, Institutional Review and Taught Degree Awarding Powers (tDAPs). The case institution was 'living' the audit process; audit was institutionalised. It was more than a '*concrete technical practice'* (Power, 1997 p.4), there was '*communal investment in the*

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[8] The Quality Assurance Agency checks how well HEIs meet their responsibilities for standards and quality.

[9] Subject to annual reporting by HEFCW and includes not only progress but rather justification of expenditure against targets and performance.

[10] Involuntary departure may be considered to be failure or sudden or unexpected cause that is not the students' responsibility.

practice'; the future of the institution relied on it. A successful tDAPs application would secure 'University' status.

In 2005, HEIs' accountabilities extended from not only the public (government) purse but also to students with the introduction of the National Student Survey (NSS)[11]. The results for all participating HEIs are published annually (Unistats, 2009), thus giving a very public account of student satisfaction (of those who completed their study). The increased accountability to students arose from the expansion of higher education and the introduction of student fees[12], following the 'top-up fees' bill on 27th January 2004. Students as customers, with certain expectations, had entered higher education and, with it, explicit new accountabilities for individual HEIs and the sector as a whole. This research considers the results of the NSS, alongside other data, as evidence to inform where and how within the institution student retention performance can be improved and, in doing so, provides a new category of 'audit' data into the case study. The increasingly diverse and very public accountability of HEIs means they have vested interests in maximising student retention, not only to minimise the direct financial loss of income from fees and public funding, but also to protect their reputation and brand capital. Providing access to a greater number of harder to retain 'non-traditional' students, whilst increasing student retention, is at the heart of this research.

The research gathers data from across and into the hierarchical structure of the case institution; analyses non-continuation, progression and completion statistics; considers the actions of the institution and how they impact on enhancing processes and systems and; separately, considers the reporting of the holistic impact on student retention. The audit process of applying tests and evidence gathering is firmly established in the research. The improvement of student retention, whilst not compromising widening access performance, requires the application of values and goals and ultimately incorporates an all embracing culture. This takes the research to a level beyond that which is 'audit'. However, since the past eight years of institutional context is so inextricably linked with 'audit', there must be acknowledgement of Power's (1997) articulation, as audit being implicated in the:

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[11] The first National Student Survey (NSS) was introduced into HEIs in the UK in 2005.

[12] For a historic perspective on the introduction of this policy, see Alley & Smith (2004)

> *'…framing of organisational life, in contributing to a style of evaluation from which organisations emerge as legitimate, safe, efficient, cost-effective, and so on.*

<div align="right">(Power, 1997 p.8)</div>

Contextualising the research is critical to its validity and broader applicability to the sector. The audit approach captures information and processes it at a point in time, evaluates it, develops actions and checks implementation. An audit may not be repeated for a number of years. Strategic management interventions to improve student retention were occurring simultaneously, at different levels, and in direct response to empirical data gathered and analysed. The leadership and change process, whilst not being the central research theme, also influences the case study and is explicit in the form of intervention descriptions, actions implemented and evaluated, performance reports and document analysis. Such a highly contextualised research approach, applied within a case study methodology that considers improvements in student retention in 'real time' as well as historic, which is informed by theory and empirical data that is connectable at various levels of analysis, has synergy with Pettigrew's work on 'contextualist research' (1985, 1987).

The UK higher education sector is diverse, as evidenced through HEIs' visions and missions, size, geography and regional spread, student intake profiles, research focus, subjects and sectors covered. This diversity is mirrored within a smaller, devolved nation such as in Wales (for an overview of the sector in Wales see James & Huisman, 2009). A policy that continues to have widespread support across the UK's devolved nations is widening access. Although there are differences between English and Welsh policies, there is agreement that widening access is about providing access to and increasing participation in higher education from 'non-traditional' groups[13]. It is widely accepted that maximising education within the populous is a good thing and access should not be determined by social class, race, age or previous personal or family experience of higher education. There is general recognition that students from lower socio-economic backgrounds[14] are likely to

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[13] It is recognised that under representation is closely connected with broader issues of equity and social inclusion and therefore includes mature students, disabled students, men and women, all ethnic groups and the lower socio economic groups.

[14] For the derivations and explanations of the categorisation socio economic grouping, see Office for National Statistics (2008).

have lower 'A' level grades than peers from other neighbourhoods and are therefore disadvantaged in securing admission to the top universities. It is not only the cost to the public purse that should drive down student non-completions but rather the human face; the costs and sacrifices endured by the students, families, communities and friends. These costs can be significant for 'non-traditional' students, not only in financial terms but also socially. Student non-completion can have significant personal impacts that stretch way beyond the finances of governments and reach into the heart of families, communities and society itself. The impact of non-completion could mean that 'slotting back' into a community left with such ambition, is impossible[15].

The NAO (2002a, 2007) found those HEIs that perform well at widening access, generally the post-1992 HEIs, also have high non-completion rates. The level of student fees payable and HEFCW's core funding do not discriminate between 'traditional' and 'non-traditional' students. However, in recent years there has been additional funding paid to HEIs in recognition of 'non-traditional' students being hard to recruit and retain. This 'add on' (low level) funding approach to what is a central policy, potentially locates widening access at the periphery for many institutions and leaves those having high levels of widening access students significantly underfunded. It does not take into account the multiplier effect of 'need'[16] on the institution. The separate funding policies for traditional admission and marginal funding for widening access and participation could potentially contribute to an increase in institutional non-completion rates. HEIs have vested interests in maximising student retention, not only to minimise the direct financial loss of income from fees and public funding, but also to protect their reputation and brand capital.

The Welsh Assembly Government[17] sets the policy, strategy[18] and funding regimes for higher education in Wales. The policy context is set out in *Reaching Higher*

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[15] For a thorough discussion on widening access in higher education, particularly emphasising 'student voice', students' perceptions, stories and experiences rather than the systems level focus of this research, see 1. Archer, Hutchings & Ross (2003) 2. Reay, David, & Ball (2005)

[16] The need may be anything from learning support to institutional intervention policies which influence teaching and learning, assessment, peer support, tutorials, group work. Significant large numbers of non-traditional students not living on campus will impact on other aspects of the higher education student experience expectations which in turn may have a knock on effect for traditional students. It is a complex multidimensional policy.

[17] The Welsh Assembly was created by the Government of Wales Act 1998. When first created, it had no powers to initiate primary legislation. Following the passing of the Government of Wales Act 2006, the Assembly has powers to legislate in some areas though still subject to the veto of the Secretary of State or Parliament.

(Welsh Assembly Government, 2002), and is a sub-strategy of the broader education and lifelong learning strategy, *The Learning Country* (Welsh Assembly Government, 2001). Both operate until 2010 and evidence commitments to widening access. Many Welsh HEIs also evidence such commitments in their mission statements (James & Huisman, 2009). The widening access policy for Welsh higher education, whilst sharing the broad common goal with English policy, is distinctly different in three key areas. Firstly, whilst England strives for 50 per cent participation by young people aged under 30 by 2010, Wales seeks to widen access for all ages. Secondly, Wales introduced its own *Multiple Index of Deprivation* and defined the 100 most deprived electoral divisions as *Community First* areas (HEFCW, 2008 p.17) and utilises it as the key widening access target, whilst England's Aim Higher strategy focuses on the lower socio-economic groups and students with disadvantaged socio-economic backgrounds (HEFCE, 2007 p.3). Thirdly, the funding formulas allocating teaching and research funds to Welsh and English HEIs are different and administered by different funding bodies: the Higher Education Funding Council in Wales (HEFCW) and the Higher Education Funding Council in England (HEFCE), respectively.

HEFCW has responsibility for ensuring the Welsh Assembly Government's higher education policies and strategies are delivered and allocates funding in support of targeted achievements as well as core higher education provision. It requires annually, from HEIs, their latest Strategic Plan[19] and monitoring statements of progress against a number of sub-strategies, including 'widening access', defined as *Reaching Wider*[20] (HEFCW, 2009a). This information is collated and the sector's performance against the national widening access targets is published in HEFCW's *Annual Report* (HEFCW, 2008). Neither *Reaching Higher* (Welsh Assembly Government, 2002) nor *Reaching Wider* (HEFCW, 2009a) include performance

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[18] In November 2009, *For Our Future – The 21st Century Higher Education Strategy and Plan for Wales* (Welsh Assembly Government, 2009) was published and supersedes *Reaching Higher (Welsh Assembly Government, 2002).* A firm commitment to widening access is retained.

[19] Each year as part of the annual strategic planning cycle the HEFCW requires a '*Reaching Higher'* template document to be completed which reports past performance and requires the completion of current and projected performance targets.

[20] *Reaching Wider* aims to increase higher education participation from groups and communities in Wales by raising aspirations, and creating new study opportunities and learning pathways to higher education. It engages with four main groups of people of all ages who are currently under-represented in higher education: disabled students, black and ethnic minority communities, people living in Communities First areas and, people who wish to study through the medium of Welsh.

indicators or targets relating to student retention. However, the former does refer to two UK performance indicators that are used ostensibly to 'celebrate' the strength of the Welsh sector in retaining students compared to the UK as a whole:

> *'8% of all full-time first degree entrants in Wales in 1998-99 did not continue in HE beyond the first year of entry, compared to 10% in the UK as a whole;*
>
> *9% of young full-time students from low participation neighbourhoods did not continue in HE after their first year, compared to 6% from other neighbourhoods. These figures are lower than the UK average.'*[21]

(Welsh Assembly Government, 2002 p.9)

The funding methodologies across the UK's devolved administrations vary and Vice Chancellors in Wales, through Higher Education Wales (HEW),[22] became increasingly concerned about the funding gap that was developing between Wales and England; this included allocations for widening access. Such funding is allocated to institutions to support additional activity based on the assumption that 'non-traditional' students are harder to reach and retain than 'traditional' students. In 2005/06, HEFCW compared the funding of widening access in Wales and England (J M Consulting, 2005) resulting in increased funding being allocated to the sector for 2006/07. The financial support to Welsh HEIs increased in 2006/07, with the introduction of the 'Supplementary Income Stream'. This one year of funding was in response to the delayed introduction of 'Top up fees' in Wales. In return for the additional funding, HEFCW required 'Fee Plans'[23] and expected a proportion of the additional income to be spent on strengthening student support and improving student retention performance.

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[21] Reaching Higher does not distinguish between first degree and all undergraduates for this performance indicator.

[22] Higher Education Wales (HEW) represents the interests of Higher Education Institutions (HEIs) in Wales and is a National Council of Universities UK. HEW membership encompasses all the heads of the universities and higher education institutions in Wales. HEW provides an expert resource on all aspects of higher education in Wales to the many interested stakeholders, including Assembly Members and Welsh MPs, the Welsh and UK media, students, staff, business leaders and industrial entrepreneurs. HEW promotes and supports higher education in Wales, representing the interests of its members to the National Assembly, to Parliament, political parties, European institutions and bodies, and negotiates on behalf of Welsh higher education (www.universitiesuk.ac.uk/AboutUs/WhoWeAre/Pages/HigherEducationWales.aspx)

[23] Returns from each Welsh HEI and directly funded FEI that describes how the additional funding, realised following the introduction of student 'top up fees', would be spent.

In addition to allocating increased funding to widening access and student retention, in 2007 student retention was included in the terms of reference of HEFCW's Widening Access Committee[24]. This committee considered the Welsh higher education sector's widening access and non-continuation performances, evidenced in *Non-continuation of full-time students: Do benchmarks deliver?* (James, 2007b). The findings were consistent with the National Audit Office's report in evidencing lower non-continuation rates in pre-1992 universities than in other institutions (National Audit Office, 2002a p.11). Pre-1992 universities also had lower widening participation rates (James, 2007b). The performance based relationships between widening access and student retention is fundamental to this research since, arguably, an institution strong in widening access should also be able to retain those students; its academic and support processes and systems could be expected to reflect the nature of the student body. However, the financial resources needed to be able to respond fully to the widening access agenda may be prohibitive. Since the link between widening access and non-continuation performance is consistently evidenced, the issue of how to reduce non-continuation without compromising widening access remains valid. This is reflected in the key research question:

> *'What can a Welsh higher education institution, that has a strong widening access mission and student profile, do to realise an efficient and effective step improvement in student retention performance?'*

The case study research is primarily located within the student retention, widening access, strategy and performance literature. Access to higher education and student retention have exercised national government since the Select Committee on Education and Employment (2001a, 2001b) reports in 2001. Prior to these reports, Yorke (1998a, 1998b, 1999) published on student non-continuation and costs to the public purse, whilst Longden (2002) responded to the agenda with work on retention rates. Since then there have been a plethora of reports. The National Audit Office (2002a, 2002b, 2007, 2008) investigated the spending of public funds, *Widening Participation in Higher Education in England* (National Audit Office, 2002b) and *Improving Student Achievement in English Higher Education: Summary and Recommendations* (National Audit Office, 2002a) and were published following the Select Committee on Education and Employment (2001a, 2001b) reports into widening access and student retention. Both topics were followed up with *Staying*

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[24] HEFCW's Widening Access Committee was merged with its Teaching and Learning Committee in 2008.

the course: The retention of students in higher education (National Audit Office, 2007) and *Widening Participation in Higher Education* (National Audit Office, 2008). This was preceded by Professor Sir David Watson's report to HEFCE *How to think about widening participation in UK higher education: Discussion paper for HEFCE* (Watson, 2006). HEFCE also received a report *Review of widening participation research: addressing the barriers to participation in higher education: A report to HEFCE by the University of York, Higher Education Academy and Institute for Access Studies* (Gorard *et al.*, 2006).

Widening access and student retention, in the UK context, is explored in a wide range of papers (Bennett, 2003; Christie, Munro, & Fisher, 2004; Christie, Munro, & Wager, 2005; Glanville, Green, & Hannan, 2004; Gracia & Jenkins, 2002; H. James, 2007b, 2007c; Johnes & Taylor, 1989; Johnston, 2001; Laing & Robinson, 2003; Longden, 2002, 2006; May & Bousted, 2004; Reay, Davies, David, & Ball, 2001; Taylor & Tasman, 2004; Trotter & Roberts, 2006; Yorke, 1998b, 2001a; Yorke & Thomas, 2003) and books (Moxley, Najar-Durack, & Dumbrigue, 2001; Reay *et al.*, 2005; Yorke, 1999). An international analysis is included in the literature review and includes the seminal works by Tinto (1975, 1982, 1993, 1997, 2005) and other leading researchers and theorists building and extending the models of student retention (Berger & Braxton, 1998; Cabrera, Castaneda, Nora, & Hengstler, 1992; Ozga & Sukhnandan, 1998).

As well as policy and research documents framing the importance of student retention, there is also on-line material targeted at potential higher education students and influencers (Times Online, 2009; UCAS, 2009; Unistats, 2009). The Good University Guide, 2010 (Times Online, 2009) allows specific comparisons to be made between universities and includes 'completion rates' and 'student satisfaction' as ranking factors. League tables are a source of controversy amongst many senior university officials[25], but are used by some HEIs to locate their marketing proposition and reinforce brand capital for applicants, to inform choice. Student retention is a key dimension of information provided to applicants and influencers. It is important therefore for institutions to improve performance, and in doing so ask:

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[25] For an overview of the publications and nature of the controversies refer to Wikipedia (League Tables of British Universities) at http://en.wikipedia.org/wiki/League_tables_of_British_universities.

> *'What does the literature suggest are key factors that influence the retention of students and how does this relate to non-traditional students?'[RQ1].*

When the influencing factors are known, institutions will want to know how to respond, asking:

> *'How are management interventions and delivering student retention performance improvements articulated in the literature?'[RQ2].*

The key research question requires the research to adopt two distinct approaches. Firstly, the research determines what the literature says about student retention and how it can be improved. Secondly the research establishes what is known about the performance of a Welsh HEI and how it has responded to its strategic priority of improving student retention. To strengthen the validity of the research, the second question needs to be located within the context of performance, over time, of the Welsh higher education sector. The two questions demand distinct approaches. The first, a literature review of student retention to determine what is considered to influence performance. The secondly, an empirical approach derived from a longitudinal embedded case study. These are operationalised through the following research questions:

> *'What is the widening access and student non-continuation performance of the Welsh HEI sector, including individual HEIs, over the period 2001/02 to 2006/07?' [RQ3].*

> *'How did the case study institution respond to the need to reduce non-continuation rates from 2004/05?'[RQ4].*

Whilst there is considerable literature on student retention, there is a need for it to speak directly to strategic management in relation to interventions, tools and mechanisms for delivering effective and efficient step changes in performance improvement. The scarcity of such literature, together with the immediate practice based demands to improve student retention, provides additional strategic and policy impetus to this research. It has a contemporary importance for research, professional practice, policy development and the funding community.

The thesis is structured into 7 chapters, which considered together respond to the key research question and provide the sector with a new model and performance framework for improving student retention and two new key performance indicators.

Chapter 2 explores the literature on student retention including theoretical models, testing of models and institutional case studies. It describes the literature selection decisions and its organisation, including the drawing out of themes that subsequently inform the theoretical responses to the key research question. It is presented from a perspective that is intended to be of use to strategic managers who are not embroiled in the literature, yet need an efficient navigation methodology. It includes descriptions of pragmatic, yet influential decisions such as the search terms adopted: student retention, non-continuation, drop-out or withdrawal.

Tinto has dominated student retention literature for over 30 years. His longitudinal model of institutional departure, described in *Leaving College: Rethinking the Causes and Cures of Student Attrition* (Tinto, 1993 pp.84-137), provides the dominant theoretical model informing this research. The model is frequently cited in retention research and has broad applicability to the holistic institutional led approach being applied in this research.

The literature review is followed by the research methodology which includes both the key research question and its supporting research questions. It consists of a critical review of research methods that focuses specifically on case studies and identifies the rationale behind the decision to adopt a longitudinal embedded institutional case study method (Cohen, Manion, & Morrison, 2007; Corcoran, Walker, & Wals, 2004; Merriam, 2001; Meyer, 2001; Tellis, 1997; Yin, 2003). Due consideration is given to the presentation of the case, since Yin (2003) determined that for case study research to make a lasting contribution, the quality of the case presentation is critical. The chapter also includes discussion on the research instruments adopted, particularly in relation to the data hierarchies and structures; access to public and closed information, case study risks and the research perspectives. It concludes by confirming that case study methodology can legitimately be applied to the research inquiry.

Chapter 4 describes how a Welsh HEI with high widening access performance rates responds to its priority of improving student retention. The case is contextualised

within the Welsh HEI sector drawing on detailed analysis provided in Appendix A. The chapter contains in-depth explorations and analysis of case study data by detailing student retention performances, interventions and evaluations and describes the supporting processes and systems infrastructure. It is descriptive of the methodologies, interventions and tools employed so practitioners can consider their relevance and maximise research transfer potential. The case study presents empirical data at the level of institution, school and, as appropriate, subjects and individual programmes. The student voice is heard through external and internal student perception surveys; other qualitative student experiences are featured through the literature. The case study highlights the connectivity between a range of variables, together with how they were isolated and investigated. It exposes 'vulnerability', an honesty and rawness hitherto not seen in the literature. Crucially, it is also the driver behind the question:

> *'What is the case for a new performance indicator and measurement system supporting widening participation performance?'[RQ5].*

Chapter 5 provides an important contribution to new knowledge that emanates from the case study and relates specifically to widening access policy. It provides researchers, practitioners and policy makers with two new performance indicators and brings widening access and non-continuation together in a more direct way than is currently evident in the literature. The first performance indicator is defined as the *'Specific Widening Participation Indicator (SWPI)'* and describes the category of students, e.g. from low participation neighbourhoods or 'in receipt of DSA'. The second is defined as the '*Multiple Widening Participation Index (MWPi)'* and measures the complexity or number of *SWPIs* acting together. The *MWPi* is articulated as *MWPi=0* (traditional students) or *MWPi>1,2,3* for widening access students. It gives a sense of the multiple challenges faced by institutions with strong widening access performances tackling student retention. It may go some way to explain why so many HEIs with widening access missions consistently perform below benchmarks for student non-continuation (Appendix A). The chapter offers a new paradigm for considering student retention.

The penultimate chapter presents a new management model and performance and monitoring frameworks for delivering step improvements in student retention. It speaks directly to a gap in the literature, seeking a response to the question:

'What could a management model include for delivering step improvements in student retention in a HEI with a strong widening access performance?' [RQ6].

A systems led, management model is developed, that identifies '*students', 'faculty'* and *'institution'* being interconnected and acting directly on student retention. The model takes account of environmental factors that have been identified through the empirical studies, literature or professional practice. Although the model is new, the literature is extensive and a wide range of influencing factors are acknowledged. It is particularly informed by the theoretical influences of Tinto (1993) and Berger and Braxton (1998). A performance improvement model needs a supporting performance monitoring framework if it is to have maximum transferability from research into practice. The research proposes two mutually inclusive frameworks: one identifying key performance indicators, the other, their measurement. The model is thus supported by the *'Improving Student Retention KPI Framework'* and the '*Improving Student Retention Performance Monitoring Information System'*. A set of KPIs have been derived which provide for annual, monthly and ad-hoc reporting, incorporating both HESA externally benchmarked indicators as well as case study derived indicators. The framework is not limited to institutions with widening access missions, but is applicable to all HEIs.

The research concludes with a consideration of funding implications for institutions with widening access missions. Evidence is drawn from the case institution and the Welsh higher education sector as a whole and shows that despite a significant variation in widening access performances across the sector, the proportion of additional funding secured varies only slightly. It challenges the current funding methodologies deployed by HEFCW and is the final response to the key research question.

'What are the implications for HEFCW related to funding received by HEIs arising from the research?' [RQ7].

The final chapter draws together the various strands of the research, reminding the policy, research and professional practice communities of the five primary research conclusions and outputs. Areas of future research and further work have been embedded within the relevant sections of the thesis and are drawn together in this chapter as a set of recommendations which have research, policy and practice relevance.

Chapter 2 LITERATURE REVIEW

This thesis is concerned with the development of a management model and performance framework for improving student retention in higher education. It is contextualised within the policies of Wales.

This chapter explores the literature using a necessary, yet rather unconventional, methodology due to the extensive international literature spanning over 30 years. It is also informed by the contemporary relevance of the topic to policy makers, practitioners and researchers. This approach adopted will facilitate an efficient review of the literature by future researchers. The chapter starts by describing the search, capture and literature organisation strategy.

It then reviews the literature around three core themes: policy context, factors influencing student retention, and theoretical contexts which are deemed most significant to respond to the key research question:

'What can a Welsh higher education institution that has a strong widening access mission and profile, do to realise an efficient and step improvement in student retention performance?'

In particular it seeks to frame the research (Creswell, 2003 p.31) within the literature, concurring with the approach suggested by Punch (2005 p.41):

'The literature itself becomes an input to the analysis and planning during this stage...'

The review focuses on student retention, contextualised within widening access, and draws on strategy and performance monitoring literature. The review also includes research methodology (Cohen *et al.*, 2007; Corcoran *et al.*, 2004; Feagin, Orum, & Sjoberg, 1991; Johnson & Onwuegbuzie, 2004; Peter T Knight, 2002; Merriam, 2001; Meyer, 2001; Punch, 2005; Tellis, 1997; Yin, 2003), methods and instruments (Oppenheim, 1992; Tashakkori & Teddlie, 2003) as well as academic writing (Bell, 2002; Wallace & Wray, 2006) more generally. The section *Building towards the*

focus of the data collection instruments by Wallace & Wray (2006) provided valuable guidance.

A summary of a number of the key theories and models underpinning student retention research are provided before specific consideration is given to Tinto's longitudinal model of institutional departure (Tinto, 1993); the dominant theory underpinning this research.

Finally, the chapter concludes with confirmation that whilst the key research question has contemporary research, policy and practice relevance and despite a substantial body of literature, there is a lack of research that adopts a holistic, system level management intervention approach aimed at improving student retention, supported by performance monitoring and measurement frameworks.

2.1 The literature search, capture and organisation strategy

This section describes the approaches taken to sourcing, prioritising and selecting the literature. It identifies the challenges associated with the use of 'key words' in searches, as the international field is large in scope and extends over 30 years.

It was beyond the resources available to undertake an internationally inclusive search and detailed review of all the relevant literature, taking in the early seminal theories (Astin, 1975b; Bean & Metzner, 1985; Pascarella & Terenzini, 1980; Tinto, 1975, 1993) which emanated from the USA and on which some of the more recent international literature (Baumgart & Johnstone, 1977; Cabrera et al., 1992; Christie et al., 2004; De Rome & Lewin, 1984; Johnston, 2001; Longden, 2002; McKavanagh & Purnell, 2007; Ozga & Sukhnandan, 1998; Pompper, 2006; Smith & Beggs, 2003; Taylor & Tasman, 2004; Thomas, 2002; Yorke, 1998b; Yorke & Thomas, 2003) has been developed. The above literature addresses diverse themes from staff and student perceptions of student non-completion, student preparedness for HE, persistence rates, programme management to institutional approaches, including case studies. The literature search strategy adopted three selectivity principles:

1. Previous literature reviews of the topic were sourced which emphasised past theories and models such that comparisons of explanations and key points could be drawn out to aid understanding for the new researcher;
2. Research papers which addressed the literature search themes as identified below and which had strong literature reviews were prioritised as were;
3. Papers evidencing case study research methodologies.

Interfacing with the above principles, were three priorities:

1. Literature that majored on linking student retention and non-traditional students: 1st generation higher education; from low participation neighbourhoods; non-traditional qualifications (i.e. anything other than 'A' Level); mature and students with a disability;
2. Literature that was UK based;
3. Literature that had a strategic focus and where appropriate included consideration of performance indicators.

Key words

The first stage of the literature review identified key words that spoke to the key research question. Three themes were most relevant: 'student retention in higher education', 'widening access' and 'strategy and performance'. Each theme had extensive international literature and contextual boundaries were therefore applied.

It became evident early on that the choice and extent of 'key words' was crucial. Key words including 'non-completion' (Ozga & Sukhnandan, 1998; Reimann, 2004; Yorke, 2001a), 'non-continuation' (H. James, 2007b), 'leaving' (Christie et al., 2004; McGivney, 1996; Tinto, 1993) and 'drop-out' (Bennett, 2003; Brundsden, Davies, Shevlin, & Bracken, 2000) were prevalent in a range of journals, books and conferences. Conversely deployment of key words such as 'retention' captured important literature (Education and Employment Committee, 2001b; Longden, 2002, 2006; Martinez, 2001; McGivney, 1996; Yorke & Longden, 2004; Yorke & Thomas, 2003). Inclusion of 'widening access' and 'widening participation' terms ensured valuable literature (Education and Employment Committee, 2001a; Gorard et al., 2006; HEFCE, 2006; National Audit Office, 2002b; Watson, 2006) focusing on policy and funding was not omitted.

The reason for including a brief discussion on the importance of key words is to increase the efficiency and effectiveness of future literature searches undertaken by both researchers and practitioners. Arguably the issue is more complex than identifying key words, since each key word is 'value laden'; meanings vary depending upon interpretation and the arguments set out. For example 'drop-out', a rather pejorative term, (on the face of it) may describe a simple case of a student choosing to 'drop out' on his/her own terms. Did the student 'drop out' or was s/he pushed by inappropriate learning, teaching or assessment methods, or perhaps a lack of programme management inducing assessment overload? Is the researcher taking a student or institutional perspective and is a 'deficit' or 'value adding' model adopted? The student may have overcome significant barriers to study in higher education. Conversely, the institution, rather than failing the student, may have supported the student through a key decision that was right for the student to terminate their programme of studies.

Descriptors themselves can preset challenges. Yorke (1999) recognised the problems of definitions in relation to non-completion and identified it as 'a slippery

concept'. He identified how, from an institutional perspective, a student who transfers from one institution to another:

> '...is a 'non-completer' – yet the student may well progress to a degree without any loss of time: viewed from the perspective of the higher education system as a whole it would be inappropriate to count such a student as a non-completer.'

<div align="right">(Yorke, 1999 p.4)</div>

Viewed from the student perspective, it would equally be inappropriate to count the student as a 'non-completer'. Such definitional complications were found within the student attribute literature and included terms such as 'non-traditional' (Laing & Robinson, 2003), 'mature' (McGivney, 1996) and 'lower socio-economic backgrounds' (Yorke & Thomas, 2003).

The literature on 'strategy and performance' also has a large and diverse international base. This was managed by emphasising the interaction between performance and student retention (Baumgart & Johnstone, 1977; Bekhradnia & Aston, 2005; Dodgson & Bolam, 2002; Fulton, 1989; HESA, 2006; Johnston, 2001; McLaughlin, Brozovsky, & McLaughlin, 1998; B. Ramsden, 2006). There were a few exceptions: for example, Cave, Hanney, Kogan, & Trevett (1988) in their critical analysis on the use of performance indicators in higher education and Jongbloed & Vossensteyn (2001) in their international review of performance based funding in higher education. Such examples were included for their contribution as strong introductory and informative texts.

Overall, the literature search identified student retention as having a significant international and diverse research base and confirmed its contemporary relevance to the UK higher education context.

Sources and locations

A small number of sample searchers were undertaken to establish a 'feel' for the literature locations, its availability and accessibility and therefore a sense of the degree to which a manageable sample, size and scope, would be representative to underpin any extrapolations into research claims. Sources were obtained from subject based literature that included psychology, sociology, engineering and accounting as well as education. Where possible, it was captured electronically.

Once journal titles were obtained, further interrogation enhanced the article search, store, retrieve and referencing capability. This was in-line with other research reviews (Kahn and Macdonald 2004 cited in Gorard et al., 2006).

Earlier work by James (2008b pp.17-18) identified a number of journals key in speaking to the topics of interest. *Higher Education Quarterly* had papers of crucial importance to two or more of the key themes. There were publications related to non-traditional students (Connor, 2001; Gorard, 2005; Wilson, 1997), performance indicators (Pugh, Coates, & Adnett, 2005) and developing an explanatory model for student retention (Ozga & Sukhnandan, 1998). The *Oxford Review of Education* had publications on retention, widening access and performance (Fielding, Belfield, & Thomas, 1998; Mayhew, Deer, & Dua, 2004). *Higher Education, Higher Education Quarterly, Journal of Further and Higher Education, Journal of Higher Education, Journal of Higher Education Policy and Management* and *Studies in Higher Education* had the highest number of publications on student retention. *The Journal of Higher Education* provided valuable sources from those who have focused on theories. This includes Tinto (1982), Cabrera, Castaneda, Nora & Hengstler (1992) and Pascarella & Terenzini (1980). A greater European and specific UK context was obtained by accessing *The Journal of Higher Education Policy and Management* with publications by a range of authors including Longden (2006) and Yorke and Thomas (1998b, 2001a, 2003). This Journal is also important as it includes publications which transcends student retention and performance. An international [non EU] perspective was obtained from the literature in *Studies in Higher Education* (Baumgart & Johnstone, 1977; P. Ramsden, 1991).

The literature search also captured 'grey literature' from web based sources including individual HEI case studies (Johnston, 2001; Medway, Rhodes, Maguire, & Gewirtz, 2003). Both the content and methods were of interest. Web-based searches also identified, and in some cases confirmed, the literature published by key authors i.e. authors researching the UK strategic and operational contexts, such as Longden (2002, 2006), Yorke (1998a, 1998b, 2001a, 2001b; Yorke et al., 2005; Yorke et al., 1997; Yorke & Longden, 2008, 2004; Yorke & Thomas, 2003), Gorard (2004; 1999, 2005; Gorard et al., 2006) and Thomas (Crosling, Heangney, & Thomas, 2009; Quinn et al., 2005; 2002). This approach was also adopted for the policy related literature produced, for example, by the Higher Education Funding Councils and the Welsh and Westminster Governments (Education and Employment Committee, 2001b; HEFCE, 2006; McClanahan, 2004; National Audit

Office, 2007; Stolk, Tiessen, Clift, & Levitt, 2007; Universities UK, 2002, 2006; Watson, 2006).

Limitations and bias

The initial search strategy aimed to achieve 100 sources. This would be informed from the scoping search, recently published reviews (Gorard et al., 2006) and take cognisance of time limitations as a single researcher. Further literature was sourced as the thesis developed, thus ensuring contemporary currency. As a lone, part-time researcher operating within tight research and professional deadlines, it was possible that 'literature capture bias' and 'blinding' would be introduced. The extensive international literature across many academic domains also introduced a risk of certain literature being excluded. This risk was mitigated by understanding the dominant publication locations for the UK literature.

2.2 A review of literature

The review of literature is not presented as a traditional review. Instead, a more unconventional and more appropriate response to the extensive international literature on student retention, extending over 30 years, is provided. Extensive literature reviews already exist (Bean & Metzner, 1985; Berger & Braxton, 1998; Gorard et al., 2006; McClanahan, 2004; Medway et al., 2003; Noel-Levitz, 2007; Tinto, 1975, 1993; Trotter & Roberts, 2006; Tym, McMillion, Barone, & Webster, 2004; Yorke, 1999; Yorke & Longden, 2004). As a consequence, the literature was reviewed around three core themes deemed necessary to respond to the key research question:

1. Policy context - funding, education and national contexts within which widening access and student retention operates;
2. Factors influencing student retention - identification of important variables influencing student retention; and
3. Theoretical contexts – examples of theories and models cited in student retention research.

The policy context

UK research interest in widening access and student retention increased following Lord Dearing's Report (1997) and the publications of the Education and Employment Committee's inquiries into widening access (2001a) and student retention (2001b). These were quickly followed with responses by the National Audit Office (2002a, 2002b); they also published two later reports on student retention and widening participation in higher education (2007, 2008). The higher education sector, through Universities UK, published their sharing of good practice report *Student Services: effective practices in retaining students in higher education* (Universities UK, 2002); this was, arguably, a response to the early audit reports.

In 2001, *The Learning Country. A Comprehensive Education and Lifelong Learning Programme to 2010 in Wales* (Welsh Assembly Government, 2001) was published, which located the policy for higher education, *Reaching Higher* (Welsh Assembly Government, 2002). The sector's strong record in recruiting and retaining students from under-represented backgrounds was acknowledged. The widening access

strategy focused on students from 'Community First' areas, whilst the commitment to student retention was articulated as:

'Retention is as important as recruitment. Widening access to those who were traditionally under-represented in higher education brings new challenges for student retention. These groups frequently need higher levels of support than has traditionally been available. We believe that institutions need to adopt a still more learner centred approach.'

(Welsh Assembly Government, 2002 p.9)

In response to the Welsh Assembly's policy and strategy for widening access to higher education, HEFCW established *Reaching Wider* (HEFCW, 2009a):

'HEFCW established the Reaching Wider initiative in 2002 to break down perceived barriers and widen access to learning. The Wales-wide initiative supports social inclusion and economic up-skilling.'

(HEFCW, 2009a)

It focuses on four target groups: 'Community First' areas (both young people and adults), those with disabilities, those from black and ethnic minority groups and those studying through the medium of Welsh. More recently young people from care was introduced.

On 25th June 2008, the Minister for Children, Education, Lifelong Learning and Skills, Jane Hutt announced that a two stage review of higher education in Wales was to be instigated. The first was published in 2008, *Review of Higher Education in Wales Phase 1: Student Finance Arrangements* (Jones, 2008) with particular links to widening access policy. The second focused on the mission, purpose, role and funding of higher education in Wales (Jones, 2009). The Welsh Assembly Government responded to the review with *For our Future – The 21st Century Higher Education Strategy and Plan for Wales* (2009).

As part of the new policy developments, *Student Withdrawal from Higher Education* (Maguire Policy Research, GfK, & arad consulting) was published in 2009. This report on student retention produced for the Welsh Assembly Government draws on a range of literature. The methodology comprised of three strands: consultations with key stakeholders (including the author of the thesis); desk research, and

additional contacts. The research focused on student withdrawal from higher education and concentrated on:

1. Characteristics of withdrawal students-age, gender, ethnicity, poor prior attainment, part-time students, students with disabilities, students of certain subject areas and those attending post-1992 institutions; and

2. Reasons for withdrawal- personal reasons, lack of integration, dissatisfaction with course/institution, lack of preparedness, wrong choice of course, financial reasons and to take up a more attractive opportunity (Maguire Policy Research et al., 2009).

The report includes suggestions for future research, that included student finance, ethnic minority students, HE delivered in FE, students in years 2 and 3, students who are based at home, widening access and HE practice to address student retention. The last four are directly addressed by this thesis.

Both UK and Welsh policies evidenced an increasing emphasis on demonstrable performance and value for money. This emphasis was a catalyst for researchers producing papers such as *Outside Benchmark Expectations: variations in non-completion rates in English higher education* (Yorke, 2001a), *Telling it as it is? Performance indicators, massification and the press* (Yorke, 2001b), *Non-completion of full-time and sandwich students in English higher education: costs to the public purse, and some implications* (Yorke, 1998a) and *The Consequences of Drop-Outs on the Cost-Effectiveness of 16-19 Colleges* (Fielding et al., 1998).

In 2005, variable fees were introduced in England, and Wales the following year. This provided a further catalyst for research particularly in relation to the impact of fees on achieving government (England and Wales) widening access policies and targets. Reports prepared for HEFCE included the *Review of widening participation research: addressing the barriers to participation in higher education* (Gorard et al., 2006), *Widening Participation: a review. Report to the Minister of State for Higher Education and Lifelong Learning by the Higher Education Funding Council for England* (HEFCE, 2006). Funding also provided the focus of *The Funding Gap: 2004/05,* prepared by HEFCW (2006a) that highlighted the need to increase the financial support for widening access in Wales.

In response to a sustained national widening access policy and increased targeted delivery expectations, the literature evidenced a number of institutional-level case studies, sometimes including groups of HEIs. A pragmatic, systematic and performance evidence driven research project into the measurement of student retention performance when two HEIs with differing widening access and retention performances merged, is provided in *Non-completion at the University of North London and London Guildhall University: a case study* (Bekhradnia & Aston, 2005).

Earlier research, *Student retention, support and widening participation in the north east of England: Universities in the North East* (Dodgson & Bolam, 2002) discusses issues of student retention, support and success of non-traditional students within the national and regional widening participation context. They included perspectives of university staff and students. Not only were HEIs with a tradition of widening access trying to understand student retention, but so too, were highly selective HEIs. This included King's College, London; the case study *Widening Participation through Supporting Undergraduates: what is being done & what can be done to support student progress at King's?* (Medway et al., 2003) reported on the institution's strategic approach to widening access and improving student retention and included a thorough methodological discussion and literature review. Research also finds expression through organisations that included The Joseph Rowntree Foundation, a social policy research and development charity providing funding for research into widening access issues. It published *From life crises to lifelong learning. Rethinking working-class 'drop-out' from higher education* (Quinn et al., 2005) which not only spoke to the UK HE sector but is well cited in the UK literature on student retention.

Factors influencing student retention

A considerable proportion of the student retention literature is informed by Tinto's extensive work on student retention in the USA (Tinto, 1975, 1982, 1993, 1997, 2005). It extends 30 years and his longitudinal model of student departure (1993) has influenced many other research theories and models, including those derived from testing the model in different situational contexts. The model is described separately, later in this chapter.

There is an abundance of literature on factors influencing student retention; too many to identify separately and selectively review. There are also many extensive literature reviews (Bean & Metzner, 1985; Berger & Braxton, 1998; Bushnell, 1991;

McClanahan, 2004; Medway et al., 2003; Noel-Levitz, 2007; Tinto, 1975, 1993; Trotter & Roberts, 2006; Tym et al., 2004; Yorke & Longden, 2004) that identify a range of influencing variables. They are defined from a wide range of perspectives, included in an equally wide range of theories and models, and analysed and discussed using variable terminology. Astin (1999 p.518) recognised the complexity:

> *'Even a casual reading of the extensive literature on student retention in higher education can create confusion and perplexity. One finds not only that the problems being studied are highly diverse but also that investigators who claim to be studying the same problem frequently do not look at the same variables or employ the same methodologies. And even when they are investigating the same variables, different investigators may use completely different terms to describe and discuss these variables.'*

A number of themes arising from the literature are summarised below.

The Early Student Experience

The transition and early experience of students in higher education is explored in a range of literature (Christie et al., 2005; Cook & Rushton, 2009; Crosling et al., 2009; Fitzgibbon, 2009; Harvey, Drew, & Smith, 2006; May & Bousted, 2004; Trotter & Roberts, 2006; Yorke & Longden, 2008). The Higher Education Academy (HEA) has focused on student experience in its engagement with large scale research across a number of HEIs (Harvey et al., 2006; Yorke & Longden, 2008) including a practice guide in Wales (Fitzgibbon, 2009).

Specific institutional based research also provides valuable insights such as *Enhancing the Early Student Experience* (Trotter & Roberts, 2006). This paper was reviewed as it was: strongly UK focused; grounded in student satisfaction; undertaken post the first national student satisfaction survey (NSS); emphasised programme management, and set within a traditional university seeking to meet the challenges of widening access and participation. It was also important methodologically as it was case study based, the dominant research strategy used in this thesis.

The importance of the student experience and institutions' responses to student needs is explored. It considers student retention, not as a student deficit, but as an institutional and programme deficit. These are synergistic with the line of inquiry

informing this thesis. The claim is that student retention is better when certain features are in place (Trotter & Roberts, 2006 pp.382-383):

'Pre-entry. This case study indicates that programmes with high retention rates are involved in effective and appropriate marketing, including the provision of correct and up-to-date prospectus entries, web pages and leaflets. These programmes have open days, ensuring the target market is informed and invited. They develop links with schools and colleges and are involved in higher education enrichment programmes in order to be aware of and help shape students' expectations of HE. They also ensure late applicants are provided with the appropriate information and time to make their decision.

Induction. It is apparent that induction should be organized around activities aimed at helping students to get to know one another. Part of induction should be linked to the future study of students. Staff should also use induction week to get to know the students and identify/remedy any initial problems students may have.

Personal tutor support. The case study indicates that personal tutor meetings should be timetabled regularly in the first semester, reverting to at least once per semester after that. An agenda for the meetings should be provided with an academic link, for example, personal development planning, study skills, review and reflection on assessment results.

The impact of undertaking paid employment and other commitments. It appears that a timetable which facilitates part-time employment and time for other commitments may contribute to improved retention.

Attendance. Notwithstanding the other commitments current students may have, an ethos of attendance being a requirement should be encouraged. Attendance needs to be monitored and procedures put in place for contacting absentees.

Teaching and learning activities. Teaching and learning strategies that involve students actively in class are likely to be more successful.

Assessment. The evidence suggests the importance of an element of continuous summative assessment beginning early in the term, accompanied by appropriate feedback.'

Yorke & Longden (2008) emphasise similar themes in their review of literature for *The first-year experience of higher education in the UK* although greater emphasis is placed on the academic milieu supporting curriculum structures, resources, fostering learning and supporting social engagement. Academic leadership, the need for monitoring and evaluating student achievement, and acting on the evidence collected, were also emphasised. They are also consistent with a synthesis of UK research on student retention explored in *Improving student retention in higher education Improving Teaching and Learning* (Jones, 2008 cited in Crosling et al., 2009 p.10).

The importance of first-year seminars maximising academic and social integration and thus enhancing the likelihood of persistence, a theme critical to Tinto's student departure model (Tinto, 1993), is evidenced in *What Works in Student Retention?* (McClanahan, 2004).The paper draws on the University of South Carolina's University 101 project, that has 12 years of research findings:

> *'…students with a lower predicted potential for survival are surviving at a higher rate than students who did not take the courses even though the students who did not take the University 101 course had an initially higher predicted grade point ratio as a group.'*
>
> (Gardner, 1986, p.271 cited in McClanahan, 2004 p.6)

The above themes are also supported by brief descriptions of specific interventions made by Welsh universities in *First year student experience Wales A practice guide* (Fitzgibbon, 2009). Interventions include: peer supporters, SMS text messaging, pre-fresher workshops, student liaison officers, code of practice for assessment, online learner support tools and portfolio of academic skills. A more research informed perspective is provided in *New Opportunities for Disadvantaged Pupils The Step-Up Programmes* (O'Kane, Finlay & Mooney in Cook & Rushton, 2009). It provides quantitative evidence and is grounded in the widening access context.

Non-traditional students

The retention of non-traditional students has specifically informed the development of models (Bean & Metzner, 1985; Laing & Robinson, 2003; Prather & Hand, 1986) as well as experiential writing (Reay, 1998; Reay et al., 2005; Yorke & Thomas, 2003). Bean and Metzner (1985) identified 'non-traditional' students as more affected by the external environment and academic integration than by social

integration. Pascarella and Chapman (1983), in their multi-institutional study between residential and commuter institutions, also concluded that the external environment or support system was more influential on student retention than academic integration.

The UK widening access and student retention contexts, particularly in relation to the small and medium sized post-1992 Institutions, has synergies with student retention in community colleges in the USA. Bushnell (1991 p.7), identified that retention rates had not changed in recent times:

> '...even though Colleges have become more intrusive in trying to improve retention.'

This is supported in Wales as evidenced by the sector's performances in James (2007b, 2009).

Bushnell's research published nearly 19 years ago still has currency in the UK. There continues to be both demographic reductions in traditional aged individuals available for higher education and increasing costs to students entering higher education. Bushnell (1991) identified a range of student retention influencing factors that included: responding to different learning styles; the need to distinguish between academic failure; and voluntary withdrawal (Bushnell, 1991) and the need for students to develop critical reading and writing skills (pp.23-25). Bushnell's research called for a holistic approach to support for the student.

Such an approach to support the student is finding contemporary relevance, as institutional strategic approaches are increasingly of interest (Higher Education Academy, 2010). A university in the north east undertook an institutional analysis on student withdrawals between 2004/05 and 2005/06. They established 'mature' males, international students and those with either low academic qualifications or that joined through clearing, were more likely to withdraw than others (Slee, P.,Watts, C., Thomas, M., pp.144-155 in Cook & Rushton, 2009). They introduced a programme called 'Friends' that built on earlier concepts of belonging, commitment, intentions, motivations and transition into higher education. These principles are consistent with Tinto's model (Tinto, 1993). This institutional based approach is extended further in this research as the *Management Model for Improving Student Retention Performance* is developed.

The importance of institutional context was explored in Titus (2004) and institutional habitus has also been the focus of widening access and student retention research: *Student retention in higher education: the role of institutional habitus* (Thomas, 2002). The work is grounded in Bourdieu's theory of 'habitus'(1998, 2001) which has also influenced other studies on widening access and student retention (Naidoo, 2004; Reay et al., 2005 Chapter 3 pp.35-60). Mature students are also the focus of research, having non-continuation rates twice that of young students (Davies, 2002; HESA, 2008b; McGivney, 1996). A thorough exploration of non-traditional students' experiences in higher education can be found in *Degrees of Choice* (Reay et al., 2005) and *Higher Education and Social Class* (Archer et al., 2003) in which a wide range of access and achievement data is discussed as well as exploring individual students' experiences of accessing and participating in UK higher education.

Practical tools supporting non-traditional student retention can be found in the work of Noel and Levitz (Noel-Levitz, 2005, 2007). They provide an insightful review of community colleges, using a wide range of literature and identifying themes consistent with UK and international literature.

First-generation higher education students

Widening access initiatives in Wales (and UK) draw in students that have no familial prior experience or knowledge of higher education. Such students are different to other non-traditional students for example mature students may have prior knowledge derived from the within the family experiences and friends.

Tym et al's (2004) work on student retention for first-generation students highlighted a number of important influencing factors. These included: access issues, characteristics of first-generation students, pre-college intervention efforts and college intervention efforts. In addition, a wide range of issues were 'commented upon' as influencing student retention - financial aid, admissions processes, demographic and enrolment characteristics, employment and graduate school rates, key components of academic programmes, developing 'learning communities' and career exploration programmes.

Research findings from the USA has resonance with the UK:

> *'First-generation students are likely to enter college with less academic preparation, and to have limited access to information about college experience, either first-hand or form relatives.'*
>
> <div align="right">(Thayer, 2000 cited in Tym et al., 2004 p.5)</div>

Recent research which focused on students no longer at UK universities, found there to be little variation in responses between students who were the first in the family to attend higher education and those who were not. The only factor highlighted more prominently in the former group related to 'financial problems'(Yorke & Longden, 2008, Appendix 6).

Commuting students and institutions (travel to study)

Research on commuter institutions and commuting students is well founded in the USA. Given the increasing numbers of full-time students travelling to study this is set to be a key factor influencing student retention in the UK. Traditionally, such students were most likely to be part-time and mature. More recently, they are likely to be full and part-time of any age. The social, support systems and 'campus feel' for commuting and non-commuting based institutions may vary as the latter do not need to respond to the student 'living' support experience.

Prather and Hand (1986) suggested that past models of student persistence (retention) such as Tinto's early *Theory of integration* (1975) needed to be refined for commuter institutions and students. In particular, they referred to Pascarella, Duby and Iverson (1983 p.7) who identified two differences:

> *'Students at commuter institutions did not require the same degree of social integration as their residential counterparts……Commuter students who persisted did, however, have high needs for academic integration.'*

The latter led to the introduction of a new variable, 'intention', and was considered to have the strongest direct effect on persistence or withdrawal.

Yorke & Longden (2008) identified that ethnic minority, disabled, 'A level' students and those with dependents, had marked higher responses than 'others' in experiencing travel difficulties (i.e. cost and time) during their first year experience. They state:

> *'The environment of their institution, or where students lived in relation to their institution, was an influence on some of those who left their programme.'*
>
> (Yorke & Longden, 2008 p.34)

In the regionalisation of universities where increasing numbers of students are travelling to study, these issues are likely to gain significance.

Finance

In practice, finance is often cited as the main reason for leaving higher education. Yet in a recent report for the Welsh Assembly Government (Maguire Policy Research et al., 2009) this view is contested. Yorke and Longden (2008) in *The first-year experience in higher education in the UK. Final Report* suggests that it does not have such influence. In the same report financial problems were cited more strongly by 'non-traditional' than 'traditional' students.

International perspective

An international perspective was crucial to this review, not least because much of the early literature, including the research models and theories, emanated from the USA in the 1970s. Current literature embracing new and revised models is evidenced from Australia (Baumgart & Johnstone, 1977; De Rome & Lewin, 1984; R. James, 2001; McKavanagh & Purnell, 2007; Taylor & Tasman, 2004), Canada (Knight & Trowler, 2000; OCUFA, 2006), UK (Johnes & Taylor, 1989; Johnston & Pollock, undated) and England (Bekhradnia & Aston, 2005; Trotter & Roberts, 2006; Universities UK, 2002; Watson, 2006; Yorke, 2001a).

It is beyond the scope of this review to undertake an international comparison of student retention policy, practice and performance. A comprehensive review can be found in *Student Retention in Higher Education Courses: International Comparison* (Stolk et al., 2007) used as evidence in *Staying the course: The retention of students in higher education* (National Audit Office, 2007).

2.3 Theories and models

This section provides an overview of theories and models that are regularly cited in academic, policy and practice - based literature (Table 1) and specific consideration of Tinto's longitudinal model of institutional departure (Tinto, 1993 pp.112-130). His work provides the dominant (but not exclusive) theoretical framework underpinning this research.

Table 1 Overview of theories and models of student retention

Author	Date	Type	Nature	Comments
Spady	1970	Model of student drop out USA	Sociological	Drawn from Durkheim's (1951) suicide model. Against a backdrop of family background, Spady(1970) proposed 5 variables: academic potential, normative congruence, grade performance, intellectual development and friendship support. Linked indirectly to the dependent variable, drop out decision, through two intervening variables (satisfaction and institutional commitment). After testing the theory in 1971, structural relations was added. Academic performance was found to the dominant factor for attrition.
Tinto	1975	Theory of Integration USA, large traditional university, full-time students.	Multivariate model Explanatory Model	Drawn from Durkheim's (1951) suicide model. Crucial to Tinto's (1975) model were the students' academic integration and social integration, both formal and informal. Tinto revised his theory incorporating Van Gennep's (1960) rites of passage, separation, transition, and incorporation. Further work by Tinto (1993), led to the development of an explanatory model for institutional departure adding '..*adjustment, difficulty, incongruence, isolation, finances, learning, and external obligations or commitments*' (1993 p.112). He also recognised that different groups of students and institutions needed different retention policies and programmes.
Astin	1975	Theory of college persistence USA	Socio-economic	Astin (1975a) found the financial situation of the student related to retention. Scholarships, grants and part-time work were found to be related to persistence, while loans and full-time work were associated with dropping out. It was noted that the student's perception of their financial situation may be more important than their ability to pay (Astin (1975) cited in Prather & Hand, 1986). Astin also determined the strongest indicator of retention is the degree of academic and social connection, both peer and faculty, that a student makes. Later Astin (1999 p.529) develops the use of student involvement theory, suggesting that a key advantage over traditional pedagogical approaches is that '*it directs attention away from the subject matter and technique and toward the motivation and behaviour of the student*'. Yorke (1999) identifies the work of Astin, Tsui and Avalos (1996) as making a contribution to the research at a system level as [they] '*examined the effects of a number of background variables on degree attainment rates; the emphasis was on completion rather than non-completion.. Astin et al discuss the use of regression analysis to produce expected attainment rates that can be set against actually observed rates.*' (Yorke, 1999 pp.15-16).

Bean and Metzner	1985	Conceptual Model of Non-traditional Undergraduate Student Attrition USA	Psychological	Is based on an adapted organisation turnover model in work organisations and focused on the attrition of non-traditional students. Bean and Metzner (1985) developed a conceptual model for non-traditional undergraduate student attrition. The chief difference between the attrition process of traditional and non-traditional students was that non-traditional students were more affected by the external environment and academic integration rather than by social integration. Pascarella and Chapman(1983) also found such differences in earlier, multi-institutional studies between residential and commuter institutions (Prather & Hand, 1986 p.5). The model was modified by Bean and Metzner (1985) in order to deal specifically with attrition amongst part-time students (Yorke, 1999). Bean and Metzner concluded that their findings demonstrated the inappropriateness of Tinto's model applied to part-time students because of the emphasis on social integration (Yorke, 1999).
Pascarella and Terenzini	1980	Theoretical Model Urban non-residential university. USA	Causal Model	In the early 80's, Pascarella and others (Pascarella & Terenzini, 1980; Pascarella & Terenzini, 1983), in the USA, worked on predicting first-year persistence and voluntary drop out in a urban non-residential university. Pascarella, Duby and Iverson (1983) tested Tinto's model for applicability to commuter institutions and refined the model as a result of differences found. Two key differences emerged. Students at commuter institutions did not require the same degree of social integration as their residential counterparts and commuter students who persisted had high needs for academic integration (Prather & Hand, 1986). A new variable at this time explaining persistence was identified as 'intention'. This variable was considered to have the strongest direct effect on persistence/withdrawal (Prather & Hand, 1986). In 1985, Pascarella developed a general causal model. '*In this model, student background/pre-college traits and structural/organisational characteristics of institutions directly impact the college environment*' (McClanahan, 2004 Appendix p.4).
Cabrera, Castaneda and Hengstler	1992	Theory convergence between Tinto and Bean and Metzner. USA		The two dominant theories of student retention were tested for convergence by Cabera, Castaneda, Nora and Hengstler (1992). The theories of Tinto and Bean and Metzner were tested in a large urban commuter institution and it was concluded that the theories were complementary (Yorke, 1999).
Ozga and Sukhnandan	1998	Explanatory Model UK-based		Study: campus-based UK university. They stress preparedness for full-time university life and the compatibility of institutional and course choice. Yorke (1999) suggests the model oversimplifies student retention as it subsumes a number of variables such as geographic environment, the institution, the academic organisation unit, the study programme as a whole

				and possibly components of the study programme. The review of the paper revealed a small sample size (41 withdrawn students) was used and, whilst single institution case studies are important such a small sample size limits the extrapolation and generalisability opportunities to other HEIs.
Elkins, Braxton & James	2000	Testing of theory of separation (Tinto's model) USA based	Path analysis	Study: USA based on a public, four-year institution with enrolment of approximately 8,000 students and moderate selectivity in admission criteria. A longitudinal, panel design was employed with three data collections during the1995–1996 academic year (Elkins, Braxton, & James, 2000). This study explored first- to second-semester persistence of full-time, first-year students, focusing upon Tinto's concept of separation. The question of how various underlying dimensions of separation influence departure decisions was examined. The dimensions of (1) support and (2) rejection of attitudes and values were found to influence persistence in a statistically significant way.
Bean and Eaton	2001	Four psychological theories underpin the model USA-based	Psychological model	USA. A psychological model of college student retention (Bean & Eaton, 2001). The foundations of the model were the psychological processes at the base of academic and social integration. They stressed the importance of institution provisions for service-learning, first-year interest groups and other learning communities, first-year orientation seminars, and mentoring programmes to support student success (McClanahan, 2004).

Represented from Tables 7 in James (2008b p24)

Dominant theoretical framework informing the research

The research inquiry is primarily, but not exclusively, located within Tinto's longitudinal model of institutional departure (Tinto, 1993). His extensive literature (Tinto, 1975, 1982, 1993, 1997, 2005) is cited in research that tests and develops models to suit varying contexts. The model is re-presented in Figure 1 and emanates from his early seminal work (Tinto, 1975).

The model is based on research undertaken in the USA, and is therefore informed by different (although arguably converging) economic and education contexts to the UK. However, since this research does not compare and contrast persistence 'predictions' across HEIs, or even countries, and the model sets a framework of influencing factors, it is considered relevant. Tinto offers a model (see Figure 1) that:

> '...is intended to speak to the longitudinal process of departure as it occurs
> within an institution of higher education. It focuses primarily, though not
> exclusively, on the events which occur within the institution following entry
> and/or which immediately precede entrance to it.'
>
> (Tinto, 1993 p.112)

He points out that it is not a 'systems model of departure', since students lost to one institution may appear in another, either immediately or at a later date. The model is particularly focused on the longitudinal process by which individuals come to voluntarily withdraw from an institution of higher education. In this sense, the model has significance and relevance to this research inquiry, however, it may not be sufficient to address the non-voluntary nature of departure from an institution. The model offers researchers a holistic institutional approach that recognises social and academic interactions and considers how students' external commitments can influence student departure.

From the outset this research inquiry was designed to be informed by models and theories rather than to test them. The models themselves act as research tools. For example, variables drawn from an 'interactionalist perspective' (a sociological construct) could be considered alongside organisational attributes from organisational theory (a structural construct). Such an approach was undertaken by Berger & Braxton (1998) in their elaboration of Tinto's model, internally validating his model with three such constructs from organisational theory. Since this research

may need to be informed by additional concepts other than those defined by Tinto, this approach has an important relevance.

Figure 1 Tinto's longitudinal model of institutional departure
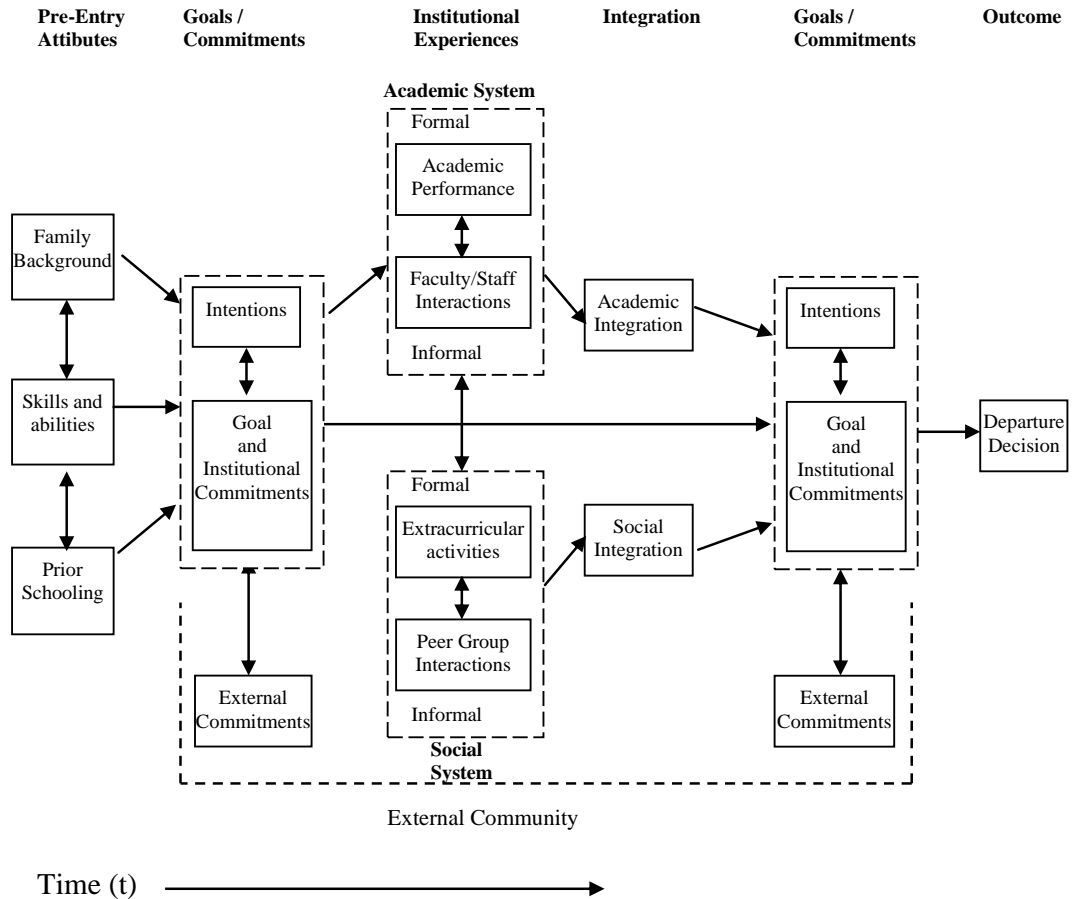
Reproduced from Leaving College: rethinking the causes and cures of student attrition (Tinto, 1993 p.114)

Tinto's model broadly argues that:

'...individual departure from institutions can be viewed as arising out of a longitudinal process of interactions between an individual with given attributes, skills, financial resources, prior educational experiences, and dispositions (intentions and commitments) and other members of the academic and social systems of the institution. The individual's experience in those systems, as indicated by his/her intellectual (academic) and social (personal) integration, continually modifies his or her intentions and commitments.'

(Tinto, 1993 pp.113-115)

The model identifies that individuals enter higher education with a range of differing backgrounds and, therefore, financial resources, skills, abilities and prior schooling. Financial resources are considered to influence student choice, such as part-time rather than full-time study to facilitate working and attending the local university to reduce travel and living expenses. This impacts on the nature of students' intentions and commitments and has particular resonance with widening access and student retention research in the UK.

The holistic nature of the model invites interpretation by researchers, policy makers and practitioners. It also identifies a range of institutional and student attributes that can influence whether an individual is prone to leave prematurely. Bean & Metzner (1985) include a comprehensive literature review of previous tests of Tinto's earlier model that evidences a wide range of results, some contradictory. A key element of the model is the articulation of intentions and commitments. Intentions or goals indicate the level and type of education and occupation desired by the individual, for example intending to achieve an honours degree or certificate or become a technician or design engineer. Commitments indicate the:

> '...degree to which they are committed to both the attainment of the goals
> (goal commitment) and to the institution into which they gain entry
> (institutional commitment).'
>
> <div align="right">(Tinto, 1993 p.115)</div>

The model proposes that once the student has entered the institution:

> '...subsequent experiences within the institutions, primarily those arising out
> of interactions between the individual and other members of the college,
> student, staff, and faculty, are centrally related to further continuance in that
> institution. Interactive experiences which further one's social and intellectual
> integration are seen to enhance the likelihood that the individual will persist
> within the institution until degree completion, because of the impact
> integrative experiences have upon the continued reformation of individual
> goals and commitments.'
>
> <div align="right">(Tinto, 1993 p.116)</div>

Tinto's early model (1975) came under criticism for being located in isolation to the external environment, having limited applicability to institutions not comprised predominantly of residential and/or young students and not fully recognising that

attending university was one of a number of competing priorities for many students, not least the non-traditional students. This led to a number of studies to extend or redefine the model to include commuting and/or mature students (Bushnell, 1991; Christie et al., 2005; Prather & Hand, 1986). Tinto's later work addresses the criticisms and recognises:

'...the institution, and the social and academic communities which comprise it, as being nested in an external environment comprised of external communities with their own set of values and behavioural requirements...external commitments are seen as altering the person's intentions (plans) and goal and institutional commitments at entry and throughout the college career...'

(Tinto, 1993 p.115)

The model identifies the importance of 'classroom experiences' and its influence on student-faculty contact beyond the classroom. In doing so it considers the engaging nature of learning and identifies:

'...students who find themselves alienated from learning in the classroom are unlikely to seek out contact with faculty beyond the classroom.'

(Tinto, 1993 p.119)

This alienation reduces the potential for academic and social interaction and integration and increases the potential for withdrawal. It explicitly draws attention to the importance of 'classrooms as learning communities' and the role that faculty staff play in shaping the nature of the classroom community. The model does not extend into learning and teaching practices, factors acknowledged in more recent and expanding student retention research (Crosling et al., 2009; Knight & Trowler, 2000). Tinto's time dependent model can also be considered alongside the student lifecycle model (HEFCE, 2001). The latter particularly emphasises preparation for higher education study, information and early study experience.

Tinto's model provides for a range of programme and institutional organisational factors by recognising the quality and nature of interactions between students, faculty and support staff influence withdrawal. Berger and Braxton (1998) elaborated on Tinto's theory by including a number of organisational attributes, providing an additional and potentially important dimension to the concept of social integration.

The model recognises there is a complex set of interacting variables which influence the decision of departure.

2.4 Conclusions

The review highlights the range and diversity of the literature. Theoretical progress, developed from a wide range of perspectives, is evidenced and the extent of the factors that influence student retention, revealed. Given the range of influencing factors, matched by the degree of complexity around their interaction, any measurements of direct cause and effect are likely to be futile.

Despite the vast amount of international literature across education and subject-based literature, there is little that embrace strategic management approaches for delivering effective and efficient institutional level student retention performance improvements. Where models do exist, they rarely focus at the institutional level nor focus on all aspects of non-continuation. They are seldom supported by strategies and instruments to enable management interventions to realise retention improvements. A gap in the literature is therefore revealed and a contemporary relevance evidenced.

Chapter 3 RESEARCH STRATEGY, DESIGN AND METHODOLOGY

As a research topic, student retention has breadth, a long history and penetrating international context. Despite this, a deficit in the literature has been found relating to strategic management intervention to improve student retention.

Chapters 1 and 2 describe the policy, funding, research and practice contexts underpinning widening access and student retention. Chapter 1 identifies the importance of widening access on student retention performance (James, 2007b, 2009; National Audit Office, 2002a, 2007), the relevance of audit (Power, 1997) and the contextualisation (Pettigrew, 1985,1987) of the research. Chapter 2 provides an insight and review of the literature, including summarising a number of models and theories and describing previous research undertaken to inform institutional performance.

This chapter describes the strategy of inquiry and the research design and methodology employed. It includes the approach and techniques used within the research process for the collection, analysis, presentation and interpretation of the empirical data. The chapter revisits the key research question, identifies seven subordinate research questions and discusses the methodological issues faced in researching retention performance. This extends to a case study and individual institutions located in the Welsh higher education sector. The consideration includes how the research questions influence the specific methodological approaches adopted and the key elements of the research design. It describes the 'case study type' chosen and the various information and data sets, designed and retrieved, at different levels within the case institution and broader higher education system.

Emphasis is placed on ensuring the quality of the empirical research through validity and reliability checks with appropriate access to information. A 'case study risk assessment is adopted to assist in the consideration of data requirements and accessibility, designed to ensure a balance between strategic level performance and school or programme level analysis. This provides a tool for reassessing the validity and reliability, as necessary, throughout the case study. Ethical issues arising from

the dual role of researcher and Executive Director of the case institution, with responsibilities including widening access and student retention, are also acknowledged.

The final section explains the complexities and limitations of the various categories of information and data that will be drawn upon throughout the research. Definitional issues are explored as they arise within the body of the chapter.

3.1 Research questions

The purpose of the research is to develop a management model and supporting performance framework for improving student retention. It is a critical contemporary research issue and one that has gained in significance since the research commenced in response to the impending public sector funding cuts arising from the global economic recession. As a consequence, retaining students within a widening access and 'no growth' context has never been more important for some institutions. The concept of value-for-money and understanding the costs associated with student non-continuation are therefore important performance contexts for institutions, funding bodies and policy makers.

This research provides a new paradigm, a new dimension for improving student retention. The research provides a system level insight into retention performances and management interventions delivered through a case study method. It documents widening access and student retention performances of individual higher education institutions in Wales during 2001/02 to 2008/09, drawing on HESA data. Both inform the development of the new model and performance framework. These approaches were instrumental in establishing two new performance indicators that describe and quantify the extent of the challenges faced by HEIs with strong widening access missions.

In developing a new model and performance framework to deliver efficient and effective step improvements in student retention performances, the key research and supporting questions were defined.

The key research question is:

> *'What can a Welsh higher education institution which has a strong widening access mission and student profile, do to realise an efficient and effective step improvement in student retention performance?'*

This is operationalised into seven research questions. These have been defined to provide a structure to the research process and design and will assist in delivering research that is valid, reliable and has transferability to the broader higher education sector. The seven research question are:

1. What does the literature suggest are key factors that influence the retention of students and how does this relate to non-traditional students?

2. How are management interventions and delivering student retention performance improvement articulated in the literature?

3. What is the widening access and student non-continuation performance of the Welsh HEI sector, including individual HEIs, over the period 2001/02 to 2006/07?

4. How did the case study institution respond to the need to reduce non-continuation rates from 2004/05?

5. What is the case for a new performance indicator and measurement system supporting widening participation performance?

6. What could a management model include for delivering step improvements in student retention in a HEI with a strong widening access performance?

7. What are the implications for HEFCW related funding received by HEIs arising from the research?

3.2 Strategy of inquiry

This section commences by considering the educational research strategy and planning context. Reference is made to Cohen *et al.*'s (2007 p.78) 'framework for planning research' as it offers the researcher a planning process including; a 'sequence' for determining the preparatory issues, 'methodology', 'sampling' and 'instrumentation', 'piloting' and 'timing and sequencing'. Research design includes consideration of the politics of research, ethical issues, research methodology, instruments, audience for the research, time frames, resources required, validity and reliability, data analysis, reporting and writing up the research (Cohen et al., 2007 p.79). This chapter and remaining sections are configured to align broadly with Morrison's approach (1993 in Cohen et al., 2007 p.79) of:

- orientation decisions
- research design and methodology
- data analysis
- presenting and reporting the results

The orientation decisions are primarily strategic, many of which underpin the discussions in the following sections. Given their significance it is worth highlighting the key aspects here. The model and performance framework being developed will be of particular benefit to strategic managers in HEIs. The underpinning research will contribute to new knowledge and understanding in the research fields of widening access and student retention. Implicit in the key research question and explicit in its supporting questions is the potential for policy related outcomes that resonate with both HEFCW and policy makers in HEIs. The research has a clear strategic and policy orientation. This is made possible, in part, by the role and space occupied by the professional capacity of the researcher. This gives unique access to information and data sets as well as resources to influence the research in 'real time'. Other orientation issues including the availability of resources, time scales and frames of the research are considered formally as part of the risk assessment.

Table 2 (p.75) will identify the risk, the likelihood of it occurring, the impact should it occur and how the risk will be mitigated. This provides a mechanism for keeping a strategic overview of the orientation related issues that may change over the time of the research.

A crucial orientation consideration for the research is that of 'context' and how it influences the research design, plays through the research and informs the outputs. The two primary contexts are widening access and student retention, whilst acknowledging that audit and organisational change have influence. The research is located in a HEI undergoing considerable organisational development and growth and under constant audit scrutiny, this includes the QAA's taught degree awarding powers inspection. All HEIs are also located in a changing external policy context and subject to scrutiny, by Government, National Audit Office, QAA and, most recently, students through the NSS.

These are important factors to be considered when determining the strategy of inquiry and the research approach that will most effectively meet the requirements of the research aim, the key research question and its supporting research questions.

Quantitative, qualitative and mixed methods approaches

Three major strategies of inquiry are used in social sciences research: quantitative, qualitative and mixed methods (Creswell, 2003).

A quantitative approach includes experiments and surveys. Complex experiments have many variables and treatments and surveys incorporate causal paths and the identification of the collective strength of multiple variables. This approach includes performance data, observational data, statistical analysis and is adopted when postpositivist claims are used for developing knowledge.

Qualitative approaches are varied and are less concerned with numerical outcomes, focusing rather on context, experiences and narratives. Examples include ethnographies, grounded theory, case studies, phenomenological and narrative research. They typically incorporate open-ended questions; interview, observational, document and audiovisual data; and text and image analysis (Creswell, 2003 p.17). It is adopted as an approach when knowledge claims are based on constructivist perspectives.

Mixed methods requires the collection and analysis of both forms of data in a single study. Methodological studies on mixed methods can be seen in several works (Brewer & Hunter, 1989; Creswell, 2003; Punch, 2005). A mixed methods approach is complex, since it is multi-dimensional: not only is there an issue of how

quantitative and qualitative methods are combined (interactive or separate) but there is also the extent and relative levels of dominance throughout the process, the degree of triangulation attempted and order of sequencing i.e. time domain. It can be a combination of quantitative and qualitative approaches in determining the research questions; combination of the methods, data capture and findings or combination to determine the conclusions. A particular strength of mixed methods is the techniques adopted are considered to be close to what researchers do in practice (Johnson & Onwuegbuzie, 2004).

All methods have limitations and biases associated with one method could neutralise the biases of the other. The concept of triangulation is therefore translated into the research methods adopted. The results from one method can inform the other (Greene et al., 1989 in Creswell, 2003). Mixed methods approaches are adopted when the researcher tends to base knowledge claims on pragmatic grounds (problem-centred, consequence-oriented, and pluralistic). This has synergy with the research inquiry.

Punch (2005) highlights the importance of the match between research questions, research approaches and subsequent methods. The questions will determine whether quantitative, qualitative or mixed methods approaches should be adopted, and influences the research methodology. The research questions in this inquiry require empirical data from the case study and national KPIs to be sourced, interpreted and presented not only in 'real' time but also retrospectively (albeit weeks, months, a year and multiples for others). Choices around the scope and depth of the analysis are important. The research questions, however, also seek to understand what an institution can do to improve student retention. This requires a more qualitative approach, considering actions, interventions and consequences. Methods such as document content analysis (policy, strategy and practice) and telephone interviews with students, therefore become important. This research inquiry demands a methodology that extends beyond the application of either quantitative or qualitative methods. It is grounded in a complex interplay between both methods and adopts therefore a mixed methods approach.

An example of how the two separate methodologies are combined to support the research questions relating to the case institution is shown in Figure 2. The quantitative approach determines the scale of an issue, for example an analysis of student withdrawals whilst the qualitative analysis asks, why or what? In this inquiry,

the quantitative methods dominates and frames the research, seeking to determine widening access and student retention performances, data patterns, relationships and trends whilst the qualitative research develops the multi perspective dimension, exploring students experiences and perceptions and determining actions.

Figure 2 Combining quantitative and qualitative methods-an example

Research question Holistic-Institute		Research question Subunit-School		Follow up Research question- Student	
How many students withdraw from undergraduate degree programmes during the year? Analysis: Institute level Student withdrawal data at regular intervals throughout the year culminating in a year end position post resit boards Output: Report-Institute level. KPI [number/%]	Requires quantitative methods	How many students withdraw from undergraduate degree programmes in each School during the year? Analysis: School level Student withdrawal data at regular intervals throughout the year culminating in a year end position post resit boards Output: Report-School level KPI [number/%]	Requires quantitative methods	What do students say about why they withdrew and are there differences between the Schools? Analysis: Student level 1) Decision identified on the withdrawal authorisation form 2) semi structured telephone interviews with students who had withdrawn 3) focus groups with programme leaders Output- Report including charts showing reasons identified from form and supplemented by analysis of telephone interviews.	Requires qualitative methods- informed from theoretical models
How many students are given pass/progress at Assessment Boards but fail to return? Analysis: Institute level Assessment Board results Output- Report- Institute level KPI [number/%]		How many students are given pass/progress at Assessment Boards in each School but fail to return? Analysis: School level Assessment Board results Output- Report- School level KPI [number/%]		What do student say about why they did not return? Analysis: Student level Open structure interview with pass/progress non-returning students and establish the reasons Output- Report informed by theoretical and practice informed models	

This research inquiry effectively 'integrates' quantitative and qualitative methods and applies it within a single institution. The study is framed within time bounds, primarily, but not exclusively, focuses on undergraduate non-continuation rates and viewed through a research lens that highlights the performances of 'non-traditional' students. The key research question and several of the research questions are well served by the mixed methods approach. However, to support the research process

it was also necessary to support it within a broader case study methodology. The rationale for this decision is now discussed.

Case study methodology

Case study methodology is ideal when a holistic, in-depth investigation is needed. It is a form of qualitative methodology that has its origins in organisational studies in the social science disciplines of sociology, industrial relations and anthropology. It has relevance when applied to studying processes and contexts of phenomenon within organisations (Meyer, 2001) as well as exploring in depth a programme, activity, a process or individuals (Creswell, 2003). Merriam (2001) also considered case studies as pluralistic, descriptive and heuristic, which has resonance with the key research question and the broader higher education sector performance context. The particularistic nature of a case study means that it can examine a specific issue but illuminate a general problem. Its descriptive nature means that it can illustrate the complexities of a situation and the heuristic quality means it can evaluate, summarise and conclude, which increases its generalisability.

Case study methodology enables the research to portray, analyse and interpret the uniqueness of a situation through accessible accounts. It can be used to present and represent reality and contribute to action and intervention (Cohen, Manion & Morrison, 2007). It is a research strategy that affords powerful freedom on the researcher in relation to research design decisions, since the definitions and descriptions of what constitutes a case study is fairly loose. However, Meyer (2001) also suggests that looseness can be both a strength and a weakness: the tailoring of the design and data collection procedures to the research questions has resulted in poor case studies, thus leaving it open to criticism from the quantitative field of research (Cook and Campbell, 1979 cited in Meyer, 2001 p.330). It can also mean that a case study is misused as a catch-all research category (Merriam, 1998). Yin (2003) defines a case study as:

> '...an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.'
>
> (Yin, 2003 p.13)

This methodology provides the opportunity to examine performances, systems and processes at different levels, in context, in 'real' time, retrospectively and during a

longitudinal study. The contextual nature of case study methodology, as applied to this research inquiry, is influential as it foregrounds the complexities of organisational reality. In adopting a case study methodology, Pettigrew (1990 p.270) identified context as:

> '...not just a stimulus environment but a nested arrangement of structures and processes where the subjective interpretations of actors perceiving, comprehending, learning and remembering help shape process.'

This resonates with the research context since the case institution was undergoing significant organisational change. It also applies to the researcher since her appreciate system also depends on time, as the phenomenon and influencing structures and systems are more fully understood and research capability is developed. This influenced when the writing of the case study took place (Pettigrew, 1990 p.271) since some of the insights on student retention performance were being realised in 'real' time; it was a dynamic process. This manifested itself in the drafting and redrafting, many times over, of Chapter 4. The importance of context is picked up throughout this thesis and articulated through descriptors of the case institution, its structure and processes as they interface with the phenomenon over time; the external policy, funding, audit and accountability environments and the relationships and reflections of being researcher, senior manager and professional practitioner (i.e. responsible for leading on widening access, student retention and strategy development).

Context and change are important to this research and work by Pettigrew (1985, 1987, 1990), helps to frame this case study. His research focuses on leadership and change and although this is not a theme within this case study in itself, its consequences articulated through performance monitoring, designing and evaluating interventions, people, process and system development are all key. He considers the leadership and change literature to fail in addressing both the holistic and dynamic analysis of 'changing' (Pettigrew, 1987) and encourages, instead, a form of research which is contextual and processual in character (Pettigrew, 1985). His contextual analysis of a process draws on the phenomena at vertical and horizontal levels of analysis and the interconnections between higher or lower levels through time (Pettigrew, 1987). Although a contextualist analysis is not wholly applied to this case study, aspects of a number of the characteristics that would be expected, is evidenced. Firstly, the phenomenon is investigated from a theoretical and empirically connectable set of levels of analysis and, within each level

(institution, school and programme) there is a set of cross-sectional categories (e.g. withdrawals, referrals). Secondly, descriptions of processes and systems as they interface with the phenomenon, over time, are included throughout Chapter 4. Thirdly, the case study is informed by theories which implicitly place human beings as underlying the research. It is a key influencing feature of the phenomenon of student retention. Finally, the case study analysis recognises that structural analysis and contextual constraints are not incompatible with processual analyses that stress action and strategic conduct, since:

> '…this approach recognises processes both are constrained by structures and shape structures, either in the direction of preserving them or in altering them.'

> (Pettigrew, 1987 p.656)

The application of Pettigrew's contextualist inquiry into strategic change involves asking questions about the 'content', 'context' and 'process' of change together with the inter-connections between these three broad analytical categories. Had the research aim and key research question emphasised the leadership and strategic change process over the study of the phenomenon itself, how it manifested itself in the reporting and performance monitoring as well as identifying management interventions, then the case study methodology would have been enhanced by the formal application of a 'contextualist' approach. The research did, however, benefit from being informed by the 'contextualist' approach.

The case study methodology needs not only to meet the demands of the research inquiry but it is important for the study to make a lasting contribution to case study methodological research. In order for it to do so, Yin (2003) identifies five general characteristics of a case study which are summarised below (for further discussion refer to Yin, 2003): the case study must be significant; be complete; consider alternative perspectives; must display sufficient evidence and be composed in an engaging manner. Case studies are varied and Stake 1994 cited in Punch (2005 p.144) identifies a number of different case types:

> 'the intrinsic case study, where the study is undertaken because the researcher wants a better understanding of this particular case

> the instrumental case study, where a particular case is examined to give insight into an issue, or to refine a theory

> *the collective case study, where the instrumental case study is extended to cover several cases, to learn more about the phenomenon, population or general condition.'*

The first and second cases, Punch (2005) identifies as single case studies. The third focuses not only within the case but across multiple cases which Punch (2005) defines as the multiple case study, or the comparative case study. This research inquiry most closely speaks to a single study case methodology.

Yin (2003) identifies five rationales for choosing a case study methodology; these are now used to test its appropriateness for this inquiry. The first rationale speaks directly to this inquiry in that the study may represent a *'critical case'* in testing a well formulated theory; that based on Tinto's model of student departure (Bean & Metzner, 1985; Pascarella et al., 1983; Pascarella & Terenzini, 1983; Tinto, 1975, 1993). The second rationale recognises the 'extreme or unique case' since preliminary research into student retention in Wales highlighted the case institution's widening access and student non-continuation performances lie in the higher quartile of all HEIs in Wales (James, 2007a). That said, there are a few HEIs in Wales, and many more in England that are of 'similar type' to the case institution and therefore Yin's (2003) third rationale may also apply; that of the 'representative or typical case'. Rationale four is difficult to assess in the design stage. However, subsequent work, including this research has exposed 'revelatory outputs' (H. James, 2007a, 2007c, 2009). A key opportunity is that of rationale five, 'longitudinal' and whilst some of the analysis will be based on retrospective data, an element of 'real-time' analysis of case data, is included.

The key research question is therefore well served by a case study approach. The final orientation issue is that of perspective.

Perspective

Mertens (2003 cited in Creswell, 2003) advocates for the importance of a theory-lens or perspective in mixed methods research to guide a case study. The theoretical frameworks underpinning much of the work on student retention, including this research are derived, or at least informed from Tinto's work (1975, 1993), which is re-produced in Figure 1, and developed from an interactionalist perspective.

An interactionalist perspective defines social interaction as involving meanings and interpretations and:

> *'…highlights the way in which the social order is actively constructed (rather than passively experienced as some Structuralists argue) by people going about the process of making sense of the actions of others.'*
>
> (Sociology.org.uk, 2005)

The concept of 'society' is seen as:

> *'...an 'elaborate fiction' created in order to make sense of the bewildering range of behaviour experienced on a daily basis.'*
>
> (Sociology.org.uk, 2005)

'Society' has its own set of players, interpretations of behaviours, labels, all creating their sense of what is real with a real set of consequences. These all act within a particular point in time, which is their reality. Players (e.g. students, peers, faculty staff, administrative and support staff, parents, friends) all have their sense of reality which may or may not coincide with another person's reality whilst the belief is maintained. Students as players in this study also have labels. They may be specific e.g. categorising socio-economic or educational background or more general e.g. a 'non-traditional' student, a category which is significant for this case study.

Considerable emphasis in the USA research literature (De Rome & Lewin, 1984; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1983) has been placed on validating Tinto's model of separation. Even in the UK where different models are emerging ,the importance of interactions between players (e.g. students, staff, family), recognising and acknowledging their own sense of reality, is understood (Ball, Davies, David, & Reay, 2002; Brundsden et al., 2000; Dodgson & Bolam, 2002; Ozga & Sukhnandan, 1998; Reay et al., 2005). The interactionalist perspective provides a valuable lens for this case study, the final methodological consideration underpinning this research inquiry.

Research design

This section describes the research design. Whereas the previous section focused on the orienting decisions and research approaches, this provides the 'tactical'; the practicalities of the research. Having determined the research approach as being a

longitudinal instrumental case study, this section draws from the key research question and its supporting research questions and identifies the specific research methods, designs, techniques, instruments and tools necessary to be included. However, before doing so, the following section discusses how the case study will be conducted in order to deliver high quality, valid and reliable research outputs.

Conducting the case study

The design of a case study or any research activity must consider the quality of its execution. The four tests of construct validity, internal validity, external validity and reliability (Creswell, 2003; Punch, 2005; Yin, 2003) have been used generally to establish the quality of empirical social research. More specifically:

> *'The preparation for doing a case study includes the prior skills of the investigator, the training and preparation for the specific case study, the development of a case study protocol, the screening of candidate case studies, and the conduct of a pilot case study.'*
>
> (Yin, 2003 p.57)

The researcher is Executive Director of the case institution and has been a member of its Core Executive since 2001. Since then, she has had responsibilities that include: strategic planning and performance, widening access and student retention, admissions, employer engagement and establishment of a new campus; academic responsibility for Technology, Computing and Science (TC&S); and most recently responsibility for student experience, commissioning of taught programmes and learning, teaching and assessment. The researcher has knowledge of the structure, policies and funding methodologies of higher education in Wales and resource allocation and management within HEIs. This experience is supported by experience in other universities, further education and industry all of which enhances knowledge particularly in relation to the student recruitment from further education and employers. This has particular relevance to a student's transition into higher education and is influential in their retention.

As a member of the Core Executive and Academic Board, the researcher is involved with all top level administrative and academic policy and decision making. This includes working closely with the Vice Chancellor, the Board of Governors and key representatives of the Faculties and Departments and, with external agents, including HEFCW. The case institution has had 'improving student retention' as a

priority since 2001. In addition, as Academic Director of TC&S for three years, the researcher gained first hand experience of assessment boards: students' results, academic decisions, mitigating circumstances and special cases and their impact on the various aspects of student retention performance. This is supported by an insight into programme performance through the Annual Monitoring Reporting (AMR) process, so aiding an understanding of student progression issues including the influence of academic regulations.

The researcher therefore brings to this inquiry an awareness, in depth knowledge and understanding of the challenges, issues, decisions and sensitivities to be encountered. This understanding of student retention and its context within a post-1992 Welsh HEI assists the researcher when working with the data, documents and information. She has a first hand experience of a wide range of influencing factors including faculty, staff and students. However, the researcher's role may introduce certain bias. Whilst every effort will be made to ensure objectivity, the biases may shape the way the data is viewed, analysed and interpreted (Creswell, 2003). This will be mitigated by applying 'triangulation' where possible and using several sources of evidence.

Access to data, case study populations and information can also influence the quality and reliability of case study research. As researcher, practitioner and senior manager the researcher had unusual access to the case institution's student and university populations, committee papers, performance data and institutional information. It extended well beyond that which would be possible as an outside investigator. This had distinct advantages to the efficiency of the majority of the data collection process since the main data and information sources were known to the researcher. However, this did not extend to all data sources, as some only became known during the research process. As knowledge of the research topic deepened and the subtleties of data definitions understood, the shortcomings of some of the case study evidence was realised. This led to a number of bespoke reports being commissioned with amendments to other 'real time' reports during their implementation. This included the introduction of peer mentors, study skills tutors and the appointment of a student retention manager.

Given the researcher was also the Executive responsible for student retention, widening access and strategy and performance this enabled the targeting of human and financial resources. As a consequence, the research could be readily adaptive

to interventions by the researcher. This direct association provided opportunities to test hypotheses, make changes to the reports and enhance the effectiveness of the research methods adopted. This presented a somewhat unique situation as researchers do not normally have this level of access to information nor are able to influence design methods so readily and timely. However, it is important to note that the institution's staff did not feel obliged or instructed to attend discussions, develop new reports or feel pressurised that the presentation of views contrary to the researcher may have ramifications for their career advancement. This was mitigated to a degree given the case institution had improving student retention as a priority, with staff eager to engage and all reports scrutinised by committees.

The skills of the researcher are also important in executing a quality case study. The research approach that has the greatest affinity with the researcher's skills and experience is 'quantitative'. The professional education and training as an engineer provides a strength in data construction, analysis and problem solving, together with an acute awareness of optimisation and application. The roles of lecturer, educationalist and senior academic manager, ensured an insight into the broad student experience and student support mechanisms. Latterly as a researcher the opportunity to develop critical reading, writing and development of research outputs is paramount. These broad skills have a crucial relevance to this case study.

Simons (1989) identified that individuals and institutions stand to gain or lose by the transmission of knowledge gained through research and evaluation. The position of professional practitioner and researcher therefore places a great responsibility for objective reporting and an awareness of the effects the study could have on the institution and on the professional credibility of colleagues (Griffiths, 1985). The various personal accountabilities were considered regularly throughout this inquiry. Considerable power and influence is vested in the researcher including acting as 'gatekeeper' and controller of access to information – what is gathered, how and what aspects are reported and the impact on the institution and individuals. What aspects of any new knowledge and how and when it was made available to the institution was a key responsibility of the professional practitioner. A tension between professional responsibilities and those of the researcher were fore grounded on many occasions. However, these were moderated by the call for committee papers supporting the priority of improving student retention. In the role of professional practitioner and researcher, minimal control could be exercised over

what was required by the committees, the discussion or the actions arising from them.

The interface between practitioner and researcher at times had the potential for Action Research (Creswell, 2003; Cohen et al., 2007). As researcher, interventions were limited to data analysis and reporting however, as practitioner and senior manager, there were many interventions introduced and evaluated for their impact on student retention, reported to committees and therefore considered as evidence in this research. Each intervention could have afforded opportunity to undertake action research but was out of the scope of this research study.

Case study: risk assessment

The preparations for conducting the case study formed an important part of ensuring quality research. This included undertaking a risk assessment, prompted by Yin's words:

> '...a case may turn out not to be the case thought at the outset.'
>
> (Yin, 2003 p.42)

This could have had serious consequences for delivering quality research, policy and practice outputs within the time resource available for a lone researcher. Planning was critical. Another consideration is the level of data analysis and the risk of potentially loosing a strategic perspective to a deep analysis of detail. In this case, the study comprises of two primary levels of data analysis: the university (the level of whole organisation accountability to Board of Governors) and schools (the level of academic standards accountability to Academic Board and management accountability to the Senior Executive Committee). On occasions, reporting is supplemented at the level of the programme, module, and groups of students and, on rare occasions, individual (anonymous) students. This type of case study is defined as an 'embedded case study' and a major concern of this method is the focus on the subunit level in case it fails to return to the larger unit of analysis (Yin, 2003).

The likelihood of these two key issues (and others) occurring for this research was therefore assessed using a method derived from an auditor's approach to risk management. The methodology, adapted from the case institution's own risk register is shown in Table 2. It identifies the key risks, the likelihood of them

occurring, their potential impact should they occur and how they are mitigated. This does not fully protect the research, but it does at least mitigate with reasonable assurance that the case will remain a valid research study.

Table 2 Case study risk assessment

Risk: Lack of access to:	Likelihood (a)1-5 high	Impact (b) 1-5 high	Mitigation: Knowledge of:	Total= a * b
Robust data over the period 2001-2008	2	4	Past and current performance of the University. Robust since 2003 and a number of reports already being regularly provided to senior executive.	8 manageable
Staff over the period 2001-2008	3	2	Attention will focus on staff currently at the university however many have been in the university for sometime..	6
Students and withdrawals over the period 2001-2008	3	2	Previous analysis work undertaken both at holistic and embedded level of School. A number of reports including reasons for withdrawal exist.	6
Strategies and plans of Institute	1	3	As a Director of the University the researcher has direct access to the documents. As a member of the two most senior committees: Senior Executive and Academic Board and in attendance at the third, the Board of Governors the researcher has both a breadth and depth of knowledge of key strategic issues.	3
Financial records	1	3	Financial accounts and returns to HEFCW and HESA are considered at senior meetings at which the researcher attends and has access to back copies. The costs associated with non-retention – The researcher had responsibility for the HESA returns including ensuring there is no financial claw-back by the HEFCW due to not meeting contracted enrolments.	3
Performance and quality enhancement reports (internal and external)	2	3	Annual Monitoring Reports and summaries. The researcher has been on the most senior committees for the duration and will therefore be fully aware of any retention issues impacting at a university level. Awareness of the need to capture retention discussions is also being communicated to Schools via the Widening Participation Manager (Student retention).	6
Committee papers/minutes	2	3	Committee structures, agendas and work plans for key committees. Quality assurance secretariat are aware of the researcher's lead role for Student Retention across the University.	6
Identifiers for the change in context over the period	1	4	The structural, personnel and external changes over the period and direct access to Principal/VC and other members of the Senior Executive who were in place in 2001.	4
Adequate	3	5	Priority for all Academic Leaders to	15 Serious

resources			have Doctorates within the university- thus provision of time, access to extensive research literature and key equipment and tools such as laptop will be available. Family commitment for the researcher to achieve a Doctorate.	concern
Others Risks The case study focuses only on the subunit level and fails to return to the larger unit of analysis (Yin, 2003)	2	4	The requirement for specific research informed practice and policy based outputs: To develop an university level student retention strategy to significantly improve performance To develop a set of key performance indicators which will drive the significant improvement in performance To provide recommendations to the HEFCW on improving student retention at the level of Wales	8

To enhance further the opportunities for delivering a quality case study, two other developments were important. Firstly, a 'case study protocol' and an electronic filing facility for all case documents, reports and data analysis were developed. Selective hard copy files were also held for documents not available in electronic format. Secondly, a pilot case study was conducted in 2007. Since the DBA encourages development as a researcher through the writing of research papers, the pilot case study was subsequently used to inform *Non-continuation rates of full-time first-degree undergraduate students in Wales: A case for change* (H. James, 2007a) and *Application of a Case Study Methodology: Improving Student Retention in a Higher Education Institution during a Period of Significant Transformation* (H. James, 2008a). The pilot case study included the concepts underpinning this doctoral research inquiry and were tested and critically reviewed with practitioners, senior managers and policy makers at HEFCW's Reaching Wider Conference: Student Retention in the paper *Non-continuation rates of full-time students: Do benchmarks deliver?* (H. James, 2007b). The research validity was also tested at a widening access research conference at the University of Bristol (James, 2009).

Before considering the specific instruments that will be used within the case study, mention is made of the principle of 'triangulation', not only as a data collection tool but also as an analysis strategy. A case study lends itself to this approach as the researcher seeks to corroborate findings using different sources of evidence: this technique is used widely in the Quality Assurance Agency (QAA) audit model for Institutional Review (Findlay, undated; QAA, 2010). Multiple sources of evidence are obtained from a number of instruments. This is discussed further in the next section.

The potential for triangulation in this study is strong and strengthens the validity of the processes and research findings.

3.3 Research instruments, data analysis and presentation

The decision on which research instrument (method) to adopt depends on the kind of research it is (methodology). This section discusses the research instruments, how the data and information is defined, captured and analysed as well as key consideration of the research presentation. For example in quantitative research, questionnaires or experiments may be adopted whilst in qualitative research personal constructs, observations and accounts could be included. Key features of research styles, their principles, rationales and purposes, the instrumentation and most suitable data types is summarised in Cohen, Manion and Morrison (2007 pp.84-86).

A key influencing factor is the key research question and how it is operationalised through the research plan. At the heart of this research is the need to respond to the requirement to deliver 'efficient and effective step improvements in student retention performance' within a widening access strategic context. Thus, it demands from the research instruments, synthesis of a wide range of information and data that has 'real time', longitudinal and retrospective analysis capability, has been gathered from a HEI and contextualised within a retrospective analysis of participation and non-continuation performance data for individual Welsh HEIs. The case study, supported by a mixed methods approach, provides the flexibility in design, instruments and data analysis that is required for responding to the key research question.

The case study must determine the scope and scale of information and data collection within the case institution as well as that required to robustly locate the research in a context that assures its validity and reliability and supports its transferability. Since the research is focused on strategic level management interventions it is crucial that papers from the case institution's most senior academic group (Academic Board), management committee (Core Executive) and governance forum (Board of Governors) were analysed. Key strategic documents including the strategic plan (Doc 91, 92, 93) were critiqued for the identification of strategic priorities, such as widening access and student retention, over the period of the research. From the consideration of agendas, papers and actions, it was possible to determine the extent to which they and their sub-committees, task and finish groups were engaged with student retention. A number of themes emerged:

1. Management: Core Executive Committee:
   a. Monitoring of withdrawals and highlighting strategic management issues, such as non-returners
2. Quality and Standards: Standards and Quality Committee:
   a. Overall performance of programmes: Annual Monitoring Process (AMR)
   b. Student satisfaction survey: NSS (detailed analysis)
3. Quality and Standards: Academic Board:
   a. Overall non-continuation performances of the schools and institution, over time, and located within the Welsh HE sector and widening access contexts
   b. Student retention strategy, plans, interventions,
   c. Student perception and satisfaction surveys - overview
   d. Summer 2008 project - strategic intervention

Other supporting committees were considered where relevant; three were evident. First, the Widening Participation, Admission and Retention Committee (WPARC - Chaired by the researcher), a sub committee of Academic Board undertook detailed analysis on student retention and developed a number of the recommendations for strategic interventions. The WPARC set up the Student Retention Strategy Task and Finish Group. Supported by a Student Retention Manager and other academic and operational colleagues, this group developed the specifications for a number of retrospective bespoke reports and interventions. Second, was the Audit and Review Committee, again a sub committee of Academic Board. This committee delivered two 'themed audits' reports that were relevant to student retention: Student Recruitment and Admissions and Programme Management. Both reports had extensive recommendations that could be recognised from the literature as having the potential to influence student retention. The third key committee is the Senior Executive, a sub committee of Core Executive that includes Heads of School. This committee received the end of year retention reports and was expected to implement recommendations for delivering enhanced retention performances.

In addition to the analysis of the documentary evidence above, a number of ad-hoc reports were commissioned by the researcher in line with her responsibility for student retention. This included retrospective analysis where the research data was found to be lacking e.g. exposure of the number of withdrawals being progressed over the assessment board period. The data was sourced from the internal student

records system (SITS) for the case institution and from HESA's[26] performance indicators tables (HESA, 2006) for the Welsh higher education sector. The data and definitions are discussed in more detail later. The documentary evidence showed that the case institution's engagement with, and response to, improving student retention was initially erratic, unsystematic and was not influenced by research findings. There was an inconsistent use of terminology, an over emphasis on withdrawal reporting and variability in the reports that were made available to committees. This is perhaps not surprising given the level of organisational development underway since 2001 (see Chapter 4). The specific constructs of the reports are discussed later in this section.

In addition to the quantitative analysis and descriptions of interventions evidenced throughout the reports and papers, the student voice was also articulated. Whilst it received limited exposure through the general papers, its prevalence came through in the specific reports on the NSS, the Programme Experience Questionnaire and other survey responses. The students' perceptions of experiences received considerable exposure and provided key documentary evidence to this research. Documentary evidence from committees included a report on 'follow up' telephone interviews with students that had withdrawn. Although the interviews were not conducted under research conditions, they do provide an insight as to the reasons why the students left and therefore can be legitimately included in the case study. Although it is beyond the scope and purpose of this research to engage directly with students these interviews were crucial to the understanding of individual student retention. Such qualitative accounts draw on research provided in the literature (including Archer et al., 2003; Ball *et al.*, 2002; Reay, 1998; Reay et al., 2005; Reay et al., 2001).

In addition to documentary case evidence and HESA performance indicator analysis, other instruments were also used to inform the research and increase its validity. It included submitting the research for scrutiny by peer researchers, practitioners and senior managers in the field of widening access (James, 2007b, 2009), senior policy advisors through HEFCW's Widening Access Committee (James, 2007b), external policy makers including a private meeting with HEFCW and the Scottish Funding Council (SFC) and advice sought from the NAO as it was

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[26] HESA statistics can be obtained on-line from

http://www.hesa.ac.uk/index.php/component/option,com_datatables/Itemid,121/

preparing its report on student retention (National Audit Office, 2007). Presenting and defending the research through the above scrutiny provided valuable opportunities to test the robustness of the claims and recommendations defined in Chapter 7. The final instrument that should be recognised is the use made of the preparation of research papers. This included papers submitted for the general research topic for DBA Stage 1 Assessment (James, 2007a, 2008a, 2008b) and that presented for international academic scrutiny in a journal (James & Huisman, 2009). The value of the feedback received cannot be underestimated in the development, implementation and presentation of this research inquiry.

Data analysis and presentation

An important part of the research process is to know what needs to be done with the data when it has been collected, how it will be processed and analysed and, how the results will be verified, cross checked and validated. The criteria for deciding which forms of data analysis to undertake are governed by fitness for purpose and legitimacy (Cohen et al., 2007 p.86). To determine what needs to be measured for this inquiry, the key research question and its 7 subsidiary research questions are considered in Table 3.

It identifies the need to capture widening access and non-continuation data from both internal and external contexts and highlights that the data sets are not comparable. It is necessary to define what is meant by the terms 'widening access' and 'widening participation' before consideration of 'non-continuation'. They are defined in two different ways: external (sector) and internal (case study). The working definitions used by the researcher and adopted in this thesis are:

- 'widening access' relates to policies, strategies and actions which support and enable access into higher education; and
- 'widening participation' relates to policies, strategies and actions which support both progression through and achievement in higher education at the pace and level appropriate for the student.

Table 3 Data requirements

Question		Information/data response
Key research question 'What can a Welsh higher education institution which has a strong widening access mission and student profile do to realise an efficient and effective step improvement in student retention performance?'		
Research questions	What does the literature suggest are key factors that influence the retention of students and how does this relate to non-traditional students?	Literature review Determine the variability of terminology and language describing different aspects of student retention
	How are management interventions and delivering student retention performance improvements articulated in the literature?	Literature review Use of key performance indicators, broad interpretation of student retention to capture the literature
	What is the widening access and student non-continuation performance of the Welsh HEI sector, including individual HEIs, over the period 2001/2 to 2006/07?	Higher Education Statistics Agency (Full-time first degree- each HEI in Wales and sector average performance) Participation of under-represented groups in higher education - entrants: mature; mature and from LPN; young and from LPN; young and NC SEC 4, 5, 6 & 7. Non-continuation beyond year of entry: entrants: mature; young LPN; young and NC SEC 4, 5, 6 & 7. Benchmark performances - access and non-continuation
	How did the case study institution respond to the need to reduce non-continuation rates from 2004/05?	SITS –access and non-continuation performance Includes all enrolled students across all years and not only full-time first degree entrants. All students (full and part-time; all levels excl PGR) Withdrawals and suspended studies; referrals; pass and progress; pass and do not return; repeat year; non-returning students Student attributes: non-traditional qualifications (Non A level); young; mature; LPN; NC SEC 4, 5, 6 & 7. Surveys - student experience emphasis External - NSS; Student Barometer Survey Internal - Programme Experience Questionnaire Ad-hoc as case study demands Since the question is 'how' the consideration of committee papers and other non-quantitative evidence will be important.
	What is the case for a new performance indicator and measurement system supporting widening participation performance?	Case study: SITS Access and non-continuation data which determine the MWPi –the density of SWPi acting simultaneously MWPi- across access and non-continuation performances SWPi progressively acting together National data: HEFCW/STATSWALES SWPi progressively acting together but for the welsh HEI sector
	What could a management interventions model include for delivering step improvements in student retention in a HEI with a strong widening access performance?	Literature review Implications from the Welsh HEI sector context, including individual HEI performances against benchmarks Case study findings Feedback on the potential for a new performance indicator
	What are the implications for HEFCW related funding received by HEIs arising from the research?	HEFCW Annual Reports- funding to the sector; delivery against priorities Circulars- Funding allocations and grants Teaching grant and allocations to HEIs for widening access and participation

Data definitions

Data definitions: external (HESA) data analysis

<u>Non-continuation following year of entry</u>

To recap, the literature review identified the Higher Education Statistical Agency (*HESA)* as the source for institutional level student information and performance indicators from 2002/03 and the Higher Education Funding Council for England[27] (HEFCE) before that. To enable comparisons across the Welsh HE sector, the nationally agreed HESA definition of 'non-continuation' is adopted: a student who is no longer in the institution or elsewhere in higher education following the year of entry. It does not include students who leave before 1st December in their first academic year.

<u>Benchmarks and performance indicators</u>

The data requirements identified in Table 3 necessitates access to performance indicators and the use of benchmarks across the sector. This information is available through HESA. A performance indicator is a statistical indicator that is intended to offer an objective measure of how a HEI is performing. The benchmark calculation provides an adjusted sector average for each institution which takes account of some of the factors that contribute to the variations in performance between institutions e.g. entry qualifications, the subjects studied and age.

The benchmarks relevant to this research relate to participation of full-time entrants and the non-continuation beyond the year of entry of full-time first-degree entrants. The emphasis is on non-traditional entrants and includes:

- All entrants
- All young entrants
- Young entrants from low participation neighbourhoods (LPN)

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[27] HESA has published the Performance Indicators since 2002/03. In previous years, the Higher (HEFCE) published them on behalf of the four UK funding bodies. Indicators prior to 2002/03 are available from the HEFCE web site at www.hefce.ac.uk/pi.

- Young entrants from other neighbourhoods (ON)
- Young entrants from NS-SEC classes 4, 5, 6 & 7
- Mature entrants

The inquiry considers access into higher education for academic years 2001/02 to 2007/08 and the non-continuation of entrants beyond the year of entry from 2001/02 to 2006/07. Both focus on new, full-time first-degree undergraduate entrants into individual HEIs and the Welsh sector as a whole. The performance data is available as publicly accessible electronic information through HESA via their website (HESA, 2006). Full-time first-degree undergraduate entrant data sets were of particular interest for three reasons:

1) It is the population that provides statistical significance and a valid sample size at both the level of an individual institution and the smaller sub-populations, for example, young entrants from low participation neighbourhoods;
2) It is the most frequently used data set in research studies. As noted by Gorard, Smith, Emma, May, Thomas, Adnett and Slack (2006 p.5) when they suggested that '*Limitations in the available datasets encourage analysts to focus on new, young and full-time students..';*
3) The data set include both performance indicators and benchmarks.

Use of these data sets highlights the performances of individual HEIs and institutional 'type' and their influence on the sector average. A time series analysis can be used to illustrate a-typical performances and trends. It is possible therefore to evidence correlation between participation and non-continuation performances that are contextualised within institutional type. This is expected to support a more targeted approach to funding allocations, including additional funding specifically for student retention.

Rather than focusing on new, full-time first-degree undergraduate entrants, an alternative and equally significant data set would have been 'all undergraduate entrants'; this would have included 'other' full-time non-first degree entrants such as Foundation Degrees and Higher National Diplomas. However, a sample analysis showed the non-continuation profiles departed significantly from that of first degree. As it warrants a separate analysis this is beyond the scope of the research inquiry.

Data definition: internal (case study) data analysis

<u>Student non-continuation</u>

In order to achieve a degree of parity between internal and external student non-continuation data sets, for the case study, student non-continuation is defined as:

> *'Students who leave the case institution in one year and cannot be found in the same institution the following year.'*

The first and most significant difference between the external and internal data sets is the reference to students and not 'new entrants'. Secondly, it includes all undergraduate provision as well as on occasion, post graduate taught students. Thirdly, full and part-time students are included. Finally, the dates that define the populations are different. One example is the case study tracks all enrolled students, whilst the external data is derived only from those new entrants enrolled at December.

Student non-continuation can arise from students withdrawing, electing not to return though eligible (student action), being failed or exited with an award or credit (institutional action). The case data shows the extent and influence of student action (or inaction). To highlight this, the potential student progression constructs given at assessment boards are defined in Table 4.

Table 4 Progression options for students on a programme

Coded enrolment status- post referral boards (Sept)	Continue	Non-continuation
Completion – exit with award or credit	x	√
Pass/progress	√	√
Pass/trail	√	√
Repeat year	√	√
Suspended studies	√	√
Withdrawal	x	√
Fail	x	√

This shows there are few enrolment status categories where interventions would not have the potential to influence continuation rates. Even students that have 'pass/progress' status do not always do so. The only categories that can be assumed not to require interventions are those coded as exiting with an award or credits, withdrawal and fail. Understanding the complex realities of student

progression is fundamental for institutions with a strong widening access mission if it is to improve student retention performance. Table 4 highlights the progression options as potential outcomes rather than what should be assumed to be the case from assessment boards. It is an important distinction.

The case study data

The case data constructs

The case study data emphasises performances at different levels within the institution, from the macro institution level to individual module performances. At the lowest level is a module which attracts specific credit points. Programmes consist of cumulative module credits. For example, success at an honours degree level demands 120 credit points at levels 4, 5 and 6. A programme is located in one of seven schools within the University: Art and Design, Business, Computing and Communications Technology, Education and Community; Health, Social Care, Sports and Exercise Sciences; Humanities, and Science and Technology. In summary, an individual student is enrolled on a module (or number of modules) which contributes towards a 'level' of a programme, which in turn is part of a full programme, located in a school. As such, there is an inevitable vertical data construct. The vertical construct also has a horizontal complexity informed by the mode of delivery (full and part-time study) and the attributes associated with students, such as being non-traditional i.e. mature, non-traditional qualifications (non A-levels), from low participation neighbourhoods and disabled. A complex matrix populated in some cases with small data sets potentially emerges. For this reason, analysis concentrates at the level of the institution and school.

Also informing the data construct is the general quality assurance and regulatory framework. All programmes are subject to strict quality assurance processes and at the macro institutional level there is a regulatory framework for awarding degrees. This includes assessment regulations which determine, amongst other things, the progression criteria, including thresholds for re-assessment and graduation. The regulations for degree, foundation degree and higher national certificates and diplomas all vary. It is beyond the scope of this thesis to engage in any substantial analysis of the regulations, except where the data suggests it may be inappropriately impacting on student continuation and progression.

The data inquiry process follows the academic cycle operating both within and across academic years. This is identified below:

- Enrolment
- Withdrawals/Suspended Studies (at any time of the year September to September)
- Module Boards (usually in June)
- Progression and Award Boards (usually in June)
- Referral and Award Boards (usually in September)
- End of Year status (end of October)

There are a number of reports that lend themselves to 'real time' analysis, such as those evidencing student withdrawals and suspended studies. As well as 'in-year' scrutiny, 'cohort analysis' can also be undertaken . This tracks the performances of an original student cohort, year by year, through to graduation (or prior exit point). The data was obtained from existing ad-hoc and systematic reports to committees whilst others responded directly to 'real time' analysis obtained directly from the student records system. Analysis of internal data affords opportunities to develop insights into new areas impacting on non-completion rates.

The research, whilst drawing heavily on quantitative data, also presents a range of qualitative information. This includes telephone feedback with students, consideration of assessment regulations, evaluation of interventions and receipt of student perceptions surveys.

Measurement of Student Satisfaction

Providing a consistent data environment across student satisfaction surveys was not possible due to different survey methodologies, populations foci and range of variables adopted.

Externally managed student perception surveys

Two externally managed surveys were used by the case institution: the National Student Survey (NSS)[28] and the Student Barometer Survey.

The NSS (Ipsos, 2009) is important since the results, now in their fifth year, are used to inform other external measures of quality. For example, the Guardian University Guide (Guardian, 2009) and the UCAS (2009) website[29] are both accessible to potential HEI applicants. The national survey measures a range of programme related issues and rates of students' satisfaction. Although the data is available at subject and institution level its integrity is dependent upon the sample size completing the survey. The NSS 'Overall student satisfaction' score is a Board of Governor's KPI.

In 2007, the institution participated in the autumn 2007 wave of the '*Student & Welsh Barometer Surveys'*, undertaken by research group i-graduate[30]. The student survey was conducted online in eight Welsh HEIs with more than 6,000 students participating and responding on 16 aspects of student support, ranging from student finance to accommodation, counselling and disability. That same year, the case institution also took part in i-graduate's Student Barometer, an annual study of domestic students across the UK.

Internally managed student perception surveys

The case university has student satisfaction surveys embedded into module[31] and course[32] evaluations which are considered as part of the programme annual

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[28] The National Student Survey (NSS) is a census of students in their final year of a course leading to undergraduate credits or qualifications across the UK. It is in its fifth year of operation and the results are published on Unistats.com where comparisons across HEIs can be undertaken and inform UCAS applicant choice. It is also accessible directly from the UCAS website. It is commissioned by the Higher Education Funding Council for England (HEFCE) on behalf of the Higher Education Funding Council for Wales (HEFCW), the Department of Employment and Learning (DEL NI) and the other funding bodies. It is fully supported by the National Union of Students (NUS).

[29] UCAS is the organisation responsible for managing the application process to higher education courses in the UK.

[30] The International Graduate Insight Group (i-graduate) is an independent benchmarking and consultancy service, delivering comparative insights for the education sector worldwide (http://www.i-graduate.org/).

[31] Student Perception of Module (SPoM).

monitoring reporting process. In 2007, a Programme Experience survey was also undertaken. Its purpose was to provide additional internal verification of the external results obtained from the NSS. The case institution considered its non-continuation rates too high and the NSS repeatedly highlighted weakness in 'Programme organisation and management' and 'Student feedback'. Based on the Ramsden Questionnaire (Ramsden, 1991), the programme experience survey sought to determine students' perceptions of course analysed at subject and institution level.

A new performance indicator and its measurement

The case institution's broadly consistent participation and non-continuation performances against benchmarks, over time, was surprising (James, 2007c); it was therefore considered in more detail and applied to other HEIs.

Internal

A pilot study described in a paper to Academic Board (James, 2007c) highlighted the potential for the case data to inform the construct of a new performance indicator. The data construct underpinning this inquiry relates to individual student widening access attributes and the degree to which they can be found acting simultaneously within the student population. Thus, the concept of the '*Multiple Widening Participation Index (MWPi)'* was defined. The *MWPi* is the number of widening access attributes (or *Specific Widening Participation Indicators (SWPi)*) a student possesses, such as being mature (McGivney, 1996), from a Low Participation Neighbourhood (LPN) (Quinn et al., 2005; Yorke & Thomas, 2003) or 'in receipt of DSA'. A student exhibiting all three would have $MWPi$=3 and those exhibiting two would have a $MWPi$=2; by definition, traditional students would have $MWPi$=0. The impact of the *MWPi and SWPi* on the student continuation and non-continuation data was investigated for academic years 2004/05 to 2007/08.

External

The data for the Welsh HE sector was provided by StatsWales (Doc 81). Whilst not being directly comparable with the case data, it non-the-less provides valuable analysis on individual *SWPi* and their impact on 'non-continuation' when acting

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[32] Student Perception of Course (SPoC).

individually and progressively together. For example, entrants from LPN who were also 'in receipt of DSA' or mature entrants domiciled in LPN and also 'in receipt of DSA'. This highlights the impact of *MWPi* on non-continuation rates at the sector level.

Chapter 4 CASE STUDY: REDUCING STUDENT NON-CONTINUATION RATES IN A WELSH, POST-1992 HIGHER EDUCATION INSTITUTION

Previous chapters established the dominant theoretical frameworks and literature relevant to this research and determined the research approach, methodology, methods and instruments. This chapter provides the empirical evidence derived from the case study of a Welsh HEI with a strong widening access performance. This will inform the development of a new system level management model and performance framework for improving student retention performance.

The case study is 'framed' within the Welsh HE sector policy and performance context during 2001/02 to 2007/08 and has improving student retention as the primary research topic. It is further contextualised within widening access policy, sector performance as well as audit and the literature. An analysis and discussion of the non-continuation rates, widening access and their respective performances against national benchmarks of the Welsh higher education sector and individual HEIs can be found in Appendix A. The 'framing' of the research strengthens the external validity and transferability to other HEIs, other UK devolved nations and countries. This requirement is acknowledged through research question 3:

> 'What is the widening access and student non-continuation performance of the Welsh HEI sector, including individual HEIs, over the period 2001/02 to 2006/07?'[RQ3].

Appendix A evidences HEIs having widening access and non-continuation performances falling into three (sometimes four) groups, the membership of which remained broadly consistent. The pre-1992 HEIs had low participation rates of 'non-traditional' new entrants, low non-continuation rates and performed lower than benchmark in each case. The post-1992 HEIs had significantly higher participation rates of 'non-traditional' new entrants, high non-continuation rates and performed higher than benchmark for both. The case study institution was consistent with the post-1992 HEI group in each respect.

In order to develop a system level model for delivering step improvements in student retention performance it is necessary to understand how the case study institution responded, over time, to the challenge to reduce its non-continuation rates. Whilst the focus remains at the level of the institution, analysis is also presented at the level of school and, on occasion programmes. Time and processes are also important dimensions to the case study and attention is given to historic and current data and actions (on processes and systems), whilst also considering how aspects of the new model can be applied. The study of the phenomenon of student retention within the case institution acknowledges the interconnectedness of the phenomenon, processes, and time. This has synergies with Pettigrew's 'contextualist' approach (Pettigrew, 1987). The study however is bias towards an 'interactionalist' perspective as described by Tinto (1993) in his model for student departure.

The need to support the literature and Welsh HEI sector performance with empirical case study data is acknowledged. It is the primary focus of this chapter and addresses research question 4:

'How did the case study institution respond to the need to reduce non-continuation rates from 2004/05?'[RQ4].

The case study is presented in what might appear to be a rational and systematic style, however, the engagement with the phenomenon and case study material was not the reality. The case study is presented to two primary audiences: it must satisfy researchers of its validity whilst maximising opportunities for supporting efficient and effective knowledge transfer for strategic managers.

The researcher, as professional practitioner and senior manager with responsibilities including widening access, student retention and strategic planning, is placed as the architect of the case institution's student retention strategy and a number of the interventions and reports produced for committees. She is therefore a key agent of change and 'participant' in the research. The case study investigates the phenomenon of student retention, system level performance through data, content analysis of committee papers, reports, policies and strategy rather than a participatory, action research approach (Cohen et al., 2007); although certain aspects, such as being a reflective practitioner was adopted. It is the quantitative investigation of performance that is at the heart of this research rather than the leadership of change process.

The empirical analysis commences with a consideration of student withdrawal and suspended studies, 2005/06 to 2008/09. The data considers full and part-time student enrolment data at institution, school and on occasions programme level. A recently published report for the Welsh Assembly Government *Student Withdrawal from Higher Education* (Maguire Policy Research et al., 2009) highlighted the need for specific research to be undertaken into the withdrawal of students in year 2 and 3 of their course, withdrawal of part-time students and widening access students. This section responds directly to each of these areas including a 'real time'[33] study from 2004/05 to 2008/09 of all full and part-time students withdrawing throughout the year.

The chapter goes on to describe other 'types' of student non-continuation and provides a range of performance data to illustrate the phenomenon, interventions and impact, where evaluated; each 'type' is afforded a separate section. This section also includes presentation of the cohort analysis (programme/school) and its role in determining overall non-continuation performances whilst not making visible the specific 'type'. This is particularly important as an indicator of what the HESA published non-continuation KPIs will state in future reports.

The penultimate section focuses on the student experience and draws on students' perceptions of their experience and is informed using three different methodologies: the National Student Survey (NSS), *a*n internal Programme Management Audit and an internal Programme Experience Questionnaire (survey). This section also describes interventions introduced by managers from across the institution, including the student retention manager, as part of the institution's strategy to improve student retention.

The chapter concludes with a discussion of the main findings which include the early stage identification of a potential new performance indicator.

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[33] The performance is presented, as far as is practicable, as it occurs in practice.

4.1 The case institution

The case institution, so called for purposes of anonymity, is recognised as one of a number of leading HEIs for widening access in Wales and in the UK and, as such has a strong 'non-traditional' student profile[34]. It does however, also have challenging levels of non-continuation rates. It recently gained taught degree awarding powers, competes with numerous universities in the wider region, recruits heavily from the sub-region and has collaborative provision with four out of the six regional further education colleges. It has approximately 8,400 enrolments and 4,300 FTEs, high levels of part-time students and a curriculum profile that extends across all of the HESA Academic Subject Categories (ASCs) with the exception of dentistry, law and medicine. The curriculum is provided from sub-degree to research degree level. The student populations are the highest in engineering and technology and the health professions. A typical student profile [for 2007/08] is shown in Appendix B.

In 2001, a new Principal and Senior Management Team were appointed. At that time, the institution was not in good academic or financial health and new key appointments were made as Director of Finance, Academic Registrar, Director of Commercial Enterprise, Research and Consultancy (the researcher) and Academic Directors (similar to Deans). From 2001 to 2004 there was a high turn over of staff, including further changes at the senior and middle management levels. These included Director of Finance, Academic Directors and a new Director of Marketing and Student Recruitment but did not include the management of student data, admissions, registry and student services; these have remained constant throughout the period of study.

A new academic structure was introduced in September 2001, not only to recover the institution but to take it to university status. A further academic restructure was introduced in 2004/05 to focus on securing the latter and remained in place until 2009/10. The structure consisted of two Faculties, each led by a Dean/PVC and, seven schools led by a Head: Art and Design, Business, Computing and Communications Technology; Education and Community; Health, Social Care,

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[34] A strong non-traditional student profile was a political strength at this time since the widening access policies of the labour government, both in the UK and Wales were gathering momentum which provided a valuable education, social and economic case for retaining the institution during the difficulties of 2001.

Sports and Exercise Sciences; Humanities and Science and Technology. Schools were further delineated into Subjects, e.g. Engineering, Computing, Communications Technology and Design, with the exception of Business and Humanities where due to the size of operation this was not practical. During this period the case institution operated within a stable management and organisational structure with only minor modifications to the school and subject sub-structure. The period 2004/05 to 2008/09 is therefore used as the time reference for much of the case data analysis.

A new vision, mission and strategic plan were developed in 2001, in consultation with the Board of Governors and staff and informed by the political and funding context at the time. The commitment to widening access and improving student retention is evidenced in the case institution's strategic plans (Doc 92,Doc 93) in place over the period of investigation. A newly appointed senior manager had authority for widening access whilst student retention was the collective responsibility of all senior managers. This changed in 2005, when a single point of authority and leadership was provided through the same senior manager that had responsibility for widening access. The responsibility of all senior managers to improve student retention however, was retained and the message reinforced through Core Executive and Academic Board. In 2006, additional dedicated support was provided across the institution; a student retention manager was appointed reporting directly to the senior manager. This position was a primary point of contact for students contemplating leaving the institution as well as for academic and operational staff seeking to enhance processes, systems and support for students. In essence, the role was designed to motivate, enthuse and influence behaviours, engage staff and students and determine appropriate interventions.

Since 2001, there has been a focus on enhancing data quality, systems and processes and evidencing decision making, actions and improvements. This was heavily influenced by the requirements of taught degree awarding powers (QAA, 2010b). Over the research period attention was given to the applications' process and admission of students into the university. The institution was heavily dependent on 'direct' and late applications (for full-time). This changed in 2007/08 when the institution changed its policy on 'direct' applications and, until a date in early summer, only UCAS applications would be accepted. The drivers behind this change in policy and supporting systems and process were enhancing the quality of input data, student retention (increasing commitment, motivation and information),

performance in league tables (utilising UCAS data) and improved student experience. Other key processes that received attention during the research period were the validation and approval of programmes, management and administration of assessment boards and timetabling. These all required interaction and engagement with academic and operational staff and have a relationships with student retention. It is beyond the scope of this research to consider the effectiveness of the leadership and change processes but are provided here as part of the contextualisation of the case data over the period of study.

The case study, described in the following sections, highlights that until recently, the influencing institutional systems, processes and actions were not widely understood and student retention was not located within the research literature context. The case institution, whilst undoubtedly engaged in a number of interventions to improve student retention, was not necessarily aware of their impact potential. The identification of efficient and effective interventions that maximise potential for realising step improvements in student retention performance is at the heart of this chapter.

4.2 Summary HESA non-continuation performance indicators and benchmarks

The case study non-continuation data is located within the national performance context before the internal detailed data is presented in the subsequent sections. The presentation of the performances for 'First degree and 'Other undergraduate'[35] entrants, against national performance indicators and benchmarks, provides an overview and immediate comparator across new entrant categories over a six year period. In particular, it draws attention to the differential levels of performance across categories pertinent to widening access policy e.g. low participation neighbourhoods and mature. These are evidenced in Table 5, below.

Table 5 Non-continuation of full-time undergraduate entrants following year of entry, 2001/02 to 2006/07: summary of performance against benchmark

Summary of NEWI/Glyndŵr University Performance: Non Continuation of students in HE beyond year of entry: *(Data source: HESA Ltd: Performance indicators in higher education in the UK. From www.hesa.ac.uk)*		Year of entry:											
		2001/02		2002/03		2003/04		2004/05		2005/06		2006/07	
		%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm
		Polar 1 method								Polar 2 method			
Full-time: First degree	Young entrants: Low Participation Neighbourhood	16.3	13.2	16.4	14.1	13.2	13.8	11.6	14.0	17.4	12.0	19.4	11.7
	Young entrants: Other Neighbourhood	13.6	9.6	13.8	11.6	18.7	11.3	14.6	11.0	15.8	10.8	12.6	10.3
	Young entrants: All Neighbourhoods	14.6	10.4	14.5	11.9	17.9	11.8	14.4	11.8	16.1	10.9	13.9	10.7
	Mature entrants	16.5	15.2	18.1	15.4	16.6	16.4	17.2	14.8	15.2	14.4	17.0	13.8
	All entrants	15.6	12.7	16.6	13.9	17.2	14.3	15.9	13.4	15.6	12.8	15.5	12.4
Full-time: Other undergraduate	Young entrants	26.7	19.8	25.2	19.7	32.7	29.3	22.2	21.6	43.2	22.5	14.6	19.8
	Mature entrants	20.5	21.4	17.2	18.4	28.1	24.8	21.0	23.8	24.1	21.9	22.1	18.4
	All entrants	23.7	21.1	20.4	18.9	29.4	26.0	21.3	23.1	31.6	22.1	20.1	18.8

To enhance the prominence of each 'entrant' category over time, relative to each other, the data is also presented graphically. In doing so, it is acknowledged that the methodology for calculating low participation neighbourhoods changed in 2005/06 and therefore direct comparisons are not possible for two of the eight categories. However, for completeness they are included. The non-continuation performances for full-time undergraduate ('first degree' and 'other undergraduate') entrants are shown in Figure 3 which includes the widening access attributes of being 'mature' and being from a 'low participation neighbourhood'. The order of magnitude difference between the non-continuation rates of 'first degree' and 'other undergraduate' entrants is immediately apparent. There is also greater variability of performance across the years. Also of note is the consistent performance of 'first degree mature entrants' at a level only marginally above that of 'first degree young entrants from all neighbourhoods'. Typically, across the sector, mature students have notably higher non-continuation rates than young entrants (Appendix A).

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[35] Includes Foundation Degrees

Figure 3 Non-continuation of full-time undergraduate entrants following year of entry for each student attribute, 2001/02-2006/07

Performance indicators in higher education in the UK: (2003/04,2004/05,2005/06,2006/07,2007/08): Non-continuation rates: Table T3a - Non-continuation following year of entry: Full-time first degree entrants. (From www.hesa.ac.uk).
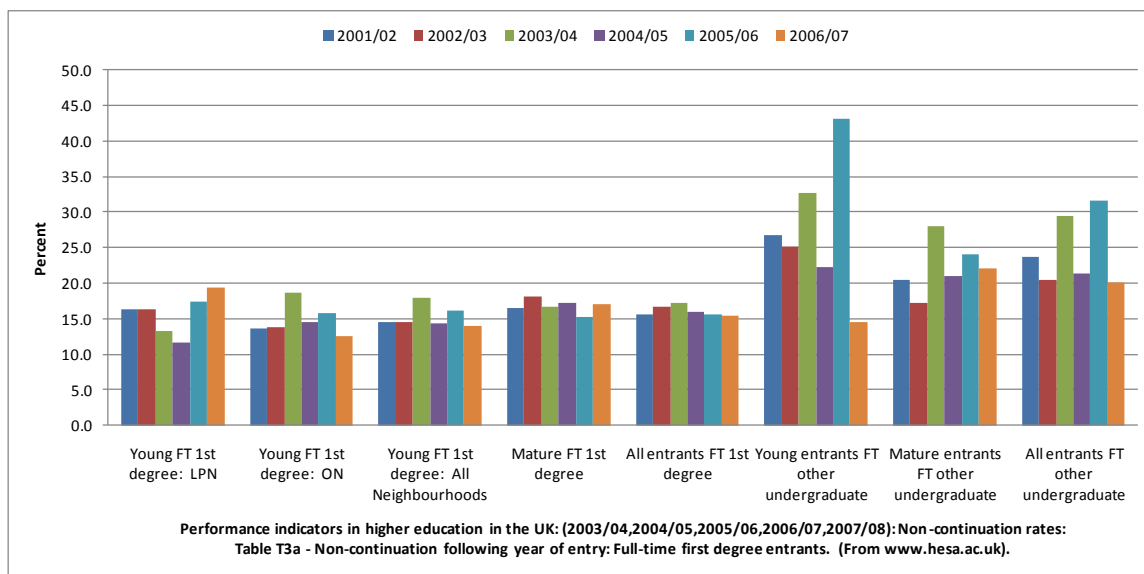
The benchmark calculation is as important as the magnitude of the non-continuation rates themselves as they provide a basis for situational comparisons at UK level. The full-time undergraduate performances against benchmarks for 'entrants' with particular attributes e.g. mature, LPN both defined as *Specific Widening Participation Indicators (SWPi),* 2001/02 to 2006/07 are shown in Table 5. The case study did not reveal evidence of performance against benchmark considerations until the topic was introduced to a joint meeting of Academic Board and Institute Managers Group in 2007 (H. James, 2007c)[36].

Of particular interest in this six year dataset is the consistent performance relative to the benchmark. To evidence this more explicitly, the variations from benchmarks are plotted in Figure 4. There is a remarkable consistency within the first degree data sets of performing higher than benchmark; this was the case in all but two years, 2003/04 and 2004/05 for 'young entrants from LPN'. There was less consistency for 'other undergraduate' entrants

The most significant and frequent variance from benchmark was evidenced for 'young entrants' to 'first degree' and 'other undergraduate' programmes; exceeding the 5% [HESA] threshold noted for being significant, in 2001/02, 2002/03, 2003/04, 2005/06 and 2006/07 across one or more of the young entrant categories.

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[36] By this time the researcher had embarked on the DBA programme but had not selected the topic of study.

The difference between full-time 'first degree' and 'other undergraduate' entrants is stark in both level and consistency. The 'all entrants' 'first degree' evidences a small reduction over time, whilst the 'other undergraduate' category shows a more sporadic response, dramatically reducing in 2006/07. The non-continuation performances of young entrants from LPN and from other neighbourhoods experience a reversal in performances from 2004/05. Also of note is the similar order of magnitude between the non-continuation rates for young and mature entrants; this is quite different to other institutions, evidenced in Appendix A.

Figure 4 Non-continuation performance from benchmark for full-time undergraduate degree entrants following year of entry for each student attribute, 2001/02 to 2006/07
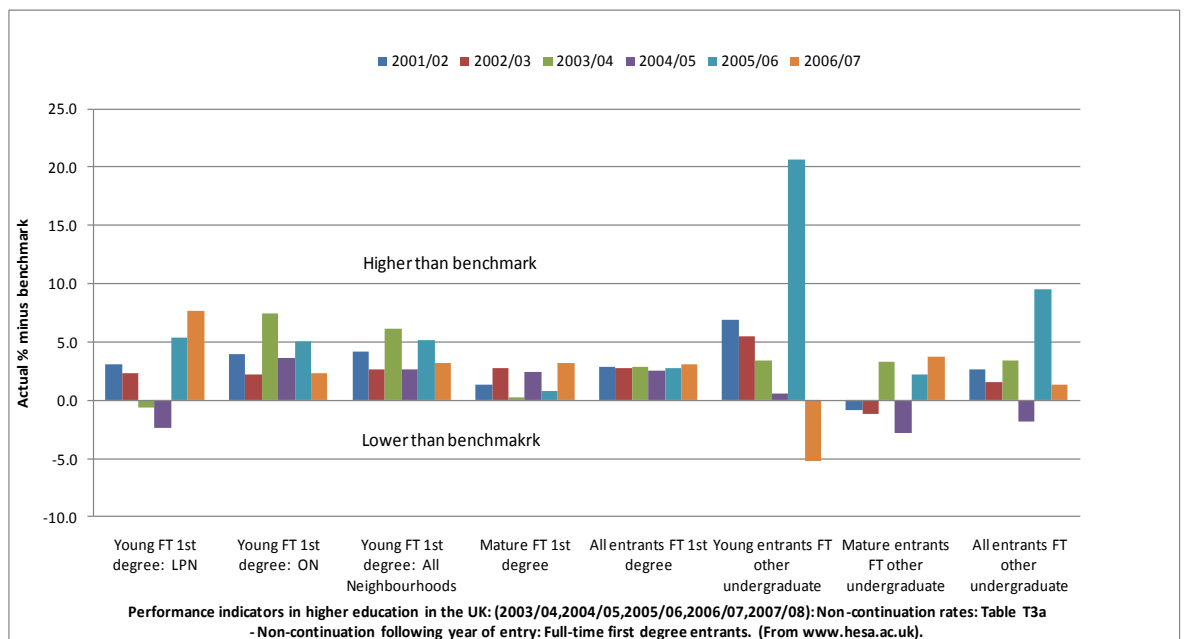
The influence of Specific Widening Participation Indicators on the overall figures is also clearly visible from Figure 4. For example, in 2005/06 the peak experienced for 'young entrants FT other undergraduate' is translated through to 'all entrants FT other undergraduate'. Also in 2006/07, despite 'young entrants FT other undergraduate' performing considerably lower than benchmark, the influence from 'mature entrants FT other undergraduate' was enough to increase the overall performance to be higher than benchmark.

It is important therefore for the case institution not only to monitor the overall non-continuation rates and variances from benchmark, but it also needs to understand the individual performances of its constituent student body.

The following sections provide an exploration of the intimate, raw and, at times exposing data that contributes to delivering the above performances. It considers different 'types' of student departure, such as 'withdrawal' and 'failure to progress' and investigates the data constructs, processes and systems that influence the recorded non-continuation performances. In doing so, it reveals a plethora of opportunities where enhanced knowledge and further understanding of data, its management and application can reduce non-continuation rates.

A similar presentational methodology is adopted throughout this chapter evidencing performances before where appropriate identifying particular interventions.

4.3 Student withdrawals and suspended studies, 2004/05-2008/09

A feature of student non-continuation addressed in the student retention literature is student led premature departure. Chapter 2 discussed the literature and highlighted a range of research papers (Adams & Thomas, 1995; Bennett, 2003; Brundsden et al., 2000; Christie et al., 2004; McGivney, 1996), books (Moxley et al., 2001; Reay et al., 2005; Tinto, 1993), HEI case studies (Bekhradnia & Aston, 2005; Bekhradnia, Whitnall, & Sastry, 2006; Davies, 2002; Dodgson & Bolam, 2002; Read, Archer, & Leathwood, 2003) and reports (Maguire Policy Research et al., 2009) that explored student retention, including premature 'withdrawal'. This section gives a full account of both full and part-time student 'withdrawal' and 'suspension of studies' at a number of levels within the institution to understand not only the macro level system but also how its performance is influenced by its subsystems; those of schools and programmes. In this section, the 'withdrawal' performances are presented and discussed before 'suspended studies'.

A key feature of this section is the importance timing. The section begins with the real-time reported 'in-year' student withdrawals between October and May, 2004/05 to 2008/09 (Doc 1, Doc 2- Doc 31). The real time reporting of in-year student withdrawals over such an extended time period is a new contribution to the literature and was highlighted as a deficit in a recent report (Maguire Policy Research et al., 2009) to the Welsh Assembly Government. Other key times chosen for this research are May, prior to the assessment boards and November, when the actual total end of year position following the summer and September referral boards are known. Also included in this section is a small study that followed up students to identify their reasons for withdrawal from the institution, September to December 2007.

'In-year' student withdrawal monthly trends, 2004/05 to 2008/09

The Core and Senior Executive Committees regularly considered full and part-time student withdrawals and suspended studies reports from the period November to May each year. Included in the early methodology for defining the data sets was a degree of uncertainty due to the dates of withdrawal not necessarily corresponding to the date when the 'notification of withdrawal form' was submitted to the student records team for entering onto the SITS system. For example, a student may have stopped attending in October but the withdrawal notification form not received until December, or later. The case institution recognising this issue revised its processes

and included a category to capture when the student was 'last seen'. Ideally, staff and student jointly agree the withdrawal date.

Figure 5, shows the reported, 'real-time' monthly 'in-year' full and part-time student withdrawals and variations throughout the year from 2004/05 to 2008/09. There is a consistency of shape in the distributions for full and part-time withdrawals as well as similarities across the years. The peaks for student withdrawals appear at similar times in the year. The data extends beyond May since notifications from programmes continue throughout the academic year. This is explored further later in the section.

Full and part-time student withdrawals commence in September and increase rapidly to a maximum in November. These withdrawals would not be included in the published HESA data sets, either because they relate to new entrants and occur before the December census date or they are part-time. The HESA published non-continuation rates for the case institution would therefore be lower than those reported internally as it utilises the full enrolment data set from September; as for all institutions.

January is a month of peak withdrawals for both full and part-time students with the latter being the higher. This is perhaps not so surprising following the break from studies during December and assignments or assessments due in January. The other month of note is May (March in 2006/07); this is particularly the case in 2005/06 and 2008/09 and to a lesser extent in 2004/05 and 2007/08. The operational context potentially influencing this is preparation for assessment boards. This data may therefore be the out workings of academic staff 'data cleaning' student records in preparation for the assessment boards rather than necessarily an increase in student withdrawals. The interface between time, process and phenomenon and its interaction with faculty staff is critically important in this context since management interventions, such as revising the academic calendar, were dependent on it.

Figure 5 Recorded monthly student
withdrawals, 2004/05 to 2008/09

2004/05

2005/06

2006/07

2007/08

2008/09
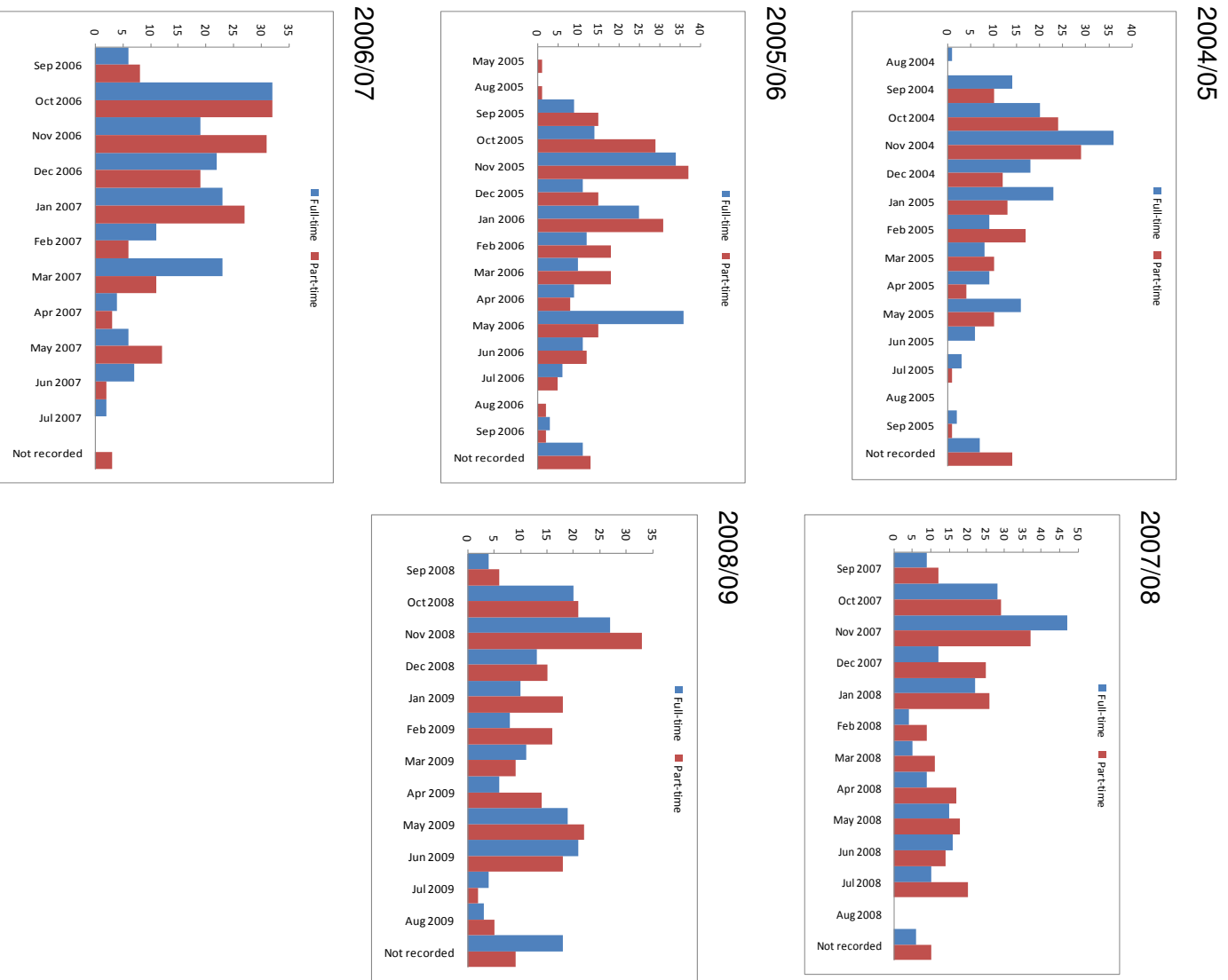
Reproduced and adapted from Doc 1, Doc 2-Doc 32

During this time there was senior level systematic consideration and concern over the levels of student withdrawals and a strengthening of monitoring student attendance, reporting absence and follow up. The monthly scrutiny by the Core Executive could have had the undesired impact of student withdrawals being withheld until the assessment boards which would also explain the peak in May and continuing into June and beyond; this would avoid the performance of programmes being further exposed to senior management.

The dramatic rise in full-time withdrawals in May 2005/06 could also have been influenced by the Quality Assurance Agency's (QAA) scrutiny, in response to the institution's application for taught degree awarding powers; it included attending assessment boards. A further influencing factor applicable to 2007/08 and 2008/09 was the introduction of student fees and, bursaries paid by the institution. These payments to students provided the motivation and drive for timely and accurate reporting of student attendance or non-attendance: firstly the student could be charged fees for tuition not received and secondly the institution would be paying a bursary to a student who arguably is not engaged and yet contributing to the institution's non-continuation performance.

An institutional level analysis such as this not only highlights the periods where interventions could be important but also the need to report student 'in-year' withdrawals as far as possible before the HESA (HESES) reporting deadline in November/December to minimise the impact on the performance indicators. The funding councils recognise the 'high risk' period prior to November as being influenced by many factors out of the control of the institution. The other important spin-off benefit of early reporting is clarity of the enrolment position (and therefore funded numbers) at a point in time. This enables direct action to minimise the impact of student withdrawals on overall enrolments levels, such as increasing part-time students on short flexible learning packages[37] later in the year.

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[37] The case institution has a successful record of recruiting EU students to engineering, computing and business programmes delivered in April through to July with part-time enrolment numbers which either assist in meeting funded numbers or deliver fee only income. Either way, it continues to be a key recruitment strategy of the institution.

'In-year' student withdrawals, May, 2006 - 2009

The case data evidences a clear distinction between withdrawals occurring post enrolment and prior to the assessment boards and, those post the assessment boards but including the referral boards. The former is defined as 'in-year' student withdrawal and since May each year was consistently the latest withdrawal report received by the Core or Senior Executive Committees, this date was used for comparisons in performance across schools and programmes.

The following section highlights the institution's 'in-year' reported student withdrawal performance 2006 to 2009, which has been summarised from four separate reports to Core Executive: May 2006, May 2007, May 2008 and May 2009. The data is presented in Table 6. Each separate report includes information on the number of students withdrawing and the percentage with respect to enrolment by programme and school. It also includes information on the block (or occurrence[38]) which is helpful when considering features relating to specific student cohorts. The reports were regularly and systematically provided for all full and part-time undergraduate and post graduate taught students thus enabling the collation and insight into the four year longitudinal performance of schools[39] and programmes.

The total number of full-time in-year student withdrawals has remained fairly static over the period with some improvement reported in 2009 over 2008 [29 students] and 2007. This contrasts with the part-time student in-year withdrawals which evidenced considerable improvement in 2009 over 2008 [52 students] and 2006 levels and modest improvements over 2007. The institution realised 81 fewer withdrawals in May 2009 than in May 2008. Whilst the institution level data does not evidence a strong basis for projected systematic performance improvement it is worth considering the school level data. Full-time student withdrawals reduced (volume and proportion) in all but one School, Computing & Communications Technology (C&CT), and across all Schools for part-time students. The Schools of Education & Community (E&C) and Health, Social Care, Sports and Exercise

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[38] The block defines the cohort. One programme could have a full-time cohort, a part-time cohort and cohorts studying at partner FE Colleges. Each cohort would be defined separately and reported separately at assessment boards.

[39] During this period the School structure was stable although new programmes would have been introduced and some may have ceased.

Sciences (HSCSES) show a consistent trend of performance improvement across all years for both full and part-time students.

Table 6 'In-year' student withdrawals May 2006, May 2007, May 2008 and May 2009

	Full Time								Part Time							
	24th May 2006		21st May 2007		15th May 2008		15th May 2009			24th May 2006		21st May 2007		15th May 2008		15th May 2009	
School		%		%		%		%			%		%		%		%
Art and Design	10	2.3	18	4.2	17	4.0	17	3.9		8	5.2	1	0.7	4	3.6	2	2.7
Business	10	5.0	18	8.9	14	4.9	12	3.8		9	2.3	10	2.7	10	2.9	4	1.4
Computing and Communications Technology	11	3.1	8	2.4	5	1.5	9	2.6		19	6.3	16	5.4	24	4.8	7	2.9
Education and Community	11	2.6	20	4.4	18	3.9	8	1.7		39	4.2	50	5.9	37	4.4	28	3.9
Health, Social Care, Sports and Exercise Sciences	23	2.9	33	4.5	30	4.0	18	2.4		39	6.5	19	2.4	19	4.1	13	2.5
Humanities	5	3.4	3	1.7	8	4.6	5	2.8		1	1.4	4	2.0	20	3.1	14	1.6
Science and Technology	18	3.5	9	1.9	26	5.7	20	4.0		18	2.7	15	2.4	24	3.4	18	2.7
	88		109		118		89			133		115		138		86	

Adapted from Doc 28, Doc 29, Doc 30, Doc 31, Doc 32

The School of Business experienced the highest proportion of full-time student withdrawals for May 2006 [5.0%] and May 2007 [8.9%] which in volume terms amounted to 10 and 18 students respectively. This is less however than for the School of HSCSES which experienced 23 [2.9%] students withdrawing in May 2006 rising to 33 [4.5%] in May 2007. The other School experiencing higher levels of withdrawals is Science & Technology (S&T) which peaked in May 2008 at 26 [5.7%] students reducing to 20 [4.0%] in May 2009.

As well as considering the volume and impact on school performance, it is their relative impact on institutional performance that will have the greatest influence on the HESA published non-continuation rates. The School of Business contributed 11%, 16% and 12% of the total withdrawals experienced by the university in 2006, 2007 and 2008 respectively. The School of HSCSES, although proportionately less student withdraw than in the School of Business, makes a 25% contribution to university performance.

This highlights the importance of not only considering the volume of student withdrawals but also the proportional impact at institutional level if strategic interventions are to have opportunities for influencing overall performance. Whilst full-time non-continuation rates are published by HESA each year, there are no

comparable published data sets for part-time students[40]. Arguably, however, the systems, processes and interventions derived from reducing full-time student withdrawals should also have some currency with improving part-time student retention. It is acknowledged that there are likely to more benefits from responding primarily to part-time students and transferring practice to improve full-time student retention. Either way, understanding the performance of both is paramount.

Firstly, the overall underlying withdrawal level is higher for part-time students than for full-time students, that is until 2009. The part-time withdrawal performance is primarily influenced by the Schools of E&C and HSCSES that is until 2008, when S&T and C&CT are also included. All schools experienced reductions in student withdrawals in 2009.

The School of C&CT shows consistent and steady improvements as a proportion of school part-time enrolments from 6.3% [2006], 5.4% [2007], and 4.8% [2008] to 2.9% in 2009. As a percentage of university performance it is modest, at less than 18% [2008]. This compares with the School of E&C where performance remains high for both the number of student withdrawals and the proportion of withdrawals to enrolments, until 2009, at least, when they both reduce but yet remain the highest of all the schools [28 students; 3.9%]. Its influence on university performance in 2006, 2007 and 2008 is 29%, 44% and 27% respectively. The School of HSCSES reduces its impact on university performance from 29%, 16% to 14% in 2008 by halving the number of withdrawals over the same period and reducing by two thirds by 2009 [39; 6.5% to 13; 2.5%]. The School of S&T maintains its overall institutional impact at around 17% although it does experience the second highest [to E&C] volume of withdrawals [18] in 2009, which is 2.7% of school part-time enrolments.

Whilst minimising student withdrawals across all schools is a laudable aim the relative system level improvement could be limited if scarce resources are focused away from schools having the greatest influence on institutional performance. For example, focusing attention on the percentage of withdrawals per school, such as Humanities (4.6%) rather than numbers (8) could have resulted in resources being allocated to improving a situation that was having minimal institution impact (7%). In contrast, by considering a combination of the number of student withdrawals and its

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[40] HESA data published in 2010 include KPIs relating to students studying part-time.

proportion of both school and institution enrolments, such as in the case of the School of HSCSES, as described above, a more efficient mechanism for identifying opportunities for university system performance improvement becomes evident. It provides a sensitivity mechanism for strategic intervention.

Analysis presented in this way provides university managers with information on how the institution's performance is influenced by its constituent parts and the degree to which opportunities for improvement exists. Since the full-time student withdrawal data directly influences the full-time student non-continuation data reported by HESA each year, this analysis highlights opportunities where strategic intervention could achieve maximum reductions for the system as a whole. Extrapolating the methodology could provide opportunities for the Welsh sector to achieve a step change in reducing non-continuation rates.

Confining information to the level of school however, may in fact conceal other information that may have a macro system level impact and which, if understood could be dealt with or simply acknowledged as being part of the product mix of the institution and have an accepting and inevitable influence on student retention. The School of E&C was highlighted earlier for its high levels of part-time withdrawals and although reductions had been realised, it retained its position in 2009 as the school with the the highest volume and proportion of part-time withdrawal students to enrolments. On further investigation, the part-time Certificate/Post Graduate Certificate Post- Compulsory Education and Training (Part-time) consistently accounted for the bulk of the part-time withdrawals in the school at May each year, that is until May 2009. The number of student withdrawals remained constant until 2009, when it reduced by over half; however this is set against a growth in student enrolments which means in real terms a proportionate reduction has been realised [17% to 10%]. The impact on overall school performance remains significant . The case study evidenced through Annual Monitoring Reports (AMRs), School Boards and Collaborative Partnership Group minutes a consistent and evaluative approach to improving student retention generally and, student withdrawal specifically. It is perhaps therefore not surprising that such an improvement was realised.

Another example evidenced by the high levels of part-time student withdrawals in 2006 [39, 6.5%] is within the School of HSCSES. On further investigation of the May withdrawal reports, it was evident that one programme was dominating performance; the Foundation Degree in Therapeutic Childcare. This programme

was introduced in 2006/07 in response to employer needs within a niche sector and with the support of the employer. It is evident from the Core Executive minutes that it was understood that the niche sector experienced transient employment patterns and this programme, in part, had been introduced to provide a flexible staff development response, in an attempt to aid staff retention. In doing so however, the school increased the potential risk of realising increased student withdrawal and suspension rates and the consequential increase of the non-continuation of students. This one programme contributed to the school's part-time student withdrawal rates by 53% in 2007 and 58% in 2008, before reducing to 31% in 2009.

These two examples are similar in that they are employer led, meet specific staff development requirements and are a condition of employment. Despite this, high levels of withdrawals were experienced. In both cases, the study evidenced interventions that: firstly recognised the problem; secondly the reasons for withdrawal were identified; thirdly discussions with the employer and other students were held, including those that did not withdraw and, finally solutions were put into place in conjunction with the employer, school and institution. Reducing student withdrawal therefore required a collaborative approach with responsibilities being accepted by all parties. Never-the-less, the nature of such programmes may inevitably mean that the schools and hence institution will experience higher than normal rates of non-continuation.

Understanding the data provides insights into the sensitivity between institution performance and individual programmes; this is exemplified in Table 43, Appendix A. Three programmes highlighted from 2006 to 2009 not only give an indication of their individual performances but also their influence on the school and institutional performances. The case evidence highlights the potential for delivering specific, measurable and realistic performance improvements by deconstructing the vertical data constructs. This provides the context for resourced and targeted strategic interventions, underpinned by the knowledge of the relative sensitivity between, and influence on, performance at programme and school level to the university. Arguably this approach makes for a more strategic and resource efficient intervention process which if successful, could lever maximum impact for university level performance improvement.

The limit of effectiveness of this methodology in delivering a marked reduction in student withdrawals at institutional level arises when the number of withdrawals is

spread thinly across a wide range of programmes. There is also potential for misinterpreting where strategic opportunities exist if there is an overreliance on the proportion of withdrawals to enrolled students rather than considering it together with the volume of withdrawal students. Knowledge of the data at programme level is therefore critical.

Some students rather than withdrawing simply needed to take a break for personal, financial or other non-academic reasons and the ability of the institution to respond accurately was important: the category of 'suspended studies' was introduced. It must also be recognised that students may choose to 'suspend studies' but at a later date move through to full separation and withdrawal. The next few sections consider suspended studies and the potential impact on withdrawal performance should students' progress (or enforced withdrawal[41]) to this status.

'In-year' suspended studies, May, 2006 - 2009

The introduction of 'suspended studies' as a data category in SITS was a response by the case institution to the challenges reported by students in their lives outside of study. It also enabled the case institution to more accurately reflect the behaviours and intentions of students who did not want to cease studies, but for a range of reasons needed to take a break. This was expected by the institution to lead to a reduction in the number of reported 'in-year' premature withdrawals and hence the number of non-continuations being returned to HESA, in the end of year returns.

As in the case for the reported 'in-year' student withdrawals, the 'in-year' suspended studies data was provided at the level of the institution and then deconstructed to include the school and programme including evidencing the block (usually equating to level for full-time students), number of students and the percentage of enrolments on the programme. It was provided systematically each month for all full and part-time undergraduate and post graduate taught students for 2005/06 to 2008/09. For the reasons previously outlined, the reports in May each year are used to illustrate the total reported 'in-year' 'suspended studies' position and are presented in Table 7.

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[41] It is possible that rather than the student determining the progression from suspended studies to withdrawal that in fact it was through staff interventions following significant period of no contact and preparations for assessment boards.

Table 7 'In-year' student suspended studies at May 2006, May 2007, May 2008 and May 2009

School	Full Time									Part Time							
	24th May 2006		21st May 2007		15th May 2008		15th May 2009			24th May 2006		21st May 2007		15th May 2008		15th May 2009	
		%		%		%		%			%		%		%		%
Art and Design	14	3.3	9	2.1	10	2.3	7	1.6		7	4.5	5	3.5	6	5.4	3	4.0
Business	4	2.0	6	3.0	1	0.4	3	1.0		17	4.3	21	5.7	8	2.3	6	2.1
Computing and Communications Technology	4	1.1	3	0.9	5	1.5	4	1.1		2	0.7	2	0.7	10	2.0		
Education and Community	8	1.9	2	0.4	13	2.8	6	1.3		9	1.0	11	1.3	19	2.2	11	1.5
Health, Social Care, Sports and Exercise Sciences	11	1.4	27	3.7	17	2.3	26	3.4		9	1.5	6	0.8	7	1.5	6	1.1
Humanities	3	2.0	2	1.1	4	2.3	1	0.6		3	4.1			5	0.8	3	0.3
Science and Technology	3	0.6	3	0.6	7	1.5	4	0.8		2	0.3	3	0.5	3	0.4	5	0.8

Adapted from Doc 28, Doc 29, Doc 30, Doc 31, Doc 32

Analysis of full and part-time 'in-year suspended studies' performances highlights that in relation to both volume and proportions, they are generally a lower order of magnitude than experienced for student withdrawals, with a few exceptions: Business in 2007, experienced 5.7% (21) of its part-time students opting to suspend studies, which was an increase on the previous year, but has since reduced. In 2007, the School of Business constituted 47% of the university suspended studies students. Notwithstanding the School of Business, the Schools of E&C and HSCSES, as with the 'in-year' student withdrawal performance, again experienced the highest levels of students suspending studies. In 2008, the School of E&C (part-time) and the School of HSCSES (full-time) had performances that accounted for 33% and 30% of the case institution's overall respective performances.

Suspended studies status has considerable benefits for both the institution and students, not least the opportunity to remain in contact and reduce the potential for withdrawal. Thus in Table 7, although the number of students having suspended studies status is considerably less than withdrawals, without appropriate interventions there is a real threat that the actual withdrawals increase beyond that which is forecast. A serious concern therefore, particularly for small universities striving to meet contracted funded student numbers and where modest variations have a disproportionate impact, must be the risk of an 'unforeseen' reduction in

enrolled students appearing at the end of the academic year when there is no time to recover the situation. Financial 'claw-back' by the funding council may be an outcome or for the case institution not meeting the threshold student enrolments to gain university title. The total impact on non-continuation rates where suspended studies also become withdrawals is evidenced in Appendix D.

Total end of year student withdrawals and suspended studies

May was established as an important 'in-year' reporting reference point for monitoring performance prior to assessment boards. However, it was possible that further withdrawals and suspensions would arise from decisions made at assessment boards and increase the non-progression or non-continuation of students. For example, the research identified that in 2007/08, 39 students had their progression code changed at an assessment board to 'withdrawn'[42]. This includes: A&D (3), Business (5), C&CT (9), E&C (7), HSCSES (5), Humanities (2) and S&T (8). Further increases could be realised following the referral boards in September.

The practice of withdrawing students at assessment boards was revealed to the researcher prior to the case study, but within the period under consideration. Chapter 3 describes the researcher having access to information and data sources not normally available to external researchers. This included access, through being an active participant, to certain processes. As Academic Director for TCS, the researcher chaired the corresponding assessment boards and became acutely aware of the above practices that had infused academic areas and their impact on actual withdrawal and suspended studies performances. This included assessment boards in 2003/04 and 2004/05. Since the researcher was also a member of Core Executive, having responsibility for institutional strategic planning, including student number returns, it was possible during the case study to triangulate policy, practice and institutional research to identify areas of investigation which could further enhance student retention. The insights and experience gained from being Academic Director was crucial to the implementation of the case study.

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[42] Dormant students are excluded, as are students whose progression code was already 'withdrawn' before the board.

The remaining part of this section focuses on student withdrawals and suspended studies as reported at the end of year, following the assessment and referral boards; defined at the end of October or early November. The recorded end of year, school and institutional level student withdrawals, incorporating decisions confirmed by the progression and award board in June/July and September from 2004/05 to 2007/08 are shown in Table 8. Comparing this data with that presented in Table 6 (page 106) for May 2006 and 2007 an increase of 113% [from 88 to 187] for full-time and 62% [from 133 to 216] for part-time withdrawals was experienced and, although reduced considerably, 2006-07 evidenced a 46% increase for full-time and 41% for part-time withdrawals. This amounted, in 2005/06, to a total of 403 students withdrawn from the institution; an additional 182 students and, therefore not forecast in the recruitment targets for the following year. This may not be the entire risk since 'suspended studies' students were not included and therefore further increases could be realised by the end of the year.

Table 8 End of year student withdrawals, 2004/05 to 2007/08

School	Full Time									Part Time							
	2004/05		2005/06		2006/07		2007/08			2004/05		2005/06		2006/07		2007/08	
		%		%		%		%			%		%		%		%
Art and Design	15	3.6	29	6.8	28	6.6	21	5.3		8	4.8	15	9.2	4	2.4	7	6.1
Business	24	12.0	15	7.4	24	11.8	21	7.7		25	5.9	36	4.5	14	2.4	9	2.4
Computing and Communications Tech	23	7.8	24	6.7	10	2.9	14	4.9		16	3.8	30	6.5	21	4.8	31	6.9
Education and Community	22	5.2	22	5.2	28	6.1	25	3.3		20	2.1	63	5.0	59	5.7	51	6.6
Health, Social Care, Sports & Exercise Sci	40	5.3	68	8.6	50	6.9	48	6.8		17	2.3	43	4.1	37	3.7	19	3.6
Humanities	8	5.5	6	4.0	5	2.9	10	6.0		8	9.9	5	1.5	8	1.2	36	3.4
Science and Technology	31	7.7	23	4.5	14	2.9	30	6.9		30	3.2	24	2.6	19	1.8	30	2.5
	163	6.34	187	6.5	159	5.6	169	6.1		124	3.3	216	4.4	162	3.2	183	4.1

Adapted from Doc 33,Doc 34,Doc 35, Doc 36

The end of year position on full and part-time suspended studies students is shown in Table 9. As was the case in student withdrawals, the data shows a considerable increase from May 2006 (Table 7, p.111) to October 2006 following the boards; 81% [from 47 to 85] for full-time and 49% [from 49 to 73] for part-time. Comparable data for 2006/07 evidences an increase of 75% and 63% for full and part-time

respectively. In simple magnitude terms this amounts to 158 suspended studies in 2005/06; an additional 62 and therefore the same not accounted for in the recruitment targets for 2006/07.

Table 9 End of year student suspended studies, 2004/05 to 2007/08

School	Full Time								Part Time							
	2004/05		2005/06		2006/07		2007/08		2004/05		2005/06		2006/07		2007/08	
		%		%		%		%		%		%		%		%
Art and Design	15	3.6	19	4.5	20	4.7	20	5.1	6	3.6	10	6.1	7	4.2	12	10.5
Business	7	3.5	7	3.5	9	4.4	1	0.4	14	3.3	18	2.3	23	3.9	4	1.1
Computing and Communications Tech	5	1.7	9	2.5	9	2.6	9	3.1	0	0.0	3	0.7	2	0.5	12	2.7
Education and Community	13	3.1	13	3.1	10	2.2	24	3.1	8	0.8	21	1.7	22	2.1	37	4.8
Health, Social Care, Sports & Exercise Sci	18	2.4	26	3.3	34	4.7	24	3.4	6	0.8	13	1.2	18	1.8	32	6.0
Humanities	2	1.4	4	2.7	3	1.7	5	3.0	3	3.7	3	0.9	1	0.2	7	0.7
Science and Technology	10	2.5	7	1.4	6	1.2	10	2.3	5	0.5	5	0.5	5	0.5	4	0.3
	70	2.72	85	3	91	3.21	93	3.9	42	1.1	73	1.5	78	1.5	108	2.4

Adapted from Doc 33,Doc 34,Doc 35,Doc 36

Table 10 Comparison of withdrawn and suspended studies students before and after the assessment boards, 2007/08

School	Full Time					Part Time			
	Withdrawn		Suspended			Withdrawn		Suspended	
	EoY	In-Year	EoY	In-Year		EoY	In-Year	EoY	In-Year
Art and Design	21	17	20	10		7	4	12	6
Business	21	14	1	1		9	10	4	8
Computing and Communications Technology	14	5	9	5		31	24	12	10
Education and Community	25	18	24	13		51	37	37	19
Health, Social Care, Sports and Exercise Sciences	48	30	24	17		19	19	32	7
Humanities	10	8	5	4		36	20	7	5
Science and Technology	30	26	10	7		30	24	4	3
Total	169	118	93	57		183	138	108	58

Adapted from Doc 37

The most recent data available, that for 2007/08, shows an increase between the May and end of year position of: 43% [51] in full-time withdrawn students; 33% [45] part-time withdrawn student; 63% [36] full-time suspended studies students and

86% [50] part-time 'suspended studies' students. Whilst the increase in withdrawn students following the assessment boards has reduced by more than half on 2005/06, it remains the case that practices before, during and potentially after (Chair's actions) the boards, impact on the non-continuation rates of the institution.

It was evident that whilst the May reporting date had value in the monitoring and managing of the 'in-year' student withdrawal and suspended studies position it was far from robust in asserting the true impact of withdrawals on non-continuation data. Original reports evidence the case institution being aware of the data, although it is not clear that the extent of its impact was fully recognised. However, the original report was influential in initiating a greater debate; one which would extend the non-continuation analysis from withdrawals into a more complex debate and analysis of student progression.

Case evidenced revealed a supporting piece of work which sought to determine students' reasons for leaving the institution. Whilst these findings are of interest to student retention studies it was not considered core to answering the key research question and as such is presented in Appendix E.

4.4 Students not returning to continue studies

The previous section highlighted the impact on non-continuation rates from two student enrolment status categories that were influenced by decisions at assessment and referral boards as well actions through the year; they were withdrawals and suspended studies. This introduced an important and largely unseen (by the institution) additional source of non-continuing students. This new insight led to questions over a broader issue relating to the enrolment status of students and progression patterns. This section speaks directly to these issues describing data and reporting considerations, developing the empirical study and advancing the contribution to new knowledge.

The section commences with a report adapted from case evidence that illustrates the extent of non-returning students from 2005/06 into 2006/07. This report, together with the end of year student withdrawal report, provides a comprehensive insight into non-continuations at the case institution and was a catalyst for further investigation into the non-returning of students.

Non-returning students enrolled in 2005/06 and not returning in 2006/07

Whilst there had been considerable exposure of 'in-year' withdrawals and suspended studies to Core and Senior Executive the practice and decisions on student enrolment status arising from assessment boards was largely the domain of the schools. However, as researcher, Academic Director and Chair of the TCS assessment boards for two years this afforded insights and access to information and decisions which hitherto had not been visible to the institution.

The first report addressing non-returning students' across each school and the institution was received in October 2006 and with minor adaptation is represented below in Table 11. The data highlights the nature of decisions made at assessment boards and their impact. It includes full and part-time students, across all programmes and levels, which, though their current enrolment status would suggest they were eligible to progress in 2006/07, in the event they did not; 29 students were subsequently withdrawn. Table 11, shows that from the enrolled students (not including those previously withdrawn) in 2005/06, 576 did not re-enrol the following year with two schools accounting for 50% of the total: S&T, 117 (20%) and CCT, 175 (30%). The two primary influencing categories of student status across full and

part-time cohorts were repeat year which was particularly relevant to S&T and pass/progress for CC&T.

Table 11 Non-returning students (enrolled in 2005/06 and did not return in 2006/07)

Non-returning students: those who enrolled in 2005/06 but did not return in 2006/07 (data in table refers to students' 2005/06 record)

| Student enrolment status at end of 2005/06 | Final progress status from assessment board | FULL-TIME | | | | | | | | PART-TIME | | | | | | | | GRAND TOTAL |
		Art and Design	Business	Computing and Communications Technology	Education and Community	Health, Social Care, Sports and Exercise Sciences	Humanities	Science and Technology	FULL TIME TOTAL	Art and Design	Business	Computing and Communications Technology	Education and Community	Health, Social Care, Sports and Exercise Sciences	Humanities	Science and Technology	PART TIME TOTAL	
Current	Deferred			2	1	1		2	6		2			2		1	5	11
	Pass with trailing modules	2	3	1		3		1	10									10
	Pass/progress	10	6	7	5	6	1	4	39	3	22	91	29	2	1	7	155	194
	Repeat year	11	9	47	3	6	8	48	132	1	9	11	10	2		40	73	205
	Suspended	1			1				2		2		1	1			4	6
	Subtotal	24	18	57	10	16	9	55	189	4	35	102	40	7	1	48	237	426
Withdrawn (having been current student)	Deferred					2			2		5		1				6	8
	Pass with trailing mods		1						1									1
	Pass/progress	1				1			2			1					1	3
	Repeat year			4	2	1			7				1				1	8
	Suspended					1			1				1		1		2	3
	Subtotal	1	1	4	2	5			13		5	1	3		1		10	23
Repeat Year	Deferred			1		1			2									2
	Pass/progress	2				2		2	6									6
	Repeat year				3	1		5	9			1		1		1	3	12
	Subtotal	2		1	3	4		7	17			1		1		1	3	20
Withdrawn (having been repeat year student)	Deferred					1			1									1
	Repeat year					4			4									4
	Subtotal					5			5									5
Suspended Studies	Deferred					2			2		2						2	4
	Pass with trailing mods					1			1									1
	Pass/progress				1				1									1
	Repeat year			1					1									1
	Suspended	9	7	6	7	13	4	3	49	5	11	2	15	7	2	3	45	94
	Subtotal	9	7	7	8	16	4	3	54	5	13	2	15	7	2	3	47	101
Withdrawn (having been suspended)	Suspended												1				1	1
	Subtotal												1				1	1
Grand Total		36	26	69	23	46	13	65	278	9	53	106	59	15	4	52	298	576

NOTES

The most significant numbers failing to re-enrol for Full Time programmes are students who are offered Repeat Year study. In particular, it appears that students from non-UK EU origins are highly unlikely to re-enrol: this underlies the high numbers of 'lost' Repeat Year students in Computing and Communications Technology and in Science and Technology.

Note that the table identifies students who have failed to re-enrol for any programme whatsoever.

Adapted from Doc 39

Table 11, highlights the volume of students who did not enrol the following year despite being entitled to do so i.e. they had pass/progress or pass/trail status; this amounted to 216 students, 38% of the total not returning. The institutional performance is influenced by part-time students in the Schools of Business (22; 15%) and E&C (29; 19%) having 'pass/progress' status but who did not re-enrol the following year. The examples of the Schools of S&T, C&CT, Business and E&C show how institutional performance can be disproportionately influenced by specific school performances. This suggests that appropriately targeted management interventions could result in institutional level performance improvements.

Also of interest is the number of students confirmed as 'suspended studies' at the assessment board in 2005/06 academic year who did not re-enrol in 2006/07. This amounted to 94 students from a total of 101 (93%) and 16% of the total population not re-enrolling. The poor re-enrolment rate although experienced by all schools, is predominantly located within the Schools of HSCSES and E&C. The number of students and the percentage of population provides further intervention opportunities to influence institutional performance. Both schools were previously highlighted as also having high withdrawal rates.

Overall, approximately 427additional full-time equivalent students did not return in addition to those who had withdrawn 'in-year'; approximately 10% of the total FTE. The consideration of non-returning performance is further explored with students having 'pass/progress' status.

Non-returning students enrolled from 2004/05 to 2007/08 and having 'pass/progress' status.

The institution, keen to evidence a reduction in students not re-enrolling despite being eligible to do so, undertook an analysis of those undergraduate students with a 'pass/progress' status following the referral assessment boards and who did not re-enrol. Table 12 provides the analysis, 2004/05 to 2006/07.

A total of 126, 145, 70 and 53 students studying in 2004/05, 2005/06, 2006/07 and 2007/08 respectively confirmed as 'pass/progress' at assessment boards did not re-enrol in 2005/06, 2006/07, 2007/08 and 2008/09. Full-time non-returner performance remained fairly consistent and in the range 22 to 35, across the four years; the lowest figure was experienced for 2007/08 into 2008/09. Part-time performance was particularly influenced by the School of S&T's second year students not returning in 2005/06 and the School of CCT's first year students not returning in 2006/07. The performance ranged from 31 to 116, with significant reductions experienced for 2007/08 which were maintained for 2008/09; bringing the levels in line with full-time students. The large numbers experienced in the Schools of CCT and S&T did not reappear in subsequent years.

Table 12 Students given 'pass-progress' end of year assessment decisions who do not re-enrol in subsequent year

| School | | Full Time | | | | | Part Time | | | | | |
| | | | Year due to return | | | | | | Year due to return | | | |
	Block	2005/06	2006/07	2007/08	2008/09		Block	2005/06	2006/07	2007/08	2008/09	Block
Art and Design	1st	4	10	7	4		1st	1	1	0	0	1st
											1	2nd
	2nd	1	1	2	4		other	1	1	2	0	3rd
											2	4th
Business	1st	0	1	2	1		1st	8	5	11	2	1st
											1	2nd
	2nd	1	1	0	0		other	1	16	0	0	3rd
Computing and Communications Technology	1st	0	0	3	1		1st	1	66	0	0	1st
											3	2nd
	2nd	0	2	3	0		other	2	1	3	0	3rd
Education and Community	1st	4	2	3	2		1st	6	20	10	13	1st
											0	2nd
	2nd	3	0	0	2		other	0	0	0	0	3rd
Health, Social Care Sports and Exercise Sciences	1st	3	6	8	3		1st	1	1	0	1	1st
								5	1	1	0	2nd
	2nd	2	0	1	2		other				0	3rd
Humanities	1st	2	1	2	0		1st	0	1	0	0	1st
											0	2nd
	2nd	0	0	1	0		other	0	0	0	0	3rd
Science and Technology	1st	4	3	0	1		1st	10	1	5	7	1st
											0	2nd
	2nd	3	2	3	2		other	63	2	3	0	3rd
											1	4th
		27	29	35	22			99	116	35	31	

From Doc 40

Qualifications infrastructure

In 2004, as Academic Director for TCS, Chair of the Assessment Boards and later as researcher (2006), first hand in depth knowledge of the range of students' performances being presented to assessment boards was gained. For example, some EU students studied a selection of modules from different levels and attend for only part of a year; in the case of the EU Summer School, students only study for one month. Responding to market demands was important for the case institution as it secured valuable funded credits. However, the rigid definitions of programmes at that time, imposed by the academic regulations, resulted in students being enrolled onto a standard honours programme when this did not accurately reflect their study intentions. The institution hadn't sufficiently developed its curriculum structures and assessment regulations to accommodate such flexible study. As a consequence, students were given 'pass/progress' decisions at the assessment boards even though it was known they would not return; they were therefore represented on the student record system as non-continuing students.

The institution appeared to be penalising itself for offering innovative, market led programmes without ensuring the academic quality assurance infrastructure was in place to support it. Once this was highlighted and the needs of students and staff in TCS were understood, a new qualifications framework based on 'Case Institution' Certificates[43] (Doc 47) was introduced. This enabled a variety of learning packages of smaller volumes of credit to be studied and supported 'pass/achieve' and 'exit with the originally enrolled qualification' decisions to be made at assessment boards. This resulted in the immediate and dramatic reduction in the number of part-time 'pass/progress' students not returning in 2006/07.

Understanding the data, decisions made at assessment boards and their broader impact on institutional performances led to management intervention and ultimately facilitated a more flexible approach to awarding credit of smaller 'bite size' chunks of learning.

Non-returning students enrolled from 2004/05 to 2007/08 and having 'suspended studies' status

Students for a number of reasons choose to suspend studies rather than withdrawal or continue and risk failure to due environmental considerations, rather than academic. Re-enrolment in the future however, is anticipated and preferably planned.

The total number of suspended studies students not re-enrolling over a four year period is shown in Table 13. It evidences totals of 73, 91, 39 and 106 not returning into 2005/06, 2006/07, 2007/08 and 2008/09 respectively. It is possible for a student to retain the status over more than one academic year. It is surprising that having made firm reductions into 2007/08, there is almost a threefold increase into 2008/09. It is noteworthy that during the summer 2008, resources were allocated to reduce the number of students not returning following referrals. It is conjecture, but a possibility, that an over focus on one group of students meant less attention given to managing the suspended studies students, to return.

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[43] In 2005/06 a new award structure was introduced into the undergraduate portfolio, that of the 'Case Institution' Certificate which provided greater flexibility for achievement of smaller volumes of credit and this provided a framework to reduce the non-continuation of students in engineering and computing that never intended to continue.

Table 13 Students given 'suspended studies' end of year assessment decisions who do not re-enrol in subsequent year

School	Block	Full Time 2005/06	2006/07	2007/08	2008/09		Block	Part Time 2005/06	2006/07	2007/08	2008/09	Block
			Year due to return						Year due to return			
Art and Design	1st	5	3	0	4		1st	2	3	2	0	1st
	2nd	4	4	0	3						0	2nd
	3rd	2	3	0	1		other	5	1	0	3	3rd
											1	4th
Business	1st	2	2	4	0		1st	4	10	2	2	1st
	2nd	1	4	0	0						0	2nd
	3rd	0	1	0	0		other	1	1	2	0	3rd
Computing and Communications Technology	1st	2	3	0	1		1st	0	0	0	2	1st
	2nd	1	1	0	2						0	2nd
	3rd	0	1	0	0		other	0	1	0	0	3rd
Education and Community	1st	5	4	0	16		1st	2	12	4	21	1st
	2nd	1	2	0	2						7	2nd
	3rd	2	2	0	0		other	3	3	1	0	3rd
Health, Social Care Sports and Exercise Sciences	1st	5	4	11	10		1st	0	1	2	5	1st
	2nd	3	4	7	5						3	2nd
	3rd	1	3	2	1		other	4	7	1	7	3rd
Humanities	1st	1	1	1	1		1st	2	2	0	0	1st
	2nd	0	2	0	0						2	2nd
	3rd	1	0	0	2		other	1	1	0	0	3rd
Science and Technology	1st	6	3	0	1		1st	0	1	0	2	1st
	2nd	3	0	0	0						0	2nd
	3rd	0	0	0	0		other	4	1	0	1	3rd
											1	4th
		45	47	25	49			28	44	14	57	

From Doc 41

Managing the suspended studies process provides opportunities to reduce the non-returning student population. Without maintaining contact with the students it is possible that a 'suspended studies' enrolment status progresses to a 'withdrawal' status. The data suggests that the institution could maximise students' chances of return with appropriate interventions such as managing and acting on the information already held within the student's record. An additional strategy would be to actively manage the withdrawal process ensuring that appropriate decisions are made in the best interest of the students at the right time. This may mean that a 'suspended studies' enrolment status progresses to one of 'withdrawal' but the outcome is part of a managed and supported process, rather than a default position after an elapsed period of time.

Non-returning students enrolled from 2004/05 to 2007/08 and having 'repeat year' status.

The institution's concern about the numbers of students withdrawing extended to include 'repeat year' status students who failed to return. In 2004, Academic Board called for an investigation. Table 11 shows that 205 'repeat year' students from

2005/06 did not re-enrol in 2006/07 which was 48% of the students not re-enrolling that year. The analysis of non-returning students having been given 'repeat year' decisions at assessment boards was extended to include 2008/09; the results of which are provided in Table 14. It shows that approximately three times more full-time than part-time students do not return having been 'repeat year' status. The case institution's total numbers not re-enrolling in 2005/06, 2006/07, 2007/08 and 2008/09 are 172, 213, 206 and 154 respectively. The School of S&T dominates the part-time figures for the first three years with a more even distribution occurring across the Schools of Humanities, HSCSES and A&D in 2008/09.

The number of full-time non-returners reduced from its peak at 160 to 121 in 2008/09. The Schools of C&CT and S&T disproportionately influence the institution's performance. Over the four years, there is little evidence of either school significantly reducing their levels of non-returners. There is no doubt that these levels of performance influence the reported institution's non-continuation rates for first year full-time degree enrolments. Consideration of non first year 'repeat year' non-returners increases the sphere of influence to HSCSES. Other schools contribute to the institutions performance however their non-returning numbers are smaller. The greatest opportunity to improve institutional non-continuation performance from 'repeat year' status students would therefore be to focus interventions on the Schools of S&T and C&CT.

The impact of the two schools on the total institution's repeat year non-returning performance is summarised in Table 15; influences were in the range 56% to 66%. They have a disproportionate influence which would be exasperated if the loss of student numbers were to be translated into loss of income, since both schools receive high rates of funding per student.

Table 14 Students given 'repeat year' end of year assessment decisions who do not re-enrol in subsequent year

School	Block	Full Time 2005/06	2006/07	2007/08	2008/09		Block	Part Time 2005/06	2006/07	2007/08	2008/09	Block
Art and Design	1st	2	5	2	3		1st	0	0	0	0	1st
	2nd	2	2	5	2						0	2nd
	3rd	1	3	2	1		other	1	1	1	0	3rd
											0	4th
Business	1st	4	4	1	4		1st	11	8	0	5	1st
	2nd	2	4	2	1		other	2	1	2	3	2nd
	3rd	4	0	0	5						0	3rd
Computing and Communications Technology	1st	16	20	13	6		1st	3	3	5	1	1st
	2nd	10	15	10	10		other	4	9	7	3	2nd
	3rd	8	9	18	8						2	3rd
Education and Community	1st	5	5	14	5		1st	0	7	3	8	1st
	2nd	4	1	1	1		other	1	3	5	3	2nd
	3rd	0	1	6	0						0	3rd
Health, Social Care, Sports and Exercise	1st	11	6	13	6		1st	0	1	1	0	1st
	2nd	11	4	7	5		other	2	2	4	0	2nd
	3rd	1	4	1	5						0	3rd
Sciences Humanities	1st	6	5	10	2		1st	1	0	0	0	1st
	2nd	1	1	4	4		other	0	0	0	0	2nd
	3rd	3	2	2	2						1	3rd
Science and Technology	1st	20	19	22	20		1st	6	28	12	5	1st
	2nd	17	9	17	18						1	2nd
	3rd	2	20	10	13		other	11	11	6	1	3rd
											0	4th
		130	139	160	121			42	74	46	33	

From Doc 42

Table 15 Impact of two schools on institutional student non-returning performance

School	Full-time: Year due to return 2005/06	2006/07	2007/08	2008/09
Computing and Communications Technology	34 [26%]	44 [32%]	41 [26%]	24 [20%]
Science and Technology	39 [30%]	48 [35%]	49 [31%]	51 [42%]
Total for both Schools [% of total RY failing to return]	73 [56%]	92 [66%]	90 [56%]	75 [62%]

Review of assessment regulations

At the request of Academic Board, a process of investigation into student pass rates, progression profiles and re-assessment opportunities and outcomes was undertaken between January 2005 and May 2006. This included an empirical analysis of progressions following failure of credit at the first attempt, and a comparison of the institution's *Assessment* Regulations (Doc 46) to other universities.

Two areas emerged as potentially problematic: firstly, the regulation that required students, who had failed 60 credits or more at the first attempt, to repeat the year again either in full or to repeat all failed modules as a part-time student; secondly, the University of Wales regulation (reflected in the institution's Regulations) indicated that the form of re-assessment should be the same as that of the original assessment. Members of Academic Board acknowledged the relevance of both issues to the institution's retention strategy[44]:

> *'Members recognised that the issues were relevant to its retention strategy and noted too that they might be overly harsh in comparison with those in place at some other institutions, notably those at some post-1992 universities.'*

> (Doc 48)

Following discussion at Academic Board in January 2005, the matter was referred for consideration to the Learning, Teaching and Assessment Committee (LTAC) and Standards and Quality Committee (SQC) before it returned to Academic Board (AB) on 5 April 2005. The Board agreed in principle to the following regulatory change to the first year of study only and for a one year pilot in the first instance:

> *'To approve a change to regulation 15.1 and 15.2 of the Regulations for Initial Modular Undergraduate Degrees, Diplomas, Certificates and Foundation Degrees to remove a requirement for students in the first year of study on those awards to achieve a pass in 60 credits prior to progression: The regulatory change to come into effect for the forthcoming assessment boards. The change to be subject to review in January 06...'*

> (Doc 49)

The amended regulation was implemented for the assessment boards in 2005. As Academic Director of TCS at that time, and therefore Chair of the Assessment Boards, it became apparent that there was an unintended outcome of the amended regulation that could have had a detrimental effect on a student's future prospect of passing the credit. For example, by not giving 'repeat year' decisions automatically, and giving 'referral' decisions in all the modules that required them, (regardless of the number of modules or percentage marks achieved), students could be given an

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[44] At this time the retention strategy was articulated through the institution's strategic plans and its widening access and participation strategy (DOC 91,DOC 94).

unrealistic re-assessment workload, that could have set them up to fail. Should this have occurred, one of the remaining two re-assessment opportunities would have been removed. In the event, it was agreed with Registry, to send a letter to all affected students giving them the opportunity to choose between the 'repeat year' or 'referral' options. This was subsequently incorporated for all other academic areas to ensure consistency.

The impact of the amended regulation was evaluated by AB at its meeting in February 2006. Table 16, restates the analysis, presented to Academic Board, of the outcomes for referred and deferred first year students in 2004/05 who failed modules at the first attempt and the proportion who subsequently returned to continue studies in 2005/06. The analysis confirms that 182 level one students had failed credit at attempt one; 65% had failed 60 credits or less, whilst 35% failed more than 60 credits. Of those failing 60 or less, 81% returned to continue their studies as compared with 47% for those failing more than 60 credits.

Table 16, also shows the specific final 'progress' decisions made at the referral boards for both groups. For students failing 60 credits or less, the trend is perhaps predictable: pass/progress 97%; pass/trail 78% and repeat year 62%. For 'repeat year' status students failing more than 60 credits, the progression rate reduces to 44%.

Table 16 Outcome for referred/deferred students who failed modules at the first attempt

Year	Credits failed at attempt 1	Number of students	Return	% Return	Final Progress	Number of students	Return	% Return
1	60 or less	118	95	81%	Left	4		
					Pass/Progress	63	61	97%
					Pass/Trail	18	14	78%
					Repeat Year	29	18	62%
					Other	4	2	50%
	More than 60	64	30	47%	Left	2	2	100%
					Pass/Progress	2	2	100%
					Pass/Trail	1	1	100%
					Repeat Year	57	25	44%
					Other	2		

A report to the February meeting of AB (Doc 51) highlights that three students benefited from the amended regulations (see shaded cells). The minutes evidence a recognition that although the removal of the 60 credit rule had benefited few students:

'It had been useful however in highlighting that the basis for decisions on credit rather on an alternative basis of marks might be unhelpful and that a decision formula based on marks would offer greater precision for boards in formulating progression decisions.'

(Doc 51)

The paper included two examples of student performance: one which would lead to an average mark of 43% and the other 19% yet under the '60 Credit Rule' both students would have received a 'repeat year' decision. The first example evidenced a strong pass and a number of marginal failures, whilst the second example evidenced a marginal pass and weak performances, across the remaining modules. The second student would therefore benefit from repeating the year. The paper (Doc 50) recommended an average mark of 20% be set. The impact of the recommendation was considered by reflecting on the progression of students in 2005/06:

'…if this average was adopted 24 students would have been given the opportunity to retrieve their failures at the first available opportunity. Under the old 60 credit rule all of these students would have been given a repeat year decision at the summer Assessment Boards.'

(Doc 50)

One further modification to the *Regulations* was made following final recommendations from the Chairs' of SQC and LTAC and the Senior Assistant Registrar, to AB in May 2006: reduce the requirement to achieve 30% to 20% in a module in order to be able to progress with a 'pass/trail' status and add that students must also have achieved a minimum of 100 credits at that level.

This section highlights the importance of progression decisions made at assessment boards and how they may influence the decision of students to return. The following section explores in more detail the issue of 'student referrals'.

4.5 Student referrals

It has previously been evidenced that some students with 'pass/progress' status and expected to continue, do not do so. It was also probable that some students referred in modules at the June assessment boards would not undertake the re-assessment or undertake it and fail and subsequently not re-enrol. Referrals and re-assessments are another potential source of system level, non-continuation impact. They place additional demands on the academic and support infrastructure and reduce the efficiency of the institution. It was important therefore for the case study to understand the nature and scale of referrals and reassessment.

This section considers an analysis of referrals for the academic year 2007/08 before going on to describe a specific intervention, referred to as the *'Summer 2008 Project'* which achieved notable reductions in non-continuation into 2008/09.

Student referrals, 2007/08

It was the practice of the institution to consider referral and completion rates at programme level as part of the formal Annual Monitoring and Review (AMR) process (Doc 53). Summary reports of AMRs were considered by SQC however, much of the detail was omitted and as such, senior academic committees were unaware of the full extent of referrals and re-assessment. The general increased exposure to non-continuation rates over the years, including the '60 Credit Rule' work, however, led Academic Board to recommend additional support be provided to referred students over the summer in an attempt to increase the successful conversions from 'referred' to 'pass/progress' status. This one act exposed the full extent of student referrals and re-assessment demands on students and the institution. It provided significant [new] information towards understanding another dimension of student progression which hitherto had received limited policy level visibility.

The analysis draws on data extracted from the student records systems following the June 2008 progression boards and includes school, programme and module performances. They are presented in detail in Appendix F. A total of 2,529 students, 38.07% of the total student enrolments, were referred in the June 2008 assessment boards (Table 46; Doc 45, Doc 54). This accounted for a total of 2,559 student*referrals, including 217 trailing from 2006/07. Of the 2,559, 79% related to full-time students and 21% to part-time students. Although there are similar number

of enrolments of full and part-time students, part-time students generally study half the volume of credit of a full-time student.

Two Schools, S&T (864: 64.96%) and C&CT (477: 56.85%) refer far more students than any other school. The Subject of Engineering evidences eight modules in the top ten worst performing modules; all level 5 and not level 4 as might be expected. The number of EU and international students referred in modules is notable and for many, they outnumber home students. EU and international students predominantly reside in the Schools of S&T and C&CT. The English for Academic Purposes module has by far the highest number of referrals [164] and consists of similar numbers of EU and international students. It was the first year this module has been provided to all international and most EU students[45].

An insight into the proportion of students referred to total enrolments on a programme and, the average number of modules referred per students is provided in Table 47, Appendix F. Within the datasets there are modules consisting of 10, 15, 20 and above credits and therefore a direct comparison is not possible. The highest performances are dominated by programmes from the School of S&T (particularly the Subject of Engineering) followed by the School of C&CT. The programmes with the highest percentage of students referred to total enrolments are: FdEng Performance Car Technology (4: 66.67%); BEng Performance Car Technology (25: 69.44%); BSc Motorsport Design and Management (13: 61.9%); BEng Aeronautical and Mechanical Engineering (46: 52.87%) and BSc Substance Use Studies (16: 51.61%). All but one belongs to the Subject of Engineering and with the exception of FdEng Performance Car Technology, has levels of student referrals that would warrant strategic interventions.

The number of referrals, the number of students referred and the average number of modules per student gives an insight into the potential for institution and system level improvements for reducing the number of students who do not return[46]. This is explored below.

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[45] An alternative programme of English study was available for the School of C&CT whilst the new module of Academic English and British Culture was introduced. In 2008/09 all EU and international students followed the new module HUM154.

[46] Short Undergraduate Course Humanities, Computer Technologies European Programme and BEng Engineering European Programme are not included since they are not full degree programmes

Table 17 Programmes with the highest average number of modules referred per student, 2007/08

Programme Title	Number of referrals	Number of students referred	Ave number of modules referred per student
FdEng Performance Car Technology	34	4	8.50
BEng Electrical and Electronic Engineering	76	14	5.43
BEng Aeronautical and Mechanical Engineering	212	46	4.61
BSc Motorsport Design and Management	59	13	4.54
BSc Studio Recording and Performance Technology	73	19	3.84
BSc Estate Management	34	9	3.78
FdEng Sound/Studio Technology	48	13	3.69

The average number of modules referred per student is highlighted in Table 17. The BEng Aeronautical and Mechanical Engineering warrants investigation since not only is the average number of modules referred per student high but also the number of students referred is excessive [52.87% of enrolled students]. Since modules are also shared with other engineering programmes it is possible by improving a few modules, wider improvements could be experienced. The School of C&CT also has two programmes worthy of investigation: BSc Studio Recording and Performance Technology and FdEng Sound/Studio Technology.

Table 18 Programmes with the highest average number of referrals on a programme, 2007/08

Programme Title	Number of referrals	Number of students referred	Ave number of modules referred per student
BEng Aeronautical and Mechanical Engineering	212	46	4.61
Business Undergraduate Degree	126	49	2.57
Computer Technologies Undergraduate Programme	122	45	2.71
Humanities Degree Programme	114	32	3.56
Education and Childhood Studies Degree Programme	96	40	2.40

The number of referrals on a programme is highlighted in Table 18. The top five programmes are each located in a different school. The number of referrals and average number of modules referred per student for BEng Aeronautical and Mechanical Engineering in part, reflects the number of 10 credit modules rather than 20 credit modules that exist in other schools. Also noteworthy due to the number of students affected, and a relatively high proportion of modules referred per student, are BA Criminal Justice [32; 38.55%]; BEng Performance Car Technology [25; 69.44%]; FdSc Computer Technologies [23; 38.98%] and BSc Studio Recording and Performance Technology [19; 47.50%].

This section highlights a number of factors that are worthy of investigation to understand the nature and scale of referrals. In doing so, management interventions at school, programme and module levels can be targeted for maximum impact on reducing the institution's non-continuation rates. The impact on resources and infrastructure to support and service 2,559 student*referrals is considerable and introduces considerable inefficiencies into institutional performance.

Additional contact and support for referred students, summer 2008

Previous sections have highlighted the need to understand the range of data and level of scrutiny required to realise a step reduction in non-continuation. These included investigations into 'referred', 'repeat year' and 'suspended studies' status students. Even a modest increase in returning students had the potential to positively impact on the HESA non-continuation data. Table 11, showed that in 2005/06, 334 [58%] 'repeat year' and 'suspended studies' students did not re-enrol. Even taking into account the influence of the Schools of S&T and C&CT, there remains scope and opportunity between the June and September assessment boards to improve performance.

The 'Summer 2008 project' was introduced to maximise the number of students with referrals to pass and progress into the following year. It involved putting measures in place to improve the quality and timeliness of communication to students including assessment board results, referral requirements and general contact and, providing additional academic support. To facilitate the project, templates and advice were provided to academic and administrative staff and a small additional senior level administrative resource was allocated July to October. The project consisted of:

- timely and more comprehensive communications to students following the assessment boards;
- schedule of academic support and availability during the summer period covering all academic areas and information held centrally and communicated to students via the website;
- referral hotline set up with information available from the home page of the website;
- support services available and key contact information via website;
- referred work made available to students on 'Blackboard';

- analysis of the referral situation following the June Assessment Boards;
- contact attempted and follow up with all students given referrals; and
- an evaluation of the impact of the pilot project.

An evaluation report was produced and considered by Academic Board in January 2009. The following section describes the impact of the project.

Returning students 2008/09

The '*Summer 2008 project*' provided valuable insights into the processes and operations supporting post June assessment boards to confirmation of results at the referral boards in September. Whilst it is not possible to infer improvements in performance being solely due to the '*Summer 2008 project*', as many initiatives were being implemented in parallel, it will have been an influencing factor. This section provides an overview of the non-continuation of students 2007/08 into 2008/09.

As in previous years, returning student data is provided post September assessment boards and this is summarised in Table 19, from case documents (Doc 55,Doc 56). The data is provided in a different format than previous reports. The case study revealed a lack of consistency in data capture, analysis and the presentation of reports. However, the resulting diversity assists in determining other influencing factors and inform recommendations for future reports. For the first time in the case study, non-returning and returning student data is shown alongside each other.

The proportion of full and part-time students having 'continuing' or 'progressing' status that did not return is 14% and 24% respectively. The two recurring and most influential categories impacting on the non-continuation data are 'repeat year' and 'suspended studies': accounting for 85% [170] of full-time students and 71% [90] of part-time students who were entitled to return but did not. Forty four students changed from studying full-time to part-time. The data evidences reduced levels of non-continuation across each category as compared to 2005/06, presented in Table 11; particularly important is the reduction in the 'pass-progress' enrolment status, from 39 to 22. The reduction in non-continuation of part-time students was notable for 'pass/progress' and 'repeat year' status: The former reduced from 155 to 31 and the latter from 73 to 44. This reduction alone amounts to an additional 153 students progressing and securing, in financial terms, in excess of the additional resources expended to support the '*Summer 2008 project*'.

Table 19 Student retention analysis - whether students who were entitled to continue after 2007/08 actually returned for 2008/09

Progression type	Full-time					Part-time			
	Students who returned in 2008/09	Students who did not return	Total	% of students who returned		Students who returned in 2008/09	Students who did not return	Total	% of students who returned
Pass-progress	1011	22	1033	98%		358	31	389	92%
Pass-trail	59	7	66	89%		16	5	21	76%
Repeat-year	116	121	237	49%		11	33	44	25%
Suspended	40	49	89	45%		14	57	71	20%
Grand Total	1226	199	1425	86%		399	126	525	76%

Adapted from Doc 55,Doc 56

Table 20 Proportion of those students entitled to continue after 2007/08 and into 2008/09 actually doing so: full-time

School	Pass-progress				Pass-trail				Repeat-year				Suspended				Grand Total
	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	
Art & Design	203	8	211	96%	1		1	100%	9	6	15	60%	12	8	20	60%	247
Business	43	1	44	98%	1		1	100%	5	10	15	33%	1		1	100%	61
Computing & Communications Technology	66	1	67	99%	6		6	100%	22	24	46	48%	4	3	7	57%	126
Education and Community	216	4	220	98%	3		3	100%	17	6	23	74%	6	18	24	25%	270
Health, Social Care & Sports & Exercise Sci.	291	5	296	98%	29	1	30	97%	19	16	35	54%	7	16	23	30%	384
Humanities	87		87	100%	3		3	100%	10	8	18	56%	2	3	5	40%	113
Science & Technology	105	3	108	97%	16	6	22	73%	34	51	85	40%	8	1	9	89%	224
Grand Total	1011	22	1033	98%	59	7	66	89%	116	121	237	49%	40	49	89	45%	1425

From Doc 55

Table 21 Proportion of those students entitled to continue after 2007/08 and into 2008/09 actually doing so: part-time

School	Pass-progress				Pass-trail				Repeat-year				Suspended				Grand Total
	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	Students who returned in 2008/09	Students who did not return	Total	% of students who returned	
Art & Design	13	3	16	81%									3	4	7	43%	23
Business	60	3	63	95%						8	8	0%		2	2	0%	73
Computing & Communications Technology	20	3	23	87%	1		1	100%	3	6	9	33%	1	2	3	33%	36
Education and Community	110	13	123	89%	7	2	9	78%	5	11	16	31%	6	28	34	18%	182
Health, Social Care & Sports & Exercise Sci.	9	1	10	90%						1	1	100%	3	15	18	17%	29
Humanities	4		4	100%	1		1	100%		1	1	0%	1	2	3	33%	9
Science & Technology	142	8	150	95%	7	3	10	70%	2	7	9	22%		4	4	0%	173
Grand Total	358	31	389	92%	16	5	21	76%	11	33	44	25%	14	57	71	20%	525

From Doc 56

The influences of individual schools on the overall non-continuation rates of full and part-time students are shown Table 20 and Table 21respectively. This confirms that 'suspended studies' students cluster in the Schools of E&C and HSCS whilst 'repeat year' students cluster in the Schools of S&T and C&CT. This concurs with earlier

sections on student 'withdrawal' and 'suspended studies' and 'repeat year' progression.

Programme level data (Table 22) further shows that the 'suspended study' category to be disproportionately influenced by: Design: Illustration Degree Programme, Bachelor of Nursing (pre-registration) Programme, Post-Compulsory Education & Training (Cert/PG Cert/Prof Grad Cert) and part-time Post-Compulsory Education & Training (Cert/PG Cert/Prof Grad Cert), BA Post Compulsory Education & Training and BSc Occupational Health, Safety & Environmental Management. The remainder were 'scattered' across programmes.

Table 22 Programmes having a disproportionate affect on non-continuation data, 2007/08 returning in 2008/09

Mode of Study	Programme	Did not return	Proportion
Full-time	Design: Illustration Degree Programme	5/7	71%
	Bachelor of Nursing (pre-registration) Programme	9/9	100%
	Post-Compulsory Education & Training (Cert/PG Cert/Prof Grad Cert)	14/15	93%
Part-time	Post-Compulsory Education & Training (Cert/PG Cert/Prof Grad Cert)	12/13	92%
	BA Post Compulsory Education & Training	8/11	73%
	BSc Occupational Health, Safety & Environmental Management	6/8	75%

The significant reduction on non-continuation into 2008/09 resulted in the *Summer 2008 project* being deemed a success and was therefore repeated in 2009. This section, more broadly, brings the non-continuation data up to date and continues the focus on identifying the key influencers of overall performance on the premise that this is where interventions will have maximise impact.

4.6 Student cohort progression

Previous sections have considered the student retention performances of the institution, schools and in some cases individual programmes and modules, based on a range of specific and detailed progression data.

In 2006/07, Academic Board requested the development of a student retention strategy and its subcommittee WPARC took on the responsibility for its development. A Student Retention Strategy Task and Finish Group (SRSTFG) was established and subsequently commissioned a number of reports that sought to identify trends of performances and extend the institutional knowledge of student retention. The additional, and hitherto new insight into institutional student retention data, was the cohort analysis.

For the purpose of the research, this is defined as the progression of a cohort of students entering in one year and following the same students through to the expected completion date. The cohort analysis illustrates the cumulative effect of the individual influences previously considered. This study also provides opportunities for comparisons with other research studies that had identified the first year of study as being the most vulnerable (Christie et al., 2005; Johnston & Pollock, undated; May & Bousted, 2004).

Full-time first degree cohort progression and achievement (excluding advanced standing students)

In previous sections, the non-continuation of students has been considered across all programmes and the distinction between foundation degrees and first degrees was not made. Table 23, relates to full-time students starting first degree programmes in 2004/05 at Level 4 and follows the cohort's progression [or not] until completion at the end of 2006/07.

Table 23 Progression of 2004/05 cohort of full-time first degree students to completion in 2006/07

Course name	2004/05 (Block 1)				2005/06 (Block 2)				2006/07 (Block 3)			
	No	Yes	Total	% who progressed	No	Yes	Total	% who progressed	No	Yes	Total	% who progressed
BA Design: Animation	1	17	18	94%	2	14	16	88%	0	14	14	100%
BA Design: Illustration	2	12	14	86%	1	12	13	92%	1	10	11	91%
BA Design: Illustration for Children's Publishing	0	18	18	100%	0	16	16	100%	0	14	14	100%
BA Design: Moving Image	1	4	5	80%	2	4	6	67%	3	3	6	50%
BA Design: Graphic Design	4	10	14	71%	2	8	10	80%	0	8	8	100%
BA Design: Multimedia Design	3	3	6	50%	1	2	3	67%	0	2	2	100%
BA Design: Illustration (Coleg Menai)	2	2	4	50%	1	3	4	75%	0	3	3	100%
BA Applied Arts: Ceramics	0	3	3	100%								
BA Applied Arts: Glass	1	2	3	67%	3	11	14	79%	0	11	11	100%
BA Applied Arts: Jewellery / Metalwork	0	3	3	100%								
BA Applied Arts: Mixed Media	2	9	11	82%								
BA Fine Art	1	22	23	96%	2	16	18	89%	1	16	17	94%
BA Early Childhood Studies	4	21	25	84%	2	20	22	91%	4	28	32	88%
Education and Childhood Studies Degree Programme	2	12	14	86%	2	11	13	85%				
BA Primary Education	14	64	78	82%	0	58	58	100%	4	53	57	93%
Business Undergraduate Degree	15	20	35	57%	2	15	17	88%	2	13	15	87%
Humanities Degree Programme	20	43	63	68%	2	37	39	95%	4	33	37	89%
BEng Aeronautical and Mechanical Engineering	7	2	9	22%	1	0	1	0%			0	
BEng Aeronautical / Electronic Eng (Avionics)	1	2	3	67%	1	1	2	50%	0	1	1	100%
BEng Electrical and Electronic Engineering	2	4	6	67%	2	2	4	50%	0	2	2	100%
BEng Performance Car Technology	6	5	11	45%	3	3	6	50%	0	3	3	100%
BSc Motorsport Design and Management	4	4	8	50%	0	4	4	100%	0	4	4	100%
BEng Sound/Broadcast Engineering	2	4	6	67%	1	3	4	75%	1	2	3	67%
BSc Studio Recording and Performance Technology	4	11	15	73%	2	9	11	82%	2	6	8	75%
BSc Architectural Design Technology	7	6	13	46%	1	3	4	75%	0	3	3	100%
BSc Building Maintenance Management		3	3	100%	3		3	0%				
BSc Construction Management	1		1	0%	1		1	0%				
BSc Estate Management	2	8	10	80%	0	7	7	100%	1	6	7	86%
BSc Estate Agency	4	1	5	20%	0	1	1	100%			0	
Environmental Studies Degree	1	3	4	75%	0	3	3	100%	0	2	2	100%
Computer Technologies Undergraduate Programme	6	20	26	77%	7	15	22	68%	2	15	17	88%
BSc Forensic Science	1	3	4	75%	0	2	2	100%	0	2	2	100%
BSc Forensic Science with Criminal Justice		1	1	100%		1	1	100%		1	1	100%
BA Criminal Justice	17	16	33	48%	4	12	16	75%	0	12	12	100%
BSc Sports Science (Outdoor Pursuits)	0	5	5	100%	0	6	6	100%	0	6	6	100%
BSc Sports Science (Coaching Studies)	1	5	6	83%	0	4	4	100%	0	4	4	100%
BSc Sports Science	2	5	7	71%	1	4	5	80%	0	4	4	100%
BA Sports and Exercise Management		1	1	100%		1	1	100%		1	1	100%
BA Sports Science with Education Studies		1	1	100%		1	1	100%		1	1	100%
BA Sports Management	1	2	3	67%	0	2	2	100%	0	2	2	100%
BA/BSc Sports Studies	0	4	4	100%	1	3	4	75%	0	3	3	100%
BSc Sports Science (Exercise Therapy and Rehab)	1	2	3	67%	0	2	2	100%	0	2	2	100%
BSc Substance Use Studies	2	2	100%			1	1	100%				
BSc Traditional Chinese Medicine	5	5	10	50%	0	4	4	100%	0	4	4	100%
	147	390	537	73%	50	321	371	87%	25	294	319	92%

Progression statistics of students at 'Case Institution' 2004/05 to 2006/07 (by course)

These statistics relate to students who started a 3-year undergraduate course in 2004/05.

The table shows how many students progressed through their degree as expected:
A "Yes" is given if the student is: in year 1 (2004/05) and has a progress code of PP* or PT* (to pass to the next level)
in year 2 (2005/06) and has a progress code of PP* or PT* (to pass to the next level)
in year 3 (2006/07) and has a progress code of PQ* (pass/qualify)
All other students (deferred, repeat year etc.) are "No".
Only full-time undergraduate programmes have been included, with some exceptions where the programmes do not follow the normal rules on progression, e.g. nursing courses.

"Direct entrants", i.e. students entering with advanced standing, have been excluded (eg entering year 3 directly in 2004/05).

NOTE: two students who transferred from BAEC2 to BAFEDS in 2006/07 have been excluded from the "Block 3" section of the table - this is why the total figures for 2006/07 are slightly different from the other report, "(b) - Progression by school".

From Doc 57

The data exposes the small numbers of full-time first degree students enrolled on some programmes when 'advanced standing' students are excluded. Table 23, evidences the pattern of progression that would be anticipated: the proportion of first year students 'entitled to progress' is lower than in subsequent 2nd and 3rd years of study [73%; 87%; 92%]. The data provides an overall insight into programme performance and does not distinguishing between categories of non-continuation. It does however, provide valuable information on the relative influence of specific programmes (numbers and percentage) on overall institutional performance. This is characterised by relatively large numbers of students not progressing as well as a

low percentage progression. For example, the progression rate beyond first year in 2004/05 to 2005/06 was 73% and influenced particularly by: Business Undergraduate Degree [15: 57%]; Humanities Degree Programme [20: 68%] and BA Criminal Justice [17: 48%]. Two other programmes also constitute a risk since they have less than 50% progression rate and although not large numbers, total more than the others spread across the remaining programmes. These are: BSc Architectural Design Technology [7:46%]; BEng Aeronautical and Mechanical Engineering [7:22%] and BEng Performance Car Technology [6:45%]. The pattern of performance is consistent with the main findings of previous sections; however, this is the first time the Humanities Degree Programme has been highlighted.

The percentage of continuing second year students in 2005/06 and given 'entitled to progress' status increased to 87%. The key influencing programmes included a number in the Subject of Engineering (within the School of S&T), where only 50% of the cohorts were entitled to progress: BEng Performance Car Technology, BEng Electrical and Electronic Engineering and BEng Aeronautical/Electronic (Avionics). In the School of C&CT undergraduate programmes, 7 out of 22 students were not entitled to 'progress' [32%] and in the School of A&D, BA Design: Moving Image, and BA Design: Multi Media Design 33% were not entitled to 'progress'. In the School of HSCSES, BA Criminal Justice, experienced 48% entitled to 'progress' from level 4, but went on to lose more students, an additional 4 from 16, did not continue [25%]. Five programmes experienced a zero graduation rate. However, in all but one case, BEng Aeronautical and Mechanical Engineering; the cohort size was small entering the first year. All these programmes have individually featured in earlier sections of this chapter.

Of the total cohort entering Level 6 in 2006/07, 92% achieved their awards. This is supported by a marked improvement across programmes, with many securing 100% achievement rates. A few programmes negatively influenced the 92% achievement rate: BA Design: Moving Image [3 students: 50%]; BEng Sound Broadcast Engineering [1:67%] and BSc Studio Recording and Performance Technology [2:75%]. However, programmes in Education [8 students] and Humanities [4] due to the higher number of students not completing provide greater potential to improve institutional level performance.

The progression of students from one level to another, shown in Table 23, represents the best case scenario, since the percentage of students progressing

each year is based on the number of students commencing their studies that year, rather than the total entitled to progress from the previous year. This is an additional loss each year and one that has been highlighted in previous sections. The 2004/05 cohort graduation rate takes those entering at Level 4, and considers how many of them graduate in 2006/07. Table 23 does not explicitly expose this. This was rectified in a later case report which is re-presentation in Table 24. Since the data is based at school and institutional level the cohort size provides for a stronger statistical base.

Table 24 Award achievement rates of the 2004/05 cohort of full-time first degree students to completion in 2006/07

Cohort analysis: Students who started in 2004/05 (by school) - excluding direct entrants

The table below relates to full-time students who started undergraduate (bachelors) 3-year degrees in 2004/05, and how many of them achieved a degree award.

Note - this table concentrates on students who got a full degree. Exit awards such as DipHE and CertHE have not been counted in this table. Nursing students have not been included as some will have a course that runs from Feb 2005 to the 2007/08 academic year. Any awards where the status has not yet reached "Agreed" have not been counted in this table.

Direct entrants onto years 2 or 3 of a degree (e.g. Computing) are **excluded** in the table below.

School code	School name	Got award	Didn't get award	Total initial enrolments (2004)	% of initital enrolments who got award	Still on course in 2007/08	% of initial enrolments who either have award or are still on course
05ART	Art and Design	81	41	122	66%	13	77%
05BUS	Business	13	22	35	37%	4	49%
05COM	Computing and Communications Technology	21	20	41	51%	9	73%
05EDU	Education and Community	83	34	117	71%	11	80%
05HLT	Health, Social Care & Sports & Exercise Sciences	39	36	75	52%	5	59%
05HUM	Humanities	33	30	63	52%	3	57%
05SCI	Science and Technology	26	58	84	31%	18	52%
Grand Total		**296**	**241**	**537**	**55%**	**63**	**67%**

From Doc 57

Of the original 2004/05 full-time first degree cohort, excluding 'advanced standing' students, 55% achieved their awards. It has the potential to rise to 67% if those students still on the course go on to achieve their awards in 2007/08. The Schools of Business [37%] and S&T [31%] have graduation rates less than 40% and three schools have approximately 50%: C&CT [51%]; HSCSES [52%] and Humanities [52%]. The performance of the School of S&T, if improved through strategic interventions, offers potential for improving institutional level performance due to it being 16% of total original enrolments. The Schools of A&D and E&C achieve the highest graduation rates [66%; 71%].

Full-time first degree cohort progression and achievement (advanced standing students)

The institution accepts students with 'advanced standing' each year into its programmes. In 2005/06, 272 such students' commenced studies, 73 of which entered into Level 5 and 199 entered Level 6. Recruitment into level 5 is dominated by the Schools of S&T and C&CT. This is also reflected at Level 6 and includes the School of HSCSES. The cohort analysis is shown in Table 25.

Graduation rates for advanced standing students were generally higher than for those entering at Level 4 (first year) [72%; 55%] and were particularly strong for those entering at Level 6 (final year). This is most notable in the Schools of S&T and Business where 85% compared to 31% and, 73% compared to 37% of enrolments, graduated.

The position for 'advanced standing' into Level 5, the second year, is less consistent and the School of C&CT experienced a reduction from 51% to 32% on a similar base level of enrolments whilst the School of S&T experienced an increase from 31% to 44%; both remain below a 50% progression rate. The potential for increase from those still on courses is considerably less for 'advanced standing' students [2%] than for 'non-advanced standing' students [12%].

Table 25 Award achievement rates of advanced standing full-time first degree students who started in 2005/06 and due to complete in 2006/07

Cohort analysis - "advanced standing" students who started in 2005/06 (by school)

"Advanced standing" students are defined as those who start their course at block 2 or higher, as they already have prior learning. They are also referred to as "direct entry" students. The table below relates to full-time students who began their study on undergraduate (bachelors) degrees in 2005/06, and how many of them achieved a degree award. No other students besides "advanced standing" students are included.

Note 1 - this table concentrates on students who got a full degree. Exit awards such as DipHE and CertHE have not been counted in this table. Nursing students have not been included as some will have a course that runs from Feb 2006 to the 2007/08 academic year. Any awards where the status has not yet reached "Agreed" have not been counted in this table.

Note 2: Some of the students who entered in block 3 did not get an award in 2005/06, but did get an award in 2006/07 - this can happen if the student had to repeat their year of study or if they had a deferral. For this reason, the total number of students who are shown as "Yes" under "Entry onto block 3" in the part (j) report, "Progression statistics of 'advanced standing' students at NEWI 2005/06 to 2006/07 (by school)" is less than the number shown who got an award in this report.

	School code	School name	Got award	Didn't get award	Total initial enrolments (2005)	% of initial enrolments who got award (in any year)	Still on course in 2007/08	% of initial enrolments who either have award or are still on course
Entry onto block 2	05ART	Art and Design	7	3	10	70%		70%
	05BUS	Business	6	6	12	50%		50%
	05COM	Computing and Communications Technology	6	13	19	32%	1	37%
	05EDU	Education and Community		1	1	0%		0%
	05HLT	Health, Social Care & Sports & Exercise Sciences	1	1	2	50%		50%
	05HUM	Humanities	2		2	100%		100%
	05SCI	Science and Technology	12	15	27	44%	3	56%
Entry onto block 3	05ART	Art and Design						
	05BUS	Business	8	3	11	73%		73%
	05COM	Computing and Communications Technology	32	11	43	74%		74%
	05EDU	Education and Community	8	3	11	73%		73%
	05HLT	Health, Social Care & Sports & Exercise Sciences	28	4	32	88%		88%
	05HUM	Humanities	2		2	100%		100%
	05SCI	Science and Technology	85	15	100	85%		85%
	Grand Total		**197**	**75**	**272**	**72%**	**4**	**74%**

From Doc 58

Full-time foundation degree cohort progression and achievement,

Foundation degrees were introduced by the British Government as a mechanism to reach out to new types of learners and thus widening access to higher education. They include work based learning and are designed with employers to meet employment and industry sector needs. Following the introduction of the new qualification, the institution moved much of its HNC/D provision across to foundation degrees and expanded into new niche employer led curriculum areas (e.g. Therapeutic Childcare; Birth to Three).

Analysis of foundation degrees are included in the student 'withdrawals' and 'suspended studies' sections of this chapter. However, until January 2008 the progression of foundation degree students had remained largely hidden to Core Executive, exposed only within AMRs. The summative impact of student 'withdrawals' and 'non-progression' was not known for Foundation Degrees until the cohort analysis report was provided. Table 26 is reproduced from a case report that was provided to inform the development of a new student retention strategy. Since a foundation degree is also a progression opportunity to an honours degree and

transfer is possible at a number of points, including after the 1st year, it was important not only to determine how many achieved an award but also how many were still deemed to be on a relevant course. This could include completing the foundation degree or studying a bachelor degree.

Table 26 Award achievement rates of full-time foundation degree students who started in 2005/06 and were due to complete in 2006/07 (by school)

Cohort analysis of Foundation Degrees - students who started in 2005/06 (Full-time), by school

The table below relates to full-time students who started 2-year Foundation Degrees in 2005/06, and how many of them achieved a Foundation Degree award in 2005/06 or 2006/07.

Note - this table concentrates on students who got a full Foundation Degree. Exit awards have not been counted in this table.

School name	Got award	Didn't get award	Total initial enrolments (2005)	% of initial enrolments who got award	Still on relevant course in Foundation degree	Bachelors degree	% of initial enrolments who got award or who are still on relevant
Art and Design	5	18	23	22%	1	4	43%
Business	3	9	12	25%	2	0	42%
Computing and Communications Technology	33	63	96	34%	8	6	49%
Education and Community	15	8	23	65%	1	2	78%
Health, Social Care & Sports & Exercise Sciences	11	12	23	48%	0	1	52%
Humanities	0	0	0	-	0	0	-
Science and Technology	15	24	39	38%	4	5	62%
Grand Total	**82**	**134**	**216**	**38%**	**16**	**18**	**54%**

Of the 207 total enrolments above, 34 were still enrolled on a course in 2007/08 that was relevant to their original foundation degree - it was either the same foundation degree, or a Bachelors degree in that subject.

Data extracted from SITS in January 2008.

From Doc 60

Table 26, evidences that the original cohort of 216 full-time students enrolled on foundation degrees, 82 [38%] achieved the award in the two years. A further 16 were still on a foundation degree course, and 18 had transferred to a bachelor degree. The highest achievement rate therefore possible was 54%. The performance of 54% is 13% less than for bachelor courses and 20% less than achieved by 'advanced standing' students. The figure of 38% is particularly influenced by the Schools of A&D [22%], Business [25%], C&CT [34%] and S&T [38%]. In the case of the Schools of C&CT and S&T, the enrolments are high enough to warrant strategic interventions that could influence institutional performance.

Foundation degrees form an important part of widening access strategies; however with as few as 38% of the original full-time cohort being awarded the qualification, it raises questions over their future sustainability at the institution.

The institution's non-continuation performance is dependent on its sub structure of school, programme and module performances. An insight into the performances of the 15 individual programmes are presented in Table 27.

Table 27 Award achievement rates of full-time foundation degree students who started in 2005/06 and were due to complete in 2006/07 (by programme)

Cohort analysis of Foundation Degrees - students who started in 2005/06 (Full-time)						Still on relevant course in 2007/08		% of initial enrolments who got award or who are still on relevant course
The table below relates to full-time students who started 2-year Foundation Degrees in 2005/06, and how many of them achieved a Foundation Degree award in 2005/06 or 2006/07.								
Note - this table concentrates on students who got a full Foundation Degree. Exit awards have not been counted in this table.								
Course code	Course name	Got award	Didn't get award	Total initial enrolments (2005)	% of initial enrolments who got award	Foundation degree	Bachelors degree	
FDAE2	FdEng Aeronautical Engineering	1	4	5	20%	2	0	60%
FDDD2	FdA Digital Media	5	9	14	36%	1	0	43%
FDEE2	FdEng Electrical and Electronic Engineering	3	3	6	50%	0	0	50%
FDFARD	FdA Art and Design	0	9	9	0%	0	4	44%
FDFBUS	FdA Business	3	9	12	25%	2	0	42%
FDFCOM	FdSc Computer Technologies	30	47	77	39%	5	6	53%
FDFCST	FdA Community Studies	3	3	6	50%	1	2	100%
FDFECS	FdA Early Childhood Studies	12	5	17	71%	0	0	71%
FDFS2	FdSc Forensic Science	5	8	13	38%	0	4	69%
FDFSPT	FdA Sports Studies	2	2	4	50%	0	0	50%
FDOHSEM2	FdSc OccHealth, Safety & Envir Management	6	3	9	67%	0	0	67%
FDPC2	FdEng Performance Car Technology	6	5	11	55%	2	1	82%
FDSB2	FdEng Sound/Broadcast Engineering	0	4	4	0%	0	0	0%
FDSS2	FdSc Sports Science	3	7	10	30%	0	1	40%
FDSU2	FdEng Sound/Studio Technology	3	16	19	16%	3	0	32%
Grand Total		82	134	216	38%	16	18	54%

Of the 207 total enrolments above, 34 were still enrolled on a course in 2007/08 that was relevant to their original foundation degree - it was either the same foundation degree, or a Bachelors degree in that subject.

From Doc 59

A number of programmes achieved less than the overall institutional achievement rates of 38%. These are: FdEng Aeronautical Engineering [20%]; FdA Digital Media [36%]; FdA Art and Design [0%]; FdA Business [25%], FdEng Sound/Broadcast Engineering [0%]; FdSc Sports Science [30%] and FdEng Sound/Studio Technology [16%]. Of the 134 students that did not get the award, 47 [35%] were studying the FdSc Computer Technologies and 16 [12%] the FdEng Sound/Studio Technology. Although FdA Art and Design achieved 0% the programme had 4 students transferred onto the bachelor degree. Other programmes transferring students onto bachelor degrees were: FdSc Computer Technologies [6]; FdSc Forensic Science [4]; FdA Community Studies [2]; FdEng Performance Car Technology [1] and FdSc Sports Science [1].

The data provided in Table 27 provides further insight into where interventions have the potential to impact on institutional non-continuation or achievement performances. Programmes where the magnitude of students not achieving the award, together with where the percentage achievement rates were low, provide the greatest opportunities for measurable impact at the institutional level. Some programmes, such as FdEng Performance Car Technology, FdSc Computer Technologies and FdEng Sound/Studio Technology have previously been highlighted in earlier sections in this chapter regarding withdrawals.

This section has concentrated on the summative impact of not retaining students in the institution on full-time, first degree and foundation degree programmes. It has emphasised the quantitative impact, revealing at times a stark and rather clinical overview of programme and school cohort non-progression performance. It has highlighted the need to gather and monitor separately the performance of 'advanced standing' and 'traditional entry' level 4 students and, identified opportunities where strategic interventions have the potential to achieve maximum performance benefits in reducing the non-continuation of students.

The case study also revealed consideration of other performance data and information relevant to student retention but not covered in the earlier sections. Thus, before concluding this chapter there are two further considerations: firstly, students' perceptions of their experiences for which external and internal survey methods were employed; and secondly, further initiatives adopted by the institution to improve student retention.

4.7 The student experience

This chapter has so far concentrated on quantitative aspects of student retention. The presentation of the case study is now developed by including the students' perceptions of their higher education experiences in an attempt to discover new insights or correlations with previous data. Analysis will be presented for the institution, school and programme as far as the data permits.

This section focuses on the 'student experience' as determined by three surveys: The National Student Survey (NSS)[47] ; The Programme Experience Questionnaire (PEQ) [48] and the Student Barometer Survey (SBS)[49] and provides a degree of qualitative analysis of the 'student voice' into what hitherto has been a systems, performance driven analysis. The three surveys cover programme experience, teaching and learning and, experience of student support and the campus environment. All were deemed crucial dimensions of student retention and widely considered in the literature.

National student survey (teaching, learning and assessment)

The NSS was introduced into the higher education sector in 2005 and captures feedback from final year completing students on their experience at the institution: the results are published on http://www.unistats.com and supports comparisons across institutions and subjects. The case institution considers the data each year at SQC and sends reports to Academic Board. In 2007/08, additionally each school was required to consider the results and make a formal response. This was received by Academic Board, November 2008. The information is captured from completing

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[47] The National Student Survey forms part of the revised quality assurance framework (QAF) for higher education. The aim of the survey is to gather feedback on the quality of students' courses in order to contribute to public accountability as well as to help inform the choices of future applicants to higher education. Downloaded on 14 April 2009 from http://www.hefce.ac.uk/learning/nss/

[48] The Course Experience Survey is directed at final year students on undergraduate degree courses in Hospitality, Leisure, Sport and Tourism. It aims to uncover information about their perceptions and attitudes towards a whole programme of study, rather than a single year or module/unit. In 2001 a pilot study was conducted to find out if the Ramsden Course Experience Questionnaire (widely used in Australian HE institutions) would be suitable for measuring student satisfaction in Hospitality, Leisure, Sport and Tourism courses. Following the pilot study a slightly modified version of the questionnaire was used to conduct nationwide surveys in 2002 and 2003. Downloaded on 14th April 2009 from http://www.heacademy.ac.uk/hlst/resources/detail/ourwork/OP_sceq_2004

[49] The institution engaged in the i-graduate Student Barometer Survey in Autumn 2007 which addressed areas such as learning, living, support and arrival and included some questions specifically aimed for international students.

students, and does not therefore include previously withdrawn students or those not progressed into the final year; it is therefore a selective sample. The 2008 and 2009, NSS results, presented alongside the 'questions' and 'scale' are shown in Table 28 and evidences that 'Organisation and management' and 'Assessment and feedback' remains a challenge. This was recognised by AB.

From the survey's introduction in 2005, the case institution evidenced steady and consistent improvement in student's overall satisfaction: 70% [2005]; 73% [2006] to 77% in 2008; it remained at this level in 2009. Institutions are also ranked against each other, including for overall student satisfaction. The case institution's ranking was: 121 out of 127 [2005]; 111/127 [2006]; 130/145 [2007]; 145/194 [2008] and 147/210 in 2009.

Across 2008 and 2009, a number of questions achieved 80% or above, these were: the course is intellectually stimulating [80%]; staff are enthusiastic about what they are teaching [82%]; staff are good at explaining things [82%]; assessment arrangements and marking had been fair [81%]; I have been able to contact staff when I needed to [81%]; I have been able to access general IT resources when I needed to [80%]; my communication skills have improved [80%] and the course has helped me present myself with confidence [80%].

The questions relating to 'Organisation and management' was the lowest performing group and remained so for 2009. The performances ranged from 57% to 75% in 2008 and 60% to 73% in 2009. This group included practical matters such as timetabling changes being communicated effectively, as well how well the timetable works for individuals. With a large number of part-time students and full-time commuting students both these would be weighted heavily.

In general, the NSS 2009 performances showed some improvements in teaching, academic support and personal development but small gains and losses in most other categories. There was a marked improvement in the results for Q8 [5%], referring to detailed comments on student work. The institution however remained in the lower percentile of UK ranked universities. This provides a 'select' student voice and insight into learning, teaching and assessment as well as programme related organisation and management which may be influencing factors behind the levels of student withdrawals and non-continuations.

Table 28 National student survey results, 2008 (2009)

Question number	% Agree Actual value	Scale	Question
Q22	77 (77)	'Overall, I am satisfied with the quality of the course'	Overall, I am satisfied with the quality of the course.
Q4	77 (80)	The teaching on my course	The course is intellectually stimulating.
Q3	79 (82)		Staff are enthusiastic about what they are teaching.
Q1	82 (86)		Staff are good at explaining things.
Q2	77 (77)		Staff have made the subject interesting.
Q9	68 (68)	Assessment and feedback	Feedback on my work has helped me clarify things I did not understand.
Q8	69 (74)		I have received detailed comments on my work.
Q6	81 (80)		Assessment arrangements and marking have been fair.
Q5	79 (77)		The criteria used in marking have been clear in advance.
Q7	62 (67)		Feedback on my work has been prompt.
Q11	76 (81)	Academic support	I have been able to contact staff when I needed to.
Q12	73 (74)		Good advice was available when I needed to make study choices.
Q10	72 (78)		I have received sufficient advice and support with my studies.
Q15	59 (60)	Organisation and management	The course is well organised and is running smoothly.
Q13	75 (73)		The timetable works efficiently as far as my activities are concerned.
Q14	57 (62)		Any changes in the course or teaching have been communicated effectively.
Q18	66 (73)	Learning resources	I have been able to access specialised equipment, facilities or room when I needed to.
Q17	80 (79)		I have been able to access general IT resources when I needed to.
Q16	71 (73)		The library resources and services are good enough for my needs.
Q21	78 (79)	Personal development	As a result of the course, I feel confident in tackling unfamiliar problems.
Q20	78 (80)		My communication skills have improved.
Q19	77 (80)		The course has helped me present myself with confidence.

Adapted from Doc 63 and Doc 66

Thus far the presentation of the case has concentrated on institutional level performance. The following section describes subject based performances which do not necessary correlate across to the schools due to the definitions adopted in the survey. The external data sets dictate the levels of data interrogation. The information presented draws on a report from SQC to AB (Doc 63) but notes that the School of Business was omitted from the analysis.

A number of questions scored less than 60% across a number of subjects: questions 14, 15 and 7 were evident across 6 subjects [almost half] and questions16, 8 and 9 were evident across 4 subjects. The lowest performing

question groups were 'Organisation and management' and 'Assessment and feedback' and additionally there was evidence of concern relating to learning resources. Two other questions, 12 and 18 relate to academic support and access to specialist facilities occurring across three subjects.

The Subjects of Communications Technology and Design Communication had performances less than 60% across all three 'Organisation and management' questions with the latter scoring 20% and 27% across two of them. The Subject of Fine and Applied Art, scored 50% and 46% in two of the three questions, whilst the Subject of Social Care scored 39% in one question. For questions associated with 'Assessment and feedback', the Subject of Computing scored between 45% and 52% across three questions, the Subject of Design Communications scored 54% to 56 % across three questions, and the Subject of Science scored 27% on one question. A third area, 'Academic support', was particularly prominent in the responses from the Subject of Design Communications with the associated three questions receiving between 52%-57%; Science also had two questions below 60% [47% and 53%].

The above summary of the poorer performing questions suggests that the students in the Schools of C&CT, A&D (Subjects of Design Communications, Fine and Applied Art) and S&T (Subject of Science) are less satisfied than in other subjects; this presents a risk to retaining students. The Subject of Sports and Exercise Sciences within the School of HSCSES, on the other hand received no result less than 60%; this was not however matched by other Subjects in the School that were critical of resources.

The results are obtained from self selecting samples of students (by definition, as they completed the survey) and in some cases the samples were small. The responses, never-the-less provide valuable insights to students' perceptions of their experiences. Furthermore the results are available for public scrutiny to inform institutional choice for UCAS applicants. The importance of measuring the NSS 'overall student satisfaction' was acknowledged in 2007, when it was incorporated as a new Board of Governors level KPI and monitored annually.

The following section describes the results of a parallel internal survey to assert completed students' perceptions of their programme of study.

Programme experience survey

Student retention has been a priority since 2001. Concern about student retention echoed across all senior level committees, including Academic Board. During 2006/07 concern escalated following the publication of the NSS results in 2006 and in response, the institution commissioned an internal survey; AB agreed to adopt the Course Experience Questionnaire (P. Ramsden, 1991). It expressed the survey as the Programme Experience Questionnaire (PEQ) to concur with internal terminologies. It was sent to all students that had completed their studies in 2006/07 [1,293 students] in the autumn of 2007.

The PEQ 2007, institutional level results are presented in Table 29 in descending order of concurrence with '% agree/strongly agree'. There were 25 separate statements relating to the programme of study. Questionnaires from 22% [284 students] of eligible students were used to inform the analysis and of this 75.5% indicated 'Overall, I was satisfied with the quality of the course'. The highest scoring questions were those relating to developing graduate level transferable skills: written communications [84.6%], analytical [87.8%], problem solving [83.4%], planning [86.8%], team membership [76.1%] and developing confidence about tackling unfamiliar problems [80.4%]. Scoring less highly were areas relating to student feedback [in the range 62.3%-72.4%] and clarity of expectations [in the range 66.2%-69.6%] both considered important aspects of retaining students. A high percentage of students [69.7%- 92.3%] 'agreed or strongly agreed' that the 'Workload and assessments not being reliant on facts and a good memory' was appropriate.

Inhabiting the range 62.3%-77.7% were questions relating to teaching. In this group 67% of respondents considered staff made it clear from the start what they expected from students; 70.4% considered the lecturers were extremely good at explaining things and 74.5% considered the teaching staff worked hard to make their subjects interesting.

Table 29 Programme experience questionnaire 2007: institution level summary

Question	% agree/ strongly agree	% disagree/ strongly disagree
Q5 The course sharpened my analytical skills	87.80%	12.20%
Q22 My programme helped me to develop the ability to plan my own work	86.80%	13.20%
Q11 The programme improved my skills in written communication	84.60%	15.40%
Q14 I was generally given enough time to understand the things that I had to learn	83.90%	16.20%
Q2 The programme developed my problem-solving skills	83.40%	16.60%
Q10 As a result of my programme, I feel confident about tackling unfamiliar problems	80.40%	19.60%
Q3 The teaching staff on this programme motivated me to do my best work	77.70%	22.40%
Q9 The programme helped me develop my ability as a team member	76.10%	23.90%
Q15 The staff made a real effort to understand any difficulties I had with my work	76.00%	24.00%
Q25 Overall, I was satisfied with the quality of the course	75.50%	24.50%
Q20 The teaching staff worked hard to make their subjects interesting	74.50%	25.50%
Q17 The teaching staff normally gave me helpful feedback on how I was doing	72.40%	27.60%
Q1 It was always easy to know the standard of work expected	72.40%	27.60%
Q18 My lecturers were extremely good at explaining things	70.40%	29.50%
Q6 I usually had a clear idea of where I was going and what was expected of me on this programme	69.60%	30.40%
Q24 The staff made it clear, right from the start, what they expected from students	67.00%	33.00%
Q7 The staff put a lot of time into commenting on my work	62.30%	37.80%
Q21 There was a lot of pressure for me to do well on this programme	39.20%	60.80%
Q13 It was often hard to discover what was expected of me on this programme	33.80%	66.20%
Q16 Feedback on my work was usually provided only in the form of marks or grades	33.30%	66.70%
Q23 The sheer volume of work to be got through on this programme meant it couldn't all be thoroughly comprehended	30.30%	69.70%
Q4 The workload was too heavy	20.50%	79.60%
Q8 To do well on this programme all you needed was a good memory	10.40%	89.50%
Q12 The staff seemed more interested in testing what I had memorised than what I had understood	9.80%	90.30%
Q19 Too many staff asked me questions just about facts	7.70%	92.30%

Sort based on ranking of Agree/Strongly Agree. Adapted from Appendix 2 in Doc 62

The paper provided to SQC presented subject level data, the home of specific programmes; this means the sample sizes for some were small. The report highlighted:

'It is difficult to draw firm conclusions on the quality of the student experience from the questionnaire, since the numbers of responses received in some subject areas are very small, but it can be noted that key themes for development appear to relate to the communication of expectations and consistency of feedback on performance.'

(Doc 62 p.1)

Although the student returns were low at the level of the subject the following comparisons between institution and subject level data were notable:

Q3.The teaching staff on this programme motivated me to do my best work. Graduates strongly disagreed with the statement in Engineering [31%], Design Communication [35.3%] and Business [28%] in contrast with the institution average [16.6%]. Science was the highest at 40% although this amounted to only 5 returns.

Q17.The teaching staff normally gave me helpful feedback on how I was doing. Several subjects strongly disagreed with this statement more strongly than the institution average [27.6%]: Engineering [65.5%]; Fine Art [57.1%] and Science [60%].

Q18. My lecturers were extremely good at explaining things.
A number of graduates more strongly disagreed with this statement than the institution average [29.5%]: Fine Art [71.4%]; Engineering [40.7%] and Science [80%].

Q20.The teaching staff worked hard to make their subjects interesting.
Graduates strongly disagreed with this statement in Engineering [48.3%], Business [44%], Design Communication [40%] and Science [60%] compared with the institution average [25.5%].

The responses for PEQ 2007 highlight subjects where students are less satisfied than the institutional average. It emphasises particular themes relating to teaching, learning and assessment such as engagement and motivation as well as student feedback. There appears to be some correlation between the graduate feedback on programmes and those schools and subjects which have previously been identified as having high levels of withdrawals and referrals, namely Engineering and Business, with the School of A&D having previously been identified with moderate

levels of withdrawals. Since the PEQ applies to graduated students (and therefore the successful students) it is likely to present the most optimistic view.

In developing a model and performance improvement framework for student retention, the above data suggests that having performance indicators relating to student satisfaction could have a meaningful role in focusing interventions to drive up student retention. If adopted at institution level, and providing robust sample sizes could be determined at subject or school level, the indicator could be cascaded down through the institution.

The PEQ provided an additional internal 'moderation' for the externally administered NSS and provides for more immediacy of interventions to realise performance improvements.

Student support and non academic interfaces with the institution are other aspects which influences student experience. In the same year the PEQ was being administered with recent graduates, the institution also took part in the on-line Student Barometer Survey (SBS) considering non academic student support.

Student barometer survey (non academic student support)

There was a degree of investigation overlap in the areas of student satisfaction (teaching, learning, assessment, academic support and programme satisfaction) undertaken through the NSS 2007 (2008 and 2009) and PEQ 2007 surveys. However, neither survey addressed non-academic support.

In autumn 2007, the institution contributed to the on-line SBS. The report to Operational Managers Group (OMG) and Senior Executive identified the lead department should work with internal support teams and the conducting company, i-graduate, to strengthen the applicability of the questionnaire for all students. The on-line questionnaire addressed areas of learning, living, support and arrival with some questions targeted towards international students. The following results were highlighted in an internal report to OMG:

> 'Students at eight higher education institutions across Wales were surveyed
> in the first annual Wales Student Barometer on 16 aspects of student
> support, ranging from student finance to accommodation, counselling and
> disability, with [the] 'Case Institution' scoring the highest overall rating out of
> the institutions taking part...Out of the four categories under consideration

(Learning, Living, Support, and Arrival), [the] 'Case Institution' scored best on the latter... We ranked reasonably well in support and learning overall, but less well in the "living" categories. Areas in which it is statistically significant that [the] 'Case Institution' ranked first in Wales...Employability; Work experience; Careers advice; Internet access; Good contacts; Financial support and finance office; IT support.'

(Doc 65 pp.2-3)

The Institution was placed last in the ranking against other Welsh institutions for university clubs and societies. This is seen by potential students as an important aspect of the student experience but is not one the institution has a management responsibility for[50]. However, reputational positioning for non-academic support is important for applicants, and is exploited by some external student guides.

The following sections focus on a series of non-data led interventions to improve student retention that the institution has made since 2001.

Interventions

The institution responded to the key issues highlighted in the NSS surveys, the PEQ 2007, and on a number of quantitative reports highlighting the performance of student withdrawals and non-continuation of students by applying a range of tools and interventions. A number of these are described in this section.

Strengthening student led engagement

Strengthening the Student Union has been a focus of attention (and resources) by the Board of Governors, Core Executive and Academic Board since 2001. In 2007, the Student Union agreed to reform into a Student Guild and focus activities on the provision of student support, clubs and societies whilst the case institution assumed responsibility for the operational management of bars and shops. Subsequently, the Student Guild, reporting to the Board of Governors, evidenced a greater engagement with enrichment activities, clubs and societies for all students and a

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[50] The Student Union/Student Guild has separate management and governance arrangements but has reporting responsibilities to the Board of Governors and Academic Board. They receive an annual grant from the institution for providing services to students, such as clubs and societies.

move away from the drinking club that had dominated previously. Notably in 2008, there was an increase in voting engagement by students and attendance at key committees. The potential for academic and social integration was increasing.

Audit and review

The next section describes how the university's audit and review quality enhancement process was applied to improve 'Programme organisation and management'. This has been consistently highlighted in the NSS since 2005 and echoed in the PEQ and SBS in 2007.

The institution applies its audit and review process to any aspect of business: academic, operational and cross institution themes. For example a themed review of recruitment and admissions was undertaken during 2004/05 and resulted in widespread recommendations within schools and central administration (Doc 67). The impact included: a reorganisation of student recruitment and admissions across the institution; strengthened procedures and a new physical and virtual, single, initial point of contact for enquiries, applicants, students and alumni, called the Service Information Desk (SID), located close to student support services and a new 'learning zone' in the library. This drew students together and gave a greater sense of community and social and learning integration; factors known to influence student retention.

The consistent feedback from the student satisfaction surveys and the continued challenging student non-continuation performance led the institution in 2007/08 to include a themed audit of programme management across the institution. The audit report highlighted:

> *'Frequent changes and clashes to the timetable;*
>
> *Last minute cancellation of lectures with no subsequent re-scheduling;*
>
> *Inaccurate information in respect of the programme of study;*
>
> *Student feedback not responded to adequately.'*
>
> (Doc 68 p.2*)*

A number of the areas identified for enhancement had previously been determined by external and internal surveys. The audit and review committee identified three

key areas around which recommendations were formulated; these are shown in Table 30.

Table 30 Programme management audit recommendations

Student support	Communication Mechanism	Programme Management and Organisation
Cohort and student identity Student induction Identification of appropriate support Student Guild Learning resources	Cancellation of lectures Electronic communication Interdisciplinary communication Formal school to institution communication	Roles and responsibilities Timetables Student feedback Monitoring of attendance Assignment bunching Submission of work

The report of the audit and review group highlighted:

'During the focus group discussions, it became evident to the Panel that a consistent approach to programme management and organisation did not exist. A dichotomy between the involvement of academic and administrative staff also emerged, which led to the conclusion that clear guidance in respect of the involvement of academic and administrative staff was required.'

This was further strengthened in the recommendations for future work, which included:

 '...to research consistency of base-line roles and responsibilities of administrative staff in respect of playing a clearer role in supporting the management and organisation of programmes and managing the communication with students of these arrangements' and *'to enhance the level of staff development and training in respect of programme management roles and responsibilities of academic and administrative staff.'*

(Doc 68 p.11)

A new academic and academic administrative infrastructure was introduced in January 2010 and includes a new Student and Programme Centre from where all programme related administration is delivered. Appropriately consistent processes and systems are being introduced. The newly established School for Undergraduate Studies has Associate Directors with enhancing programme management and student experience specific responsibilities. A new programme commissioning process introduced for 2010 includes KPIs on student satisfaction, non-continuation

rates and cohort progression rates. Performance data and methodologies derived from this research are directly informing policy, strategy and funding within the case institution.

Student induction

The transition into higher education, including induction is an important influencer in retaining students. In January 2006, a working group was established to strengthen student induction within the case institution. It adopted a three stage approach: priming, welcoming and engaging. The priming stage involved sending information to all full-time students due to commence study in the September. The information leaflet was called 'getting started':

> *'... it introduced services available to students and incorporated a pre-arrival checklist. It also included information on accommodation & the enrolment process; tuition fees; details on student support, child care & health care; careers and ....'*

> (Doc 71 cited in Doc 69)

The induction 'priming stage' also included an invitation to one of three 'Fresher' workshops established to support students with higher education study skills, an opportunity to become familiar with the campus and staff and support available in advance of commencement of study.

The 'welcoming stage' consisted of a simultaneous address to all new students from the Principal supported by the Registrar and Secretary before attending sessions on a number of themes: advice & information services; sports, clubs & societies; student life and an introductory overview of all the support services provided by operational managers. This was delivered against the backdrop of timetabled enrolment sessions, and school and programme induction throughout the week. An induction checklist was also provided to all new students so they could check that they had received the required information.

The third and final stage of induction, as determined by the working group, was 'engaging'. A number of services were promoted for example the Student Union, Sports Centre and catering facilities. The induction working group recognised the importance of induction extending into programme delivery, and that students may

require continued support as they become increasingly 'engaged' with the programme and its requirements.

> *'Home Programmes will begin teaching, tutoring and supporting students, though should be mindful that much of the information distributed before and during the Induction week will only make sense as new students encounter issues. Some students will need help to identify learning differences whilst others will discover that their chosen course is not what was expected. Care should be taken to direct these students to appropriate help...'*

<div align="right">(Doc 69 p.6)</div>

The Induction Working Group, reporting to WPARC, continued to strengthen the induction process: for example in 2008/09, the use of peer supporters, including residential peer supporters into the student accommodation were introduced, and additional pre-fresher's workshops were included in school based activity (Doc 70). Once on a programme, students were supported with a range of services and support. Rather than describing them all, the following sections focus on initiatives and interventions implemented to respond directly to the need to improve student retention. They are described to assist practitioners in the development of student retention strategies and the identification of variables considered relevant to the systems led, *Management Model for Improving Student Retention*.

Personal development planning (PDP)

PDP is compulsory for all programmes and is considered to contribute to improving student retention. However, in 2007 its delivery was considered variable (Doc 73). The *Personal development planning summary report 2006/07* (Doc 73) illustrates that despite all schools engaging with PDP:

> *'Retention problems still exist on some programmes despite the operation of PDP....PDP [is] successful when embedded within modules' and that validations of new programmes were evidencing this approach. Allocation of time for staff student contact, including individual appointments was also considered by the author to have 'improved the operation of the PDP process.'*

<div align="right">(Doc 73 p.1)</div>

Student retention strategy task and finish group (SRSTFG)

During 2007/08, at the request of AB, the WPARC convened a task and finish group to prepare a student retention strategy. The team consisted of members who were already engaged with student retention and were agents of change within the academic and operational constituencies. The work was co-ordinated by the Student Retention Manager. As a result of the work a number of specific progression/non-continuation reports were produced such as described earlier in this chapter e.g. cohort analysis and progression reports.

The group also became a catalyst for specific qualitative initiatives driven by individual staff, schools and departments. The following interventions briefly summarise some of the qualitative initiatives supported by the task and finish group as well as those led by individuals within the general auspices of developing a student retention strategy[51].

Student support tutors

The Schools of HSCSES and S&T identified the need for additional academic support tutors supporting higher education key skills, such as maths/numeracy and essay writing/literacy. Both schools had previously been identified as having high levels of withdrawals and suspended studies. The School of S&T also had high levels of student referrals. All schools recruit high levels of widening access students and in particular, mature students who may be deficit in recent subject knowledge and skills. The SRSTFG approved proposals to introduce student support tutors.

The form and content of delivery varied with need, but generally included scheduled classes (e.g. maths) and drop in sessions (e.g. understanding assignment briefs). Representatives from the student support tutors attended the SRSTFG and provided valuable insights into the extent of student need. They also highlighted how their work had strengthened teaching, learning and assessment, such as designing assignment briefs.

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[51] A student retention strategy was presented to Academic Board in 2009. It is being revised in light of developments, the new academic structure and enhanced emphasis on student experience.

As a result of the feedback from students, Heads of Schools and student support tutors, the resource was continued into 2008/09 and 2009/10. It was strengthened for 2008/09 by piloting key skills assessment on entry into the institution in one school (HSCSES); this was continued for 2009/10.

Pre-course (post admission) key skills assessment and on-course support

The practice of assessing students' key skills needs on entry is well established within the further education sector. However, this is not the situation in higher education and was not in place in the case institution. The SRSTFG investigated the financial and other resource implications and agreed to deliver a pilot in the first instance. The aim of the key skills assessment[52] pilot developed during 2007/08 and implemented for 2008/09 was to identify at risk students and enable early referral for support. The School of HSCSES was identified following the successful intervention of additional key skills support project; it had high levels of student withdrawals and the project had the support of the Head of School. The project identified that:

> *'Assessment can indicate the need for specialist support for dyslexia, dyspraxia, or dyscalculia and help initiate quick access to student services. In conjunction with this students requiring less specialist help yet need to enhance written, analytical, or numerical skills, can be targeted and receive an appropriate and timely level of support in the early part of the first semester...This type of support can be provided in readiness for the first round of student assessments usually set between October to December, and representing a high risk period impacting on student retention. It is also anticipated that early diagnosis and support will enhance student grades, with the aim of improving progression and reducing the need for assignment re-submission and exam re-sits.'*
>
> (Doc 74 p.3)

The project provided an early identification of skills gaps, developed individual learning plans which could be linked to PDP, and allowed for early structured support following further diagnostic assessment. All were considered positive

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[52] The Initial Assessment tool is an on-line literacy / numeracy assessment package which enables immediate results indicating the student's level of literacy/numeracy skills; assessing from entry level 1 up to level 3. For the project, level 3 was used as an indicator for literacy, and level 2 for numeracy.

influencing factors to improve student retention rates in high risk schools. A number of disadvantages existed: verbal and written skills weren't assessed; students may have seen it as a threat; resources, computers and staff time, were needed and ongoing support for students identified as having skills gaps. The pilot was extended for a further year.

Academic integration and engagement has been determined as critical for student retention. All too often students can quickly feel isolated, start to miss lectures and the 'student/institution separation' commences which unless checked leads to withdrawals or failure (Tinto, 1993).

Student retention officers

The Programme Management Audit (Doc 68) highlighted the issue of student attendance and previous sections in this chapter have evidenced that students given suspended studies may not return. The levels of referrals in some schools were excessive; this led to high levels of repeat year students who were subsequently found to have high non-continuation rates.

Student retention officers were introduced into the Schools of Business, S&T and HSCSES. The additional staffing resource enabled a register of attendance to be administered, non-attendance and non-submission of work to be followed up and, a dedicated non-academic point of contact relating to pastoral issues. Additional communications with students had also been introduced by academic staff in the School of C&CT using SMS and Moodle[53] (Doc 76). This direct and immediate communication style was aimed at improving attendance and was supported by on-line assignment submission and feedback.

Effective lifelong learning inventory (ELLI)

The Effective Lifelong Learning Inventory (ELLI) is a collaborative research project with 12 other HEIs investigating the factors required to improve the 'Learning Power' of students (Doc 75). Initiated by two academic staff in the School of Business and

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[53] Virtual learning environment

the Subject of Computing, the project being relevant to improving student retention was considered by the SRSTFG in April 2008.

Students from a range of programmes in the School of Business and Subject of Computing engaged in the project. Each attended a session involving:

> *'an introduction to the seven dimensions of learning,*
>
> *the completion of the online ELLI questionnaire,*
>
> *the production of each student's personal learning profile,*
>
> *a discussion on the accuracy of the profile and ideas for students to improve their 'Learning power'.*
>
> *the introduction of 'Facebook' for each group of students, in order to provide a network of support,*
>
> *student photographs taken for the Facebook site...*
>
> *The students who attended seemed to enjoy the sessions and most of them were able to identify with their personal profile. Most students thought that the exercise was worthwhile and there was some interest in using a Facebook group as a network tool.'*
>
> <div align="right">(Doc 75 p.1)</div>

This was followed up later in April when students were asked to repeat the questionnaire and volunteers were selected to contribute to focus groups to discuss the ideas of 'Learning Power'. In May 2008, a workshop was held for all staff members of the 13 HEIs engaged in the ELLI Project, to reflect on progress and consider future plans. This is an on-going research project.

<u>What about me?</u>

This initiative was organised jointly by the Student Guild, the Nurses and other interested staff and held 3-5 March 2008. The initiative was taken to the SRSTFG (Doc 77) as a new way of engaging and supporting students. The purpose of the project was to:

> *'Raise awareness amongst students about the indicators of stress.*

How to recognise the signs of not coping which could affect their own performance in relation to achieving their goals.

Provide time out to relax prior to the examination/assessment period to combat stress.'

(Doc 78 p.1)

The group recognised its support for student retention by suggesting its value was:

'Assisting students who may be at risk from dropping out by providing them with some coping mechanisms to assist them throughout the academic cycle and in particular through the stressful examination/assessment period...longer term looking at incorporating this type of support as a rolling programme at various points during the academic year. Including forming a small working group to discuss long term strategies which could be included in [the] 'Case Institution's retention strategy.'

(Doc 78 p.1)

The three day event included workshops and information, covering: healthy eating, wellbeing, stress awareness, physical activity, support groups, people to talk to, taster sessions and financial and legal advice.

The evaluation report highlighted that although there was good response to some of the coping strategies offered, the overall participation was poor. Strong engagement was however identified in the School of A&D which is located on a separate campus. There may be a link between levels of engagement to the levels of referrals (self or by academic staff) for counselling, which is described in the next section.

Increased student counselling support

There is little evidence of evaluative reports from Student Services being fed into cross institution student retention initiatives, until 2008. At this time the WPARC took an interest in student counselling to inform its work on student retention. The following information is adapted from a report presented to its meeting on 26th June 2008 (Doc 79) and which informed a subsequent presentation to the joint Institute Managers Group (IMG) and Academic Board Strategic Away days (June 08).

The counselling service identified that from 2004/05 to April 2008, the Schools with the highest number of clients supported were A&D (23%) and HSCSESs (37%) with Business (6%), C&CT (6%), Humanities (5%) and S&T (6%) having the least. 61% are mature students, 38% have a declared disability of which 66% are female and of the total seeking support, 91% move from the clinical population (in need of therapeutic support) to the non-clinical population (Doc 79 p.3). The team collect questionnaires from students and out of the 20 received, 18 considered that the support they received enabled them to remain at the university (Doc 79 p.4). An insight into the issues that students present to counselling is provided below:

> *'Anecdotally Counsellors are aware of the broad range of issues that students bring to counselling, and it is clear that Nursing students face a demanding course and placement, alongside managing family and emotional pressures which may emerge. For some, placements can trigger previous or current life experiences or raise issues relating to mortality and illness. For some Social Science students there are previous difficult life experiences which may be triggered by the nature of the course and placements too. Many Art and Design students declare Dyslexia, however this is not the reason they come for counselling. Art and Design Students bring a broad range of issues such as self-esteem and identity, depression, anxiety, self-injury, and childhood trauma.'*

> (Doc 79 p.2)

The high level of referrals in the Schools of HSCSES and A&D may be indicative of a student population with significantly more mental health issues than in other schools, or it could be that the referral system is more fully understood, communicated to students and adopted by staff. It is worth recalling the high levels of student withdrawals and suspended studies in the School of HSCSES and modest levels in the School of A&D. Counselling would seem to be a crucial offer to some students who are at risk of withdrawing. Following the presentation to Committees, the SRSTFG agreed to increase the counselling resource to a) recruit additional counselling support and b) undertake a pilot scheme with the School of Humanities involving workshops with staff on '*Maintaining helpful boundaries with students'* in response to:

> '*Given the recent THE article's findings[54] which show that tutors are often taking the brunt of students' mental health issues*'

<div align="right">(Doc 79 p.9)</div>

Other Student Services teams could usefully be held to scrutiny and their impacts on the student experience understood and measured. This would assist with assessing the broader costs and impact of widening access missions in HEIs across academic, administration and operational areas.

This section has explored the case institution's approach to improving student retention including how the need for various interventions were identified, defined and implemented and overall impacts on progression and non-continuation performances. Both qualitative and quantitative information has been utilised from bespoke reports to longitudinal analysis of case reports. Before a model can be determined, it is necessary to consider further the relationships widening access and retention. These are developed in the following chapter and include a new methodology for considering the complex inter-relational impacts resulting in two new KPIs.

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[54] (Hudson, 2008)

Chapter 5 MULTIPLE WIDENING PARTICIPATION INDICATORS AND THEIR INFLUENCE ON STUDENT NON-CONTINUATION PERFORMANCE

The empirical exploration of student retention thus far, has included widening access and non-continuation performances of individual Welsh HEIs (Appendix A) and an in depth case study of one Welsh HEI, with a strong widening access mission. Analysis of the patterns of absolute performance and those against HESA's benchmarks, evidence a link between widening access and high levels of student non-continuation.

Chapter 5 draws on data from StatsWales[55](Doc 81) requested specifically for this research (Appendix H) and data from the case institution (Appendix G). It offers new insight into the scale and degree of student retention challenges, faced by HEIs with large numbers and proportions of 'non-traditional' students. New knowledge is offered to researchers, practitioners and policy makers in the form of two new performance indicators that bring together widening access and student retention in a direct and intimate way. In doing so, responds to:

> *'What is the case for a new performance indicator and measurement system supporting widening participation performance?'[RQ5].*

The analysis presented in this chapter also supports the need for a review of the algorithm that determines the calculation of the HESA benchmarks for student non-continuation.

The impetus for this chapter began at Christmas 2007, as one paper was being prepared for the DBA (H. James, 2007a) and another one was being developed for a joint meeting of the Academic Board and Institute Managers Group (H. James, 2007c) (Doc 80); both spoke to the topic of student retention. During the data

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[55] StatsWales is a free-to-use service that allows visitors to view, manipulate, create and download tables from the most detailed official data on Wales. Available at http://statswales.wales.gov.uk/index.htm

analysis a new dimension of widening access began to emerge; the '*Multiple Widening Participation Index' (MWPi)* was defined by this research. Although crude in the early analysis originating from the case institution, James (2007c) evidences both the number and proportion of full and part time enrolled students in one academic year having multiple widening access attributes and subsequently continue or did not continue with their studies. This data had hitherto not been exposed within the case institution or in the literature. The preliminary findings were presented to HEFCW's Widening Access Conference in February 2007 (H. James, 2007b), and led to contact from the National Audit Office team who were preparing the report *Staying the course: the retention of students in higher education* (National Audit Office, 2007); the researcher and the 'case institution's contribution is formally acknowledged. Due to institutional priorities this new insight remained dormant until this research. The concepts and key aspects of this research findings, in relation to the new performance indicators, have been shared and peer reviewed at a national, annual Widening Participation Research Seminar, hosted by the University of Bristol (H. James, 2009).

One of the new performance indicators, the '*Multiple Widening Participation Index' (MWPi),* is defined as the number of widening access related attributes (or indicators) a student possesses. For example, a 'mature student' (indicator 1) domiciled in a 'low participation neighbourhood' (indicator 2) who has 'non-traditional qualifications' (indicator 3) and 'disabled' (indicator 4) has a *MWPi* equal to 4; it therefore follows that when *MWPi=0* it represents traditional students. The new performance indicator, *MWPi*, is a measure of the widening access complexity experienced by a student. Whilst valuable in its own right, it has greatest value when combined with the 'nature' of the complexities. These are defined through this research as the *Specific Widening Participation Indicators (SWPi),* the second new performance indicator, and incorporates various widening access attributes, such as having 'non-traditional qualifications' or domiciled in a low participation neighbourhood.

The first section establishes the non-continuation of students in the Welsh higher education sector beyond the year of entry for 2002/03, 2003/04, 2004/05 and 2005/06, set against a number of *Specific Widening Participation Indicators (SWPi).* The second section considers the *MWPi* and *SWPi* applied within the case institution, drawing on data commissioned specifically for this research.

5.1 Specific widening participation indicators *(SWPi)* - the welsh higher education sector full-time first degree non-continuation performance

This section presents for the first time the effects of '*Specific Widening Participation Indicators' (SWPi)* acting cumulatively on the total full-time first degree new entrants across the Welsh higher education sector, and in doing so, also evidences the effects of the '*Multiple Widening Participation Index' (MWPi).* The data was provided by StatsWales (Doc 81) specifically to support this research. Data captured for the Welsh higher sector as a whole is of particular value as it includes all the universities and is therefore inclusive of their respective diverse missions and ensures appropriate sample sizes: traditional universities with large numbers of traditional students and universities such as the case institution with strong widening access performances.

The section explores various combinations of *SWPi* seeking to identify patterns of performance and highlight issues that have the potential to influence research, professional practice and policy, including funding. The data is analysed and presented in a range of graphical forms to illustrate the relationships between the non-continuation rates for entrants with particular student attributes *(SWPi)* and their relative performances to each other, over time.

Specific widening participation indicator- mature entrants

This section aims to evidence the relationship, over time, between non-continuation rates for full-time first degree mature entrants with no previous higher education and when they are also in possession of other *SWPi*, such as being 'in receipt of DSA'.

Firstly, the non-continuation performance of each data set is presented over the four years, enabling an overview of the performances across a number of *SWPi* acting together, including total mature full-time first degree entrants; mature full-time first degree entrants from LPN; and mature full-time first degree entrants from LPN and who are 'in receipt of DSA'. Figure 6 illustrates this as well as their relative position to each other. Since being mature, is in itself a *SWPi,* the *Multiple Widening Participation Index* is greater than zero*, MWPi>0.* The graphs are influenced by a new methodology, introduced in 2006/07, for calculating low participation neighbourhoods.

There is a degree of consistency over the four years, including the relative position between each, and the dominance of the *base SWPi* is clearly evident. Mature entrants with no previous HE and from low participation neighbourhoods (LPN) were consistently found to experience the highest non-continuation rates [average 18.3%], whilst mature entrants with no previous HE who were from LPN and 'in receipt of DSA', had the lowest non-continuation rates [average 9.5%]. This is counter intuitive to the greater the disadvantage the higher the non-continuation rates. It is not evident here; at least where *SWPi= 'in receipt of DSA'* is concerned.

Figure 6 Specific widening participation indicators: Welsh sector full-time first degree mature entrants non-continuation, 2002/03-2005/06
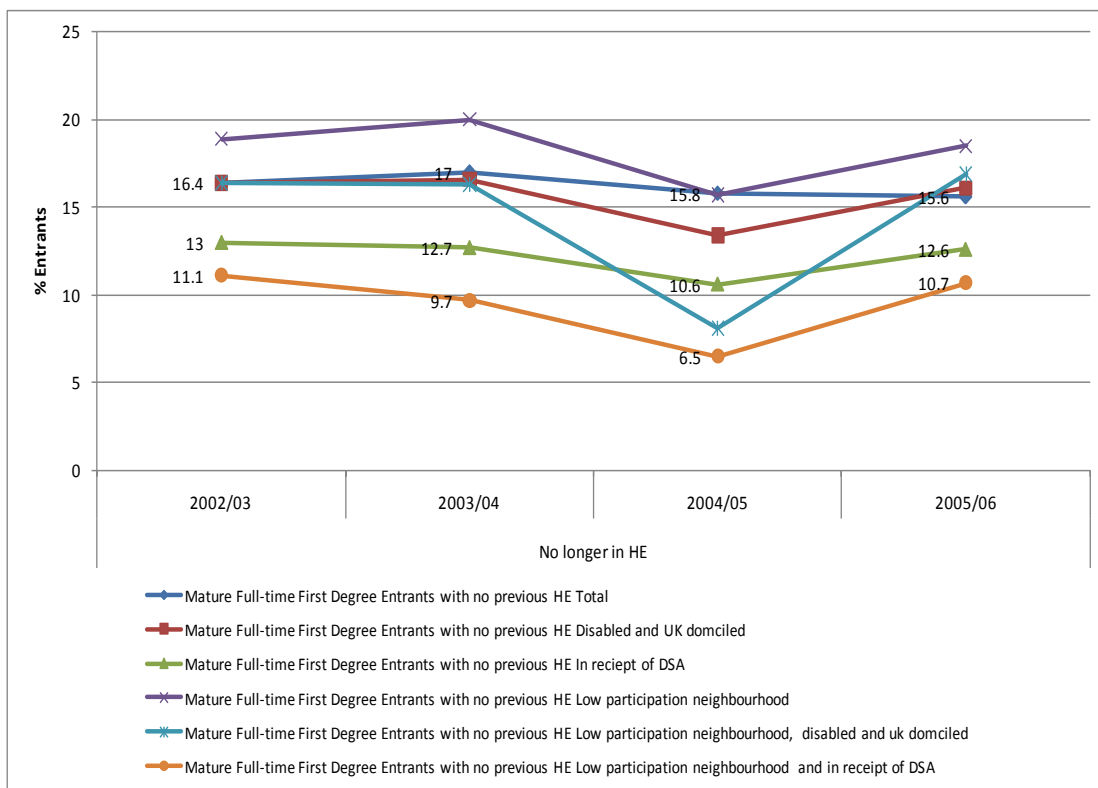
Adapted from Doc 81, Appendix H

The reduction in non-continuation rates from being a mature entrant to being mature and 'in receipt of DSA' is also evident, although to a lesser degree [average 16.2% reduces to 12.2%]. Even where mature entrants disclose a disability but is not 'in receipt of DSA' the non-continuation rates are reduced, although much less [to 15.6%] so, than when 'in receipt of DSA'. In general, over the four years of

consideration[56] when the mature entrant is also 'in receipt of DSA', the likelihood of non-continuation reduces; in some cases, by as much as half. Being registered for DSA support has a significant affect on reducing non-continuation. It is possible that the support provided is not only effective in supporting the specific disability, but also the broader and multifaceted issues that present themselves. To highlight the influence of DSA further, the data is represented in a bar chart (Figure 7) with the key data points separately identified.

Figure 7 Specific widening participation indicators: Welsh sector full-time first degree mature entrants non-continuation, 2002/03-2005/06
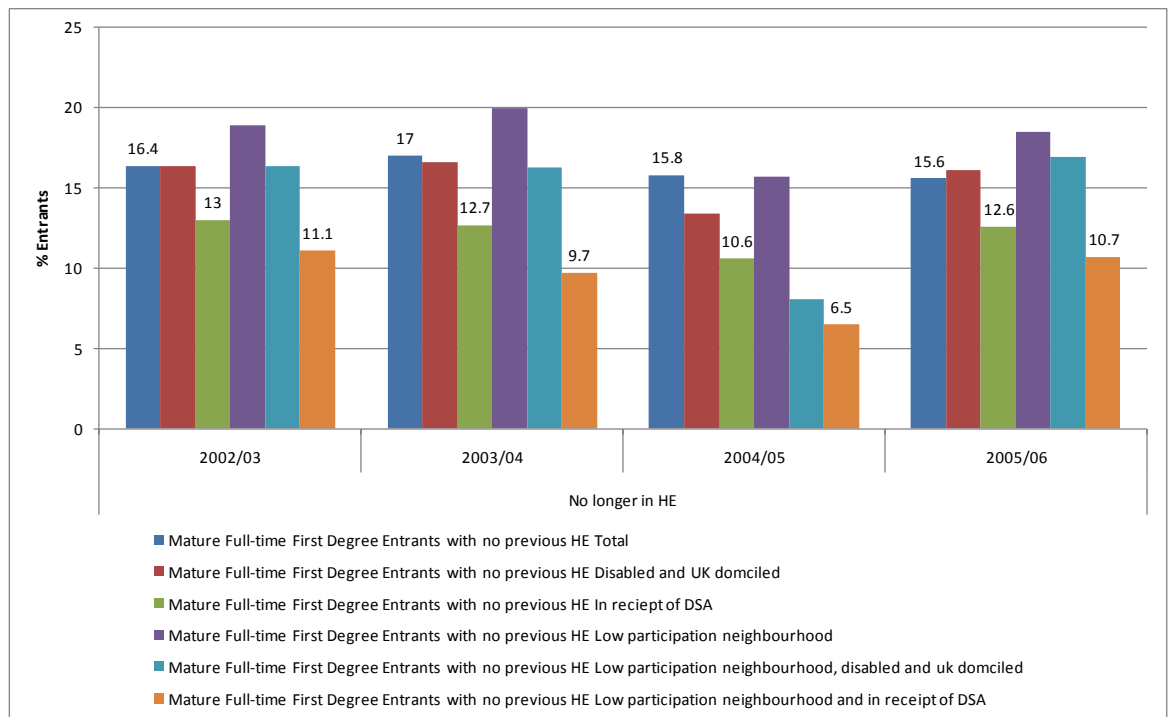
Adapted from Doc 81, Appendix H

Specific widening participation indicator- young entrants

This section aims to evidence the relationship, over time, between non-continuation rates for full-time first degree young entrants and when they are also in possession of other *SWPi*, such as being 'in receipt of DSA' or/and from a LPN. The data presented in this section differs slightly from the previous one as the HESA performance indicators for young entrants also include socio-economic groupings. The equivalent graphical representations of non-continuation performances are

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[56] This was the latest national data available at the time of the data request from StatsWales.

therefore more complex. Consistent with the previous section, the non-continuation performances of each data set, over the four year period, is presented first. This enables an overview of the performances across a number of *SWPi* acting together, including total young full-time first degree entrants; young full-time first degree entrants from 'low participation neighbourhood'; 'disabled'; 'in receipt of DSA'; from 'socio economic groupings' NS-SEC 4, 5, 6 & 7; and those from LPN and socio-economic groupings NS-SEC 4, 5, 6 & 7. Figure 8 illustrates this, as well as the relative position to each other. This was particularly valuable in the previous section and is therefore repeated here. It is also important to note, as in the previous section, that a new methodology for calculating low participation neighbourhoods was introduced in 2006/07 which could influence the data. The graph illustrates a degree of consistency over the four years, including the relative position between each. The dominance of the *base SWPi* is clearly evident.

The performance trends for young entrants, young entrants and disabled; young entrants and 'in receipt of DSA', young entrants from NS-SEC 4,5,6 and 7 and young entrants from LPN are similar relative to each other and vary little over the four years. The highest average non-continuation rate of 11.4% was experienced for young entrants from LPN whilst the lowest was 5.9% for young entrants 'in receipt of DSA'. This is consistent with the non-continuation rates for mature entrants. The base population, young entrants, averaged 8.1%, twice that for mature entrants. This is consistent with 'non-traditional' students not continuing at higher rates than 'traditional' students.

When young entrants had *MWPi=2*, i.e. young, from LPN and 'in receipt of DSA'; or young, from NS-SEC 4, 5, 6 and 7 and 'in receipt of DSA' the trends over the four years is more sporadic than when *MWP=0* or *1*. It does not necessarily evidence however, that as more *SWPi* act together i.e. higher *MWPi* there is an increase in the non-continuation rates. An example of this is young entrants 'in receipt of DSA' and from NS-SEC 4, 5, 6 & 7 that average of 6.42% against the base data average of 8.1%.

Figure 8 Specific widening participation indicators: Welsh sector full-time first degree young entrants non-continuation, 2002/03-2005/06
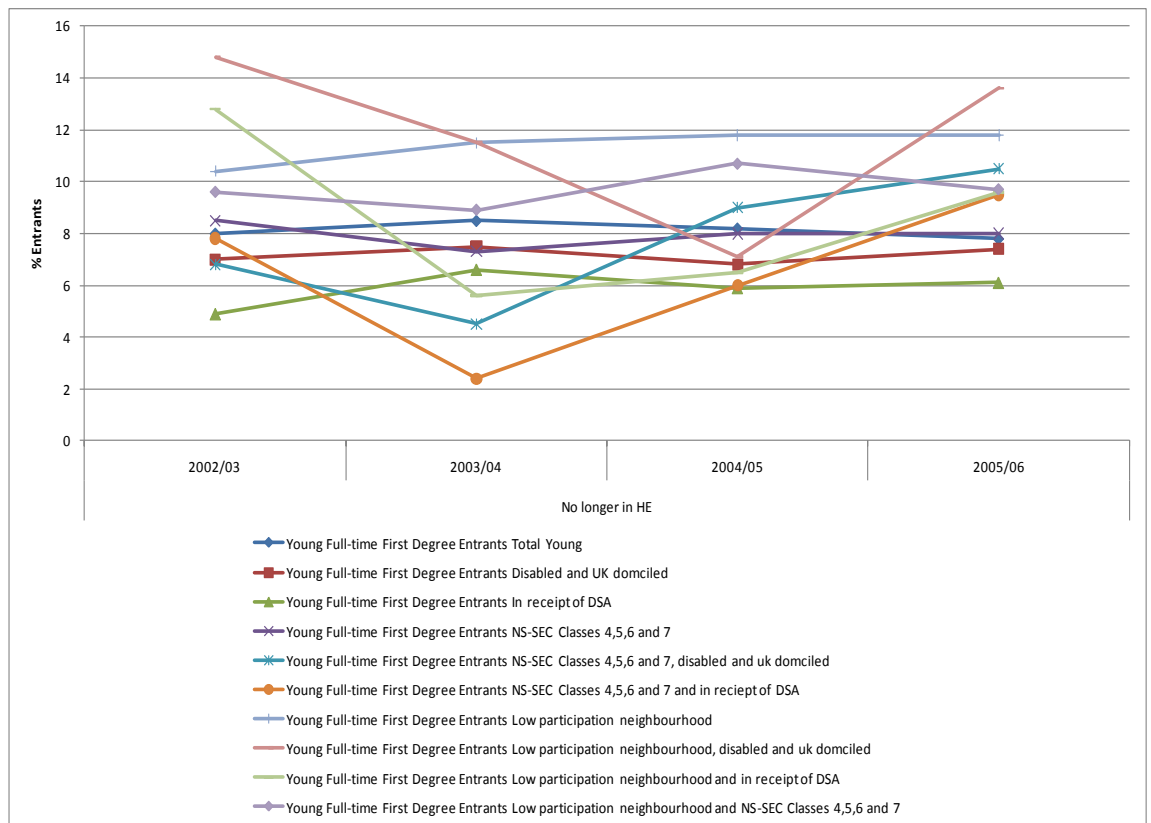
Adapted from Doc 81, Appendix H

The reduction of non-continuation experienced by 'young entrants' when they are also 'in receipt of DSA' is most clearly evident in Figure 9, from the respective pairs of data points; it also shows a degree of consistency over the four years. For example in 2002/3, 8% of young full-time first degree entrants did not continue in higher education beyond the year of entry as compared to 4.9% of the same group also 'in receipt of DSA'; an improvement of 3.1%. The pattern is also evident for young entrants from socio-economic groups NS-SEC classes 4, 5, 6 & 7. The primary category performance experience 8.5%, 7.3%, 8% and 8% over the four years reducing to 7.8%, 2.4%, 6% when 'in receipt of DSA'. Only in 2005/06 did it rise above the primary category figure to 9.5%. Reductions of 0.7%, 4.9%, 2% and - 1.5% were evidenced.

Young and mature entrants 'in receipt of DSA' increase their potential of continuing in higher education beyond the year of entry. This is a significant finding in relation to the effectiveness of DSA and warrants further research.

Figure 9 Multiple widening participation index: Welsh sector full-time first degree young entrants non-continuation, 2002/03-2005/06
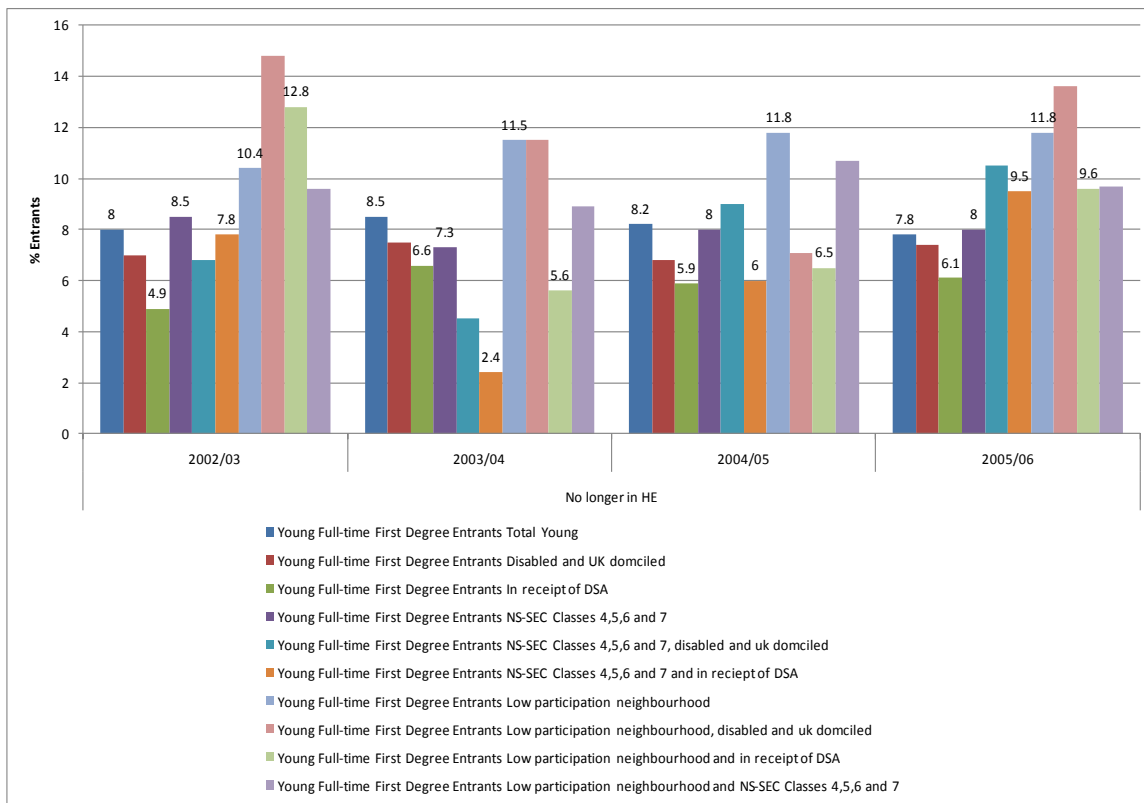
Adapted from Doc 81, Appendix H

Non-continuation rates and 'in receipt of DSA'

Thus far in this chapter, the data analysis and presentation has been restricted to those entrants not continuing in higher education beyond the year of entry. This section develops the analysis further and compares the representation of entrants 'in receipt of DSA' not continuing to those in the total enrolled population. In doing so it highlights any under or over representation. This is shown in Figure 10 and draws on the StatsWales data, provided in Appendix H.

The number of full-time entrants 'in receipt of DSA' increases from 573 in 2002/03, 562 in 2003/04, 569 in 2004/05 to 807 in 2005/06. When set against the general expansion of new entrants from 18,356 in 2002/03, 19,029 in 2003/04, 19,091 in 2004/05 to 19,426 in 2005/06, the relative proportion increases by 1.1%. This is evidenced in Figure 10 alongside the proportion of entrants 'in receipt of DSA'.

Figure 10 The relationship between full-time entrants 'in receipt of DSA' to those not continuing and 'in receipt of DSA', 2002/03-2005/06
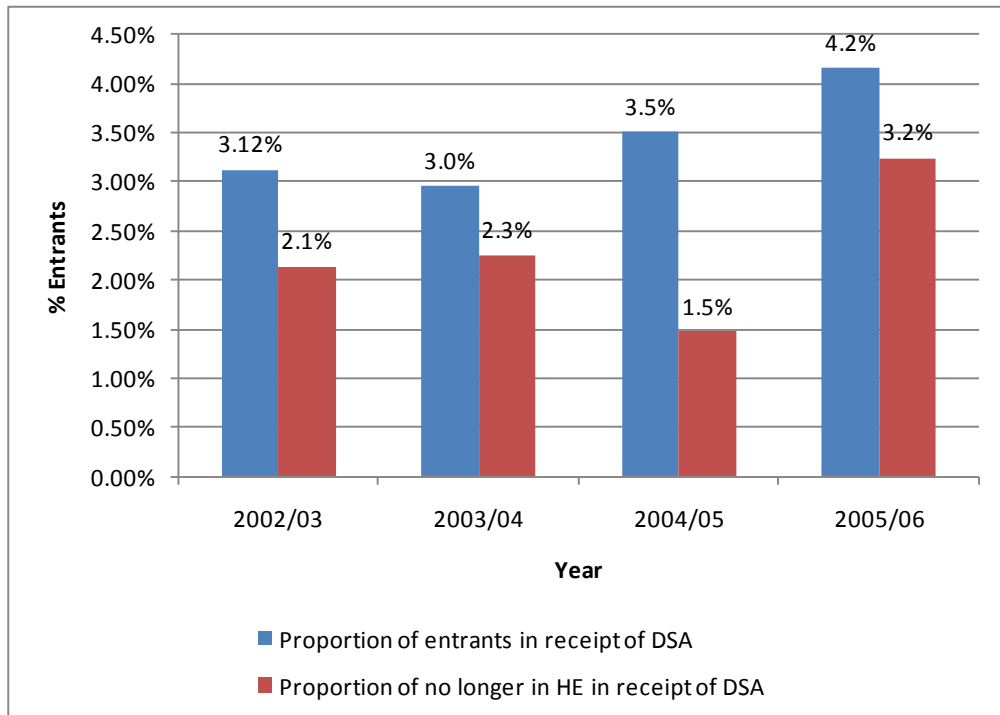
Adapted from Doc 81, Appendix H

Full-time first degree entrants 'in receipt of DSA' are consistently under-represented in the non-continuation population by as much 2% (in 2004/05) and generally by 1%. This substantiates the previous two sections and evidences the benefit that 'in receipt of DSA' has on reducing the likelihood of non-continuation. This is evidenced at the Welsh higher education sector level.

This section represents new insights and knowledge into the impact of DSA on improving the likelihood of entrants continuing their studies. This finding opens up research potential into the DSA support received by eligible entrants, its relationship to other attributes such as being domiciled in a LPN and its relationship to specific institutions or institution types, funding and impacts on student retention.

5.2 Multiple widening participation index *(MWPi)* – the case institution, widening access and student non-continuation performance

The detailed performance of the case institution contextualised within the Welsh HEI sector (Appendix A), established it as a leading HEI for widening access, and one which has, over time, reduced its non-continuation rates for new full-time 'first degree entrants'(see Chapter 4). Reductions in non-continuation rates for 'Other undergraduate' students, including those studying part-time were also discussed.

This section discusses the application of a new performance indicator, the *Multiple Widening Participation Index (MWPi)* that was defined and piloted in the early phase of this research study (H. James, 2007a, 2007c). The index is the number of *Specific Widening Participation Indicators (SWPi)* acting at any one time and is defined in detail in Chapter 3. The index can take on a value from *MWPi=0*, equating to a traditional student, through to four or five (or greater) depending on the number of *SWPi* being considered. The earlier pilot phase of the research (H. James, 2007a, 2007c) informed the further development and, evidences the significance, of the *MWPi* in three ways. Firstly, the *MWPi* is located within the total and non-continuing student populations (previously only non-continuing population); it considers data over a four year period 2004/05 to 2007/08 (previously only one year); and contrasts performances relating to traditional and 'non-traditional' students. The data analysis enables direct comparisons to be made between continuing part-time and full-time students and those who do not continue.

Consistent with the previous section, evidencing the implications of the *MWPi* and *SWPi,* this section focuses on the case institution and includes five different data constructs. Firstly, 'entrants' is replaced by 'students'; the case institution considers all students not continuing, not only 'new entrants'. Secondly, the case institution includes full and part-time first degree and 'other undergraduate' students who were eligible to progress and not only full-time first degree. Thirdly, the case institution's data concerns itself with whether the students continue at the institution and not whether they are in higher education the following year. Fourthly, the case institution's data excludes those who had withdrawn, or had been withdrawn, during the year and as such is not the complete non-continuing population. Finally, the internal data is not externally verifiable at the date of the data capture.

This section is based on a similar premise to the previous section which is that students enter higher education with any number and types of widening access attributes *(Multiple Widening Participation Indicators*; *Specific Widening Participation Indicators).* In contrast to the previous section however, deeper and more specific data manipulations are possible due to access to the data sets. To maintain a degree of statistical significance the analysis is undertaken at institutional level.

This section reveals the extent of the challenges faced by one HEI with strong widening access performances.

Multiple widening participation index and student participation performance

The first section explores the impact of the *MWPi* on both the continuing and non-continuing student populations who were not withdrawn prior to assessment boards or due to graduate, 2004/05 to 2007/08; it does not therefore represent the complete non-continuing populations and as such cannot be compared with those presented for consideration in Chapter 4. It considers full and part-time students with *MWPi* from 0 (traditional student), 1 (any one *SWPi*), 2 (any two *SWPi*) through to 4 and is shown in Figure 11.

The distribution of each *MWPi* within the student population, over the four years, remains broadly consistent. The most striking result, and the one with the greatest implications for policy, funding and professional practice in student retention is the distribution relating to *MWPi=0*; that relating to the representation of traditional students. The proportion of traditional students in the student population over the four years is 16.1% in 2004/05, 18.% in 2005/06, 16.9% in 2006/07 and 15.5% in 2007/08. It is appropriate to assume a similar distribution of *MWPi* for students in their graduating year since there are minimal variations over the years. Also evident is that approximately 25% of the student population consistently has *MWPi=2*, (varying from 24% to 28% across the four years) and considering *MWPi=3* and *MWPi=4* together, amounts to approximately 8% of the student population. These results are perhaps not so surprising for an institution with a strong widening access performance. However, the low proportion of traditional students is astounding.

Figure 11 Multiple widening participation index distribution for student population (excluding those withdrawn and graduating), 2004/05-2007/08
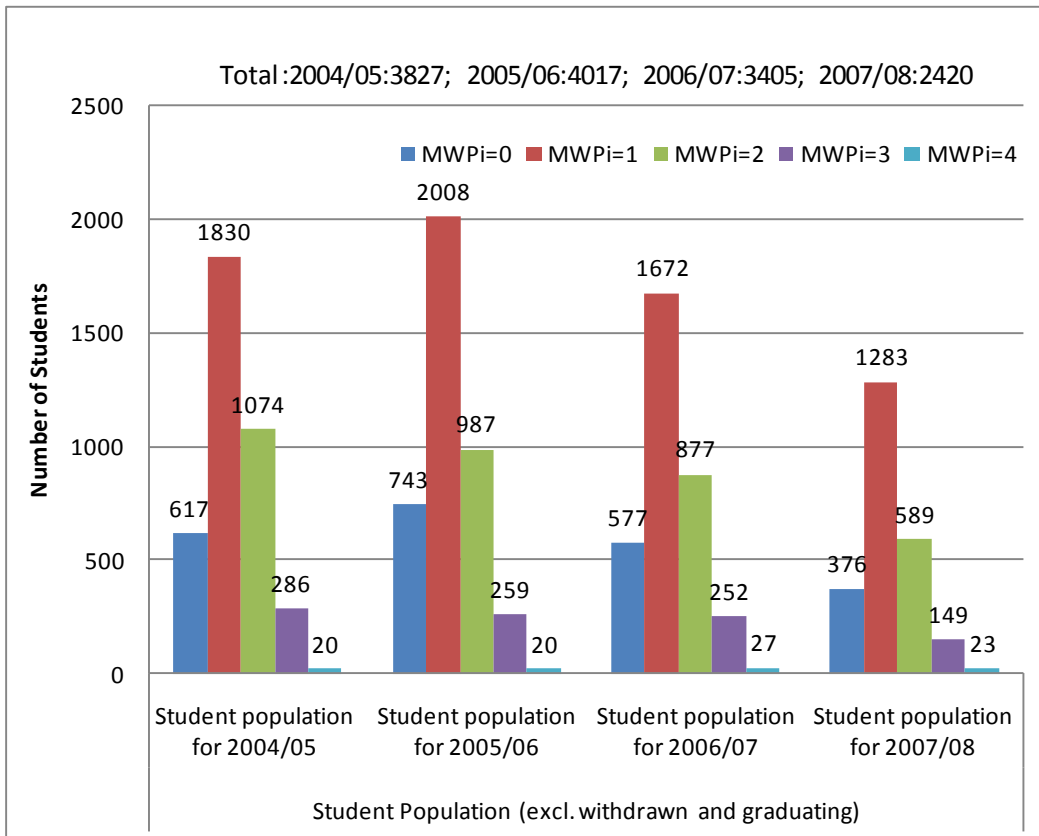
From Doc 83

Figure 12 Multiple widening participation index distribution for student population (excluding those withdrawn and graduating), 2005/06: full and part-time.
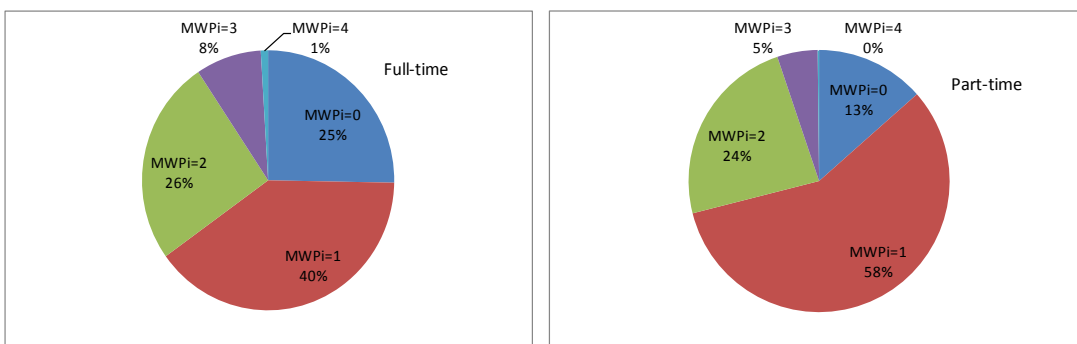
From Doc 84

The distribution of the *MWPi* across the fours years is broadly consistent and as such, one academic year (2005/06) was chosen to illustrate its distribution across the full and part-time populations. This was the same population used for the pilot study (James, 2007a, 2007c) .

The distribution of the *MWPi* within the full and part-time populations is illustrated in Figure 12. The greatest variation occurs for *i=0* and *1*. It evidences that *MWPi=0* (traditional students) represents only 25% and 13% of the full and part-time student populations respectively. When *MWPi=1* the representation is 40% and 58% respectively. This is perhaps not so surprising since there are more mature students studying part-time than young students (Appendix B). However, it cannot be assumed that when *MWPi=1* that it is entirely due to mature students. The distribution evidenced in Figure 12 shows the extent of penetration of the widening access policy across the case institution.

The degree to which the student population has some form of *MWPi* is a revelation. It is possible by considering the HESA KPI performances to determine the degree to which new entrants with particular *SWPi* are represented in the student population. However, only by adopting the *MWPi* approach can the true extent of the impact of widening access be determined.

Multiple widening participation index and student non-continuation performance

Considering the distribution of *MWPi* across the student population provides a deeper insight, and ultimately, understanding of the scale of the challenges faced by HEIs. This section considers the nature and extent of full and part-time student non-continuation with respect to *MWPi*, 2004/05 to 2007/08: firstly, in relation to the distribution within the non-continuing population; secondly in absolute terms and then as a percentage of students not continuing to those who do.

Full-time non-continuing population

The representation of *MWPi* across the full-time participation and non-continuing populations for 2005/06 is summarised first of all; this is shown in Figure 13. The distribution of the *MWPi* of the full-time student non-continuing population shows a closeness to that of the continuing population. It shows that 76% of the non continuing population has a *MWPi>0* against a representation in the total population of 75%. *MWPi=1* experiences some variation and an increase of 4% representation in the non-continuing population.

Figure 13 Multiple widening participation index: full-time non-continuing student population and participation, 2005/06
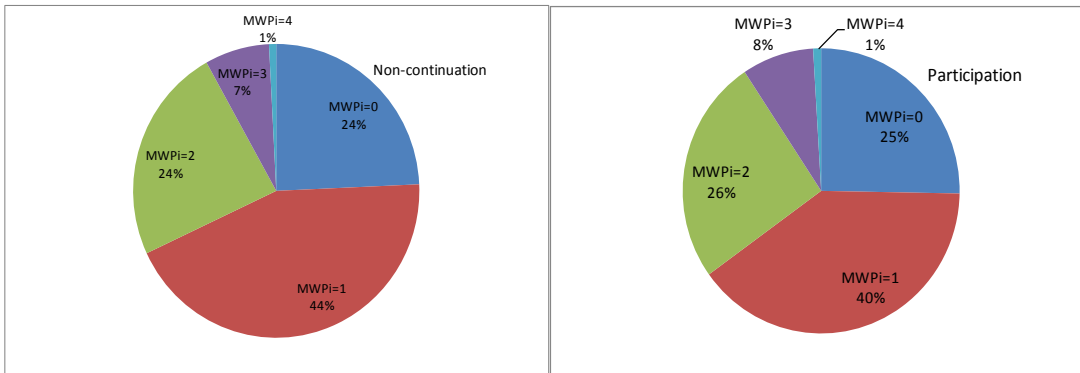
The relationships between the full-time continuing and non-continuing populations, 2005/06 to 2008/09 are shown in Figure 14. As was evidenced in the participation population for 2005/06, the distribution of *MWPi* for those students continuing (c) and those students not continuing (nc) are similar: *MWPi=0*: 26% (c), 24% (nc); *MWPi=2*: 27 (cp), 24 (nc). The general shape of Figure 14 is similar to that of the student population (see Figure 11) with the exception in 2006/07 when the value for *MWPi=0* exceeds that for *MWPi=3,* this is not representative of the distribution within the total population. In 2005/06 to 2006/07, the non-continuation of students with *MWPi=2* is at similar levels as those with *MWPi=0*. In 2007/08 returning in 2008/09, there is a considerable reduction in the non-continuation levels of traditional students compared to those with *MWPi=2*, which remains at previous levels. That year also experiences a dramatic reduction in non-continuation levels across all the *Multiple Widening Participation Indices* greater than zero, *MWPi>0*. This contrasts to minimal reductions experienced by traditional students. This is shown in Figure 14. An alternative perspective is presented in Figure 15 which shows more clearly the reducing ratio between those not-continuing to those who did.

Figure 14 Multiple widening participation index and returning full-time students, 2004/05-2007/08
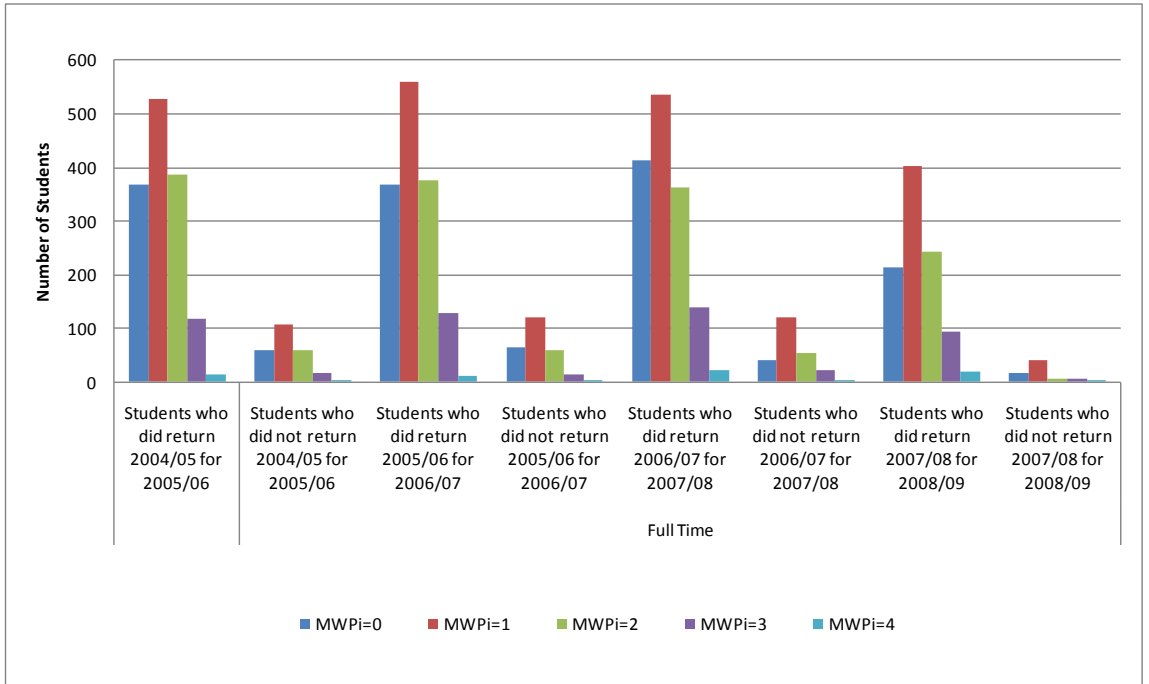
Figure 15 Widening participation index and the percentage of returning full-time students, 2004/05-2007/08
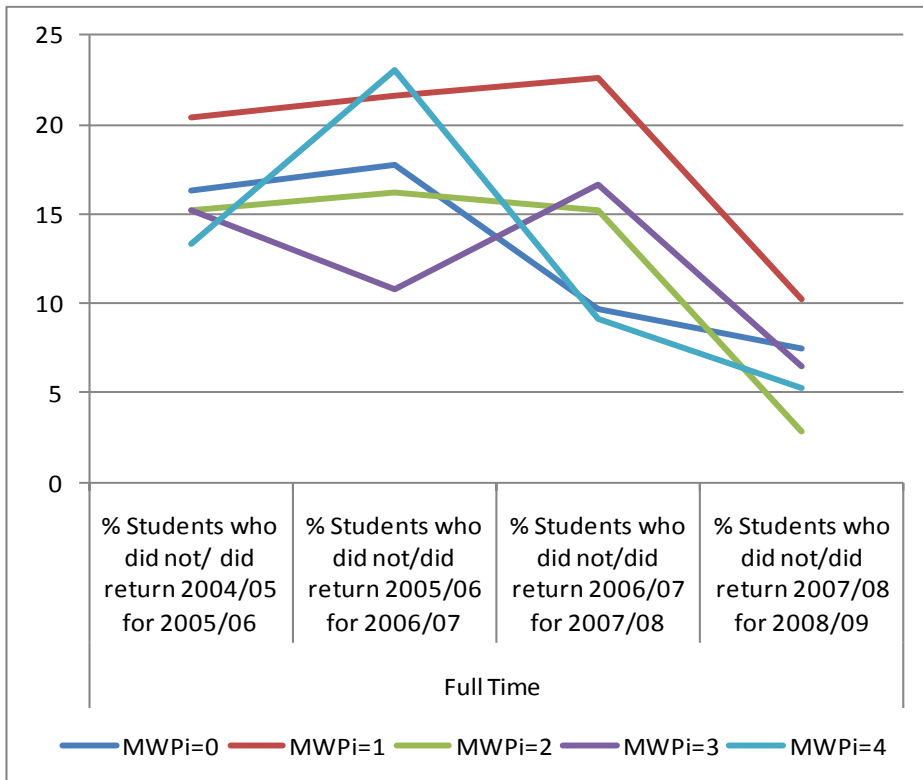
This significant reduction in the number of students in 2007/08 not returning in 2008/09 occurs over the same period of the 'Summer 2008 project' (Doc 45) described in Chapter 4. From its peak in 2005/06 returning for 2006/07 the percentage of students who 'did not/did return' reduced by10.9%. Of particular significance is the extent of the reduction relating to students with *MWPi >0*. Dramatic reductions are experienced for students with *MWPi*=1,2 and 4 [11.4%, 13.3% and 17.8%]. Traditional students reduce by 10.2% . The same methodology is used in the following section to evidence the performance of part-time students.

Part-time non-continuing population

The representation of *MWPi* across the part-time participation and non-continuing populations for 2005/06 is summarised first of all; this is shown in Figure 16.

Figure 16 Multiple widening participation index: part-time non-continuing student population and participation, 2005/06
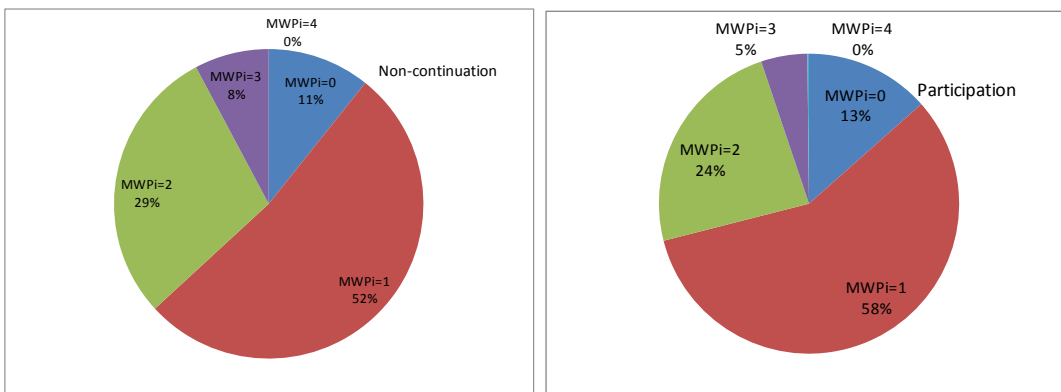
Adapted from Doc 84

The level of representation of traditional students in the full and part-time participation populations varies: *MWPi=0*: 13% for part-time and 25% for full-time. There is also variability in the degree of consistency in the corresponding non-continuing populations between full and part-time e.g. *MWPi=1* shows a participation proportion of 58%, but only 52% for the non-continuation population, compared with 44% and only 40% for the full-time non-continuing population. Overall, broadly similar proportions of *MWPi* are distributed across the part-time participation and non-continuation populations. Figure 17, shows the non-continuation population evidenced alongside the continuing population across all four years.

Figure 17 Multiple widening participation index and returning part-time students, 2004/05-2007/08
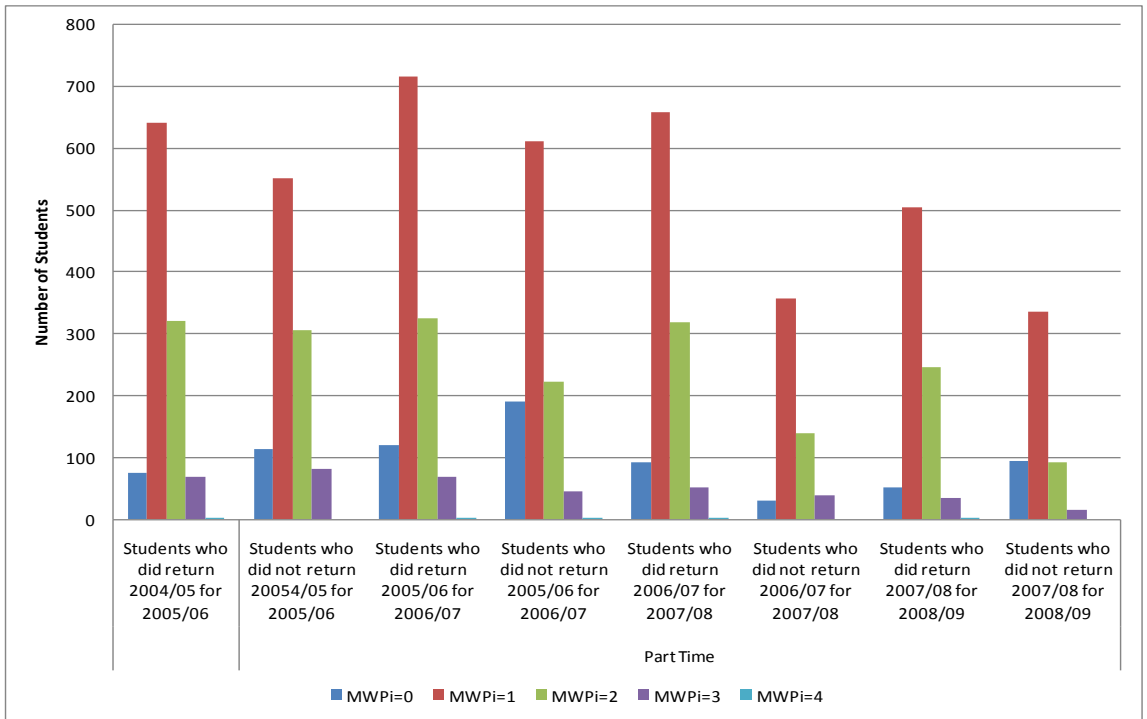
Adapted from Doc 81, Appendix G

Figure 18 Widening participation index and the percentage of non-returning part-time students, 2004/05-2007/08
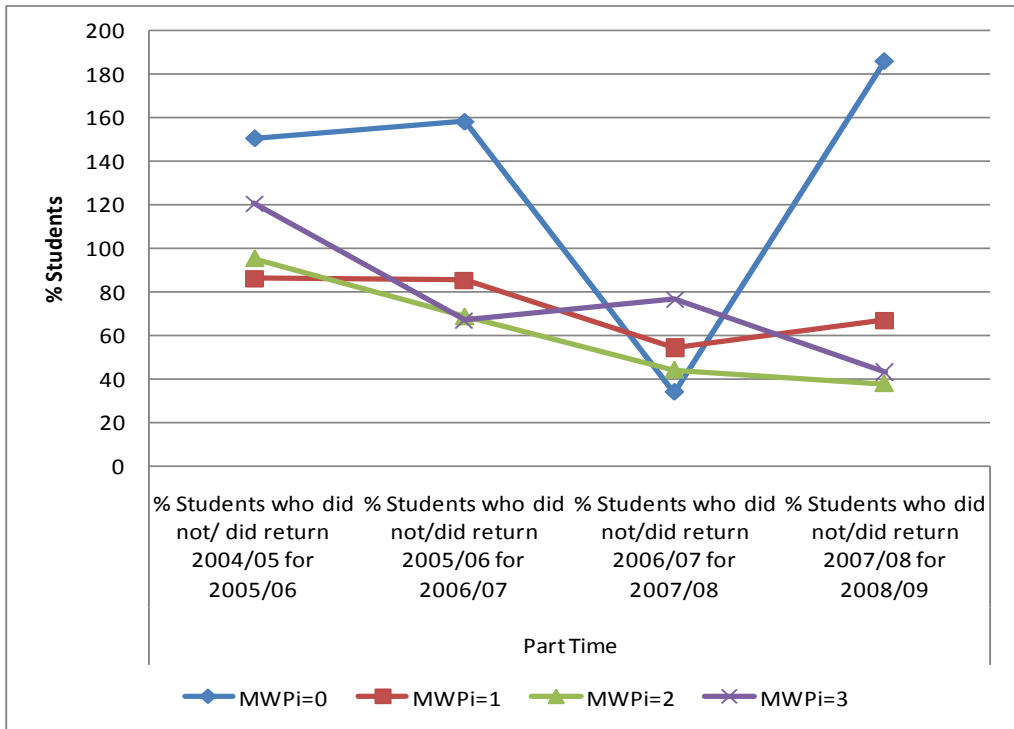
Adapted from Doc 81, Appendix G

The shape of Figure 17, is in stark contrast to the corresponding full-time graph, Figure 14. Firstly, the number not returning is almost as high as those who return. Secondly, in all but one year, 2007/08, more traditional part-time students did not return than returned. This contrasts to non-traditional students *(MWPi>0)* where in only two specific instances this occurs: *MWPi=3* in 2004/05 and *MWPi=4* in 2006/07 (although numbers are very small).

To more effectively evidence the performances over time, the percentage of those not returning to those who did are plotted in Figure 18. There is a general reducing trend for *MWPi>0*; for *MWPi=3* the reduction is 77.7% and for *MWPi=2* it is 57.7%. Both represent significant reductions over the four years. The reduction however was not mirrored for traditional students; they experienced an increasing trend, with the exception of one year when it was reduced to 35.6%, a reduction of over 130%. Overall, the percentage of students not returning to returning steadily declines from 95% to 50.4% in 2006/07 with an increase in 2007/08 influenced by the increase experienced for traditional students. In many cases, the non-continuation rates are four times, and in some cases as much six times, higher than exerienced for full-time students.

The reductions in full and part-time student non-continuation as a proportion of those continuing are evidenced over the four years, for students where *MWPi>0*. Students with *MWPi=2 and 3*, some of the most vulnerable, benefit the most from interventions such as the '*Summer 2008 project'*. Further research is needed on the traditional student population to understand the high levels on non-continuation but it suggests that interventions to support non- traditional students do not necessarily impact positively on traditional students.

This section has highlighted the benefits of using the newly derived performance indicator, the *Multiple Widening Participation Index (MWPi)*. It has highlighted how the non-continuation of widening access student populations can vary from traditional students and that there are also differences between the performances of full and part-time students, that should be recognised.

Specific widening participation indicators and student non- continuation

This section considers the student non-continuation performance related to each *Specific Widening Participation Indicator (SWPi),* including traditional students *(MWPi=0).* The same approach as presented in the previous section is applied to assess how the percentage of those not-continuing to continuing changes over the four year period, 2005/06 to 2007/08. It also considers the data as a proportion of the non-continuing population to assess any variations. The data is shown for full-time and part-time student populations.

Full-time non continuing population

This section considers firstly, the distribution of full-time students not-continuing as a percentage of those who returned, when *SWPi* = mature students; students with non-traditional qualifications; students from LPN and students 'in receipt of DSA'. The distributions are shown in Figure 19. Secondly, it goes on to consider the non-continuing population for each *SWPi* as a proportion of the non-continuing population.

All *SWPi* experience considerable reductions in non-continuation by 2007/08; some in excess of 10%. However, with the exception of traditional students, the trend remains fairly static until 2007/08 (not returning in 2008/09); the period covered by the '*Summer 2008 project*'. Considerable reductions were realised in this one period. All *SWPi* categorie*s* experience reductions; only traditional students had smaller reductions. Full-time students 'in receipt of DSA' experience an increase in excess of 6% from 20045/05 until the summer of 2008, following which, a reduction of 12.6% was achieved. Since the reduction is across many of the *SWPi* and so immediate, it is likely that it is a result of the '*Summer 2008 project*' intervention.

Figure 19 Specific widening participation indicators and the percentage of non-returning full-time students, 2004/05-2007/08
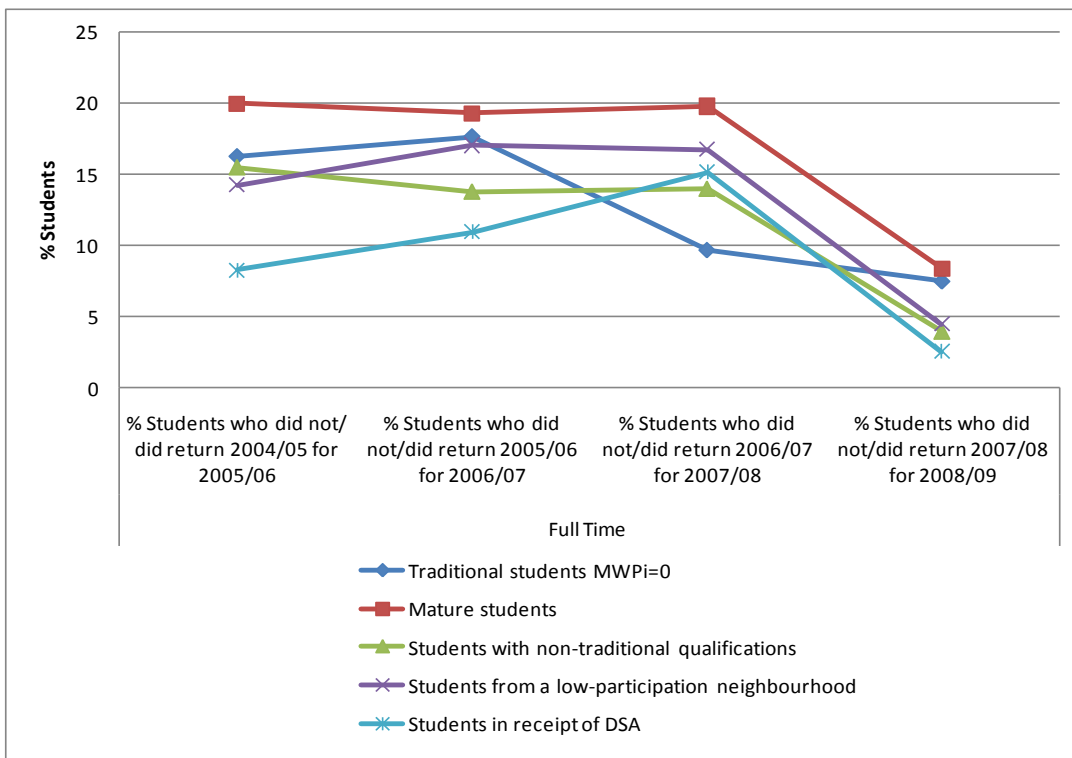
Adapted from Doc 81, Appendix G

The need to control the non-continuation performances of individual *SWPi* as well as the population as a whole is evidenced in Figure 20. The representations of individual *SWPi* in the non-continuing population over the four years are broadly consistent. Mature students account for approximately 70% of the total non-continuing population. The extent of the difference between the mature student non-continuation and students with non-traditional qualifications was surprising. Previous work (James, 2007c), although only applied to only one academic year cohort, 2005/06, suggested a statistically significant correlation between mature student non-continuation and those students with non-traditional qualifications. Figure 20 suggests the correlation may not be as strong as prevously thought. Also evident, are small increases in the proportion of mature and traditional students in 2007/08 not returning in 2008/09; these are accommodated within the population as a whole (100%) by the reductions experienced by students 'in receipt of DSA', students with non-traditional qualifications and, to a lesser extent, students from LPN. The *Summer 2008 project* was having a positive impact on the non-traditional students.

Figure 20 Specific widening participation indicators and non-returning full-time students as percentage of non-returning population, 2004/05-2007/08
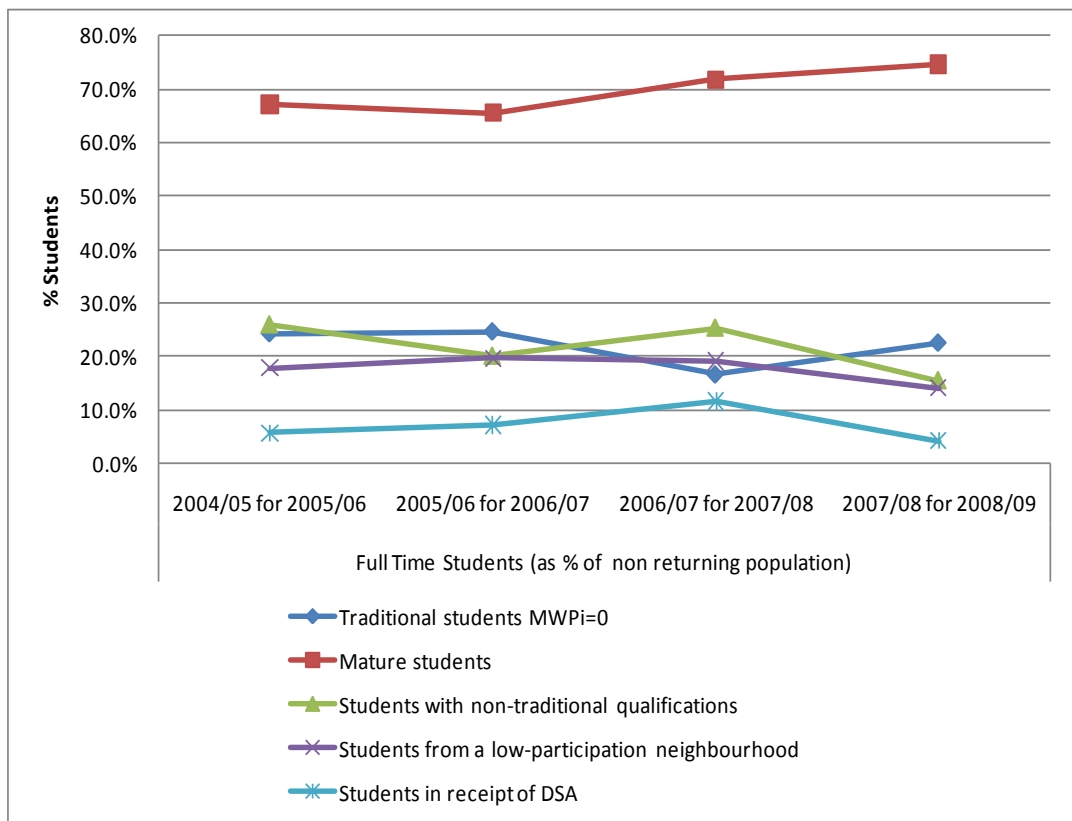
Adapted from DOC 81, Appendix G

Part -time non continuing population

This section considers firstly, the distribution of part-time students not-continuing as a percentage of those who returned when *SWPi* = mature students; students with non-traditional qualifications; students from LPN and students 'in receipt if DSA', The distributions are shown in Figure 21. This is consistent with the procedure adopted for full-time students. Secondly, it considers the non-continuing population for each *SWPi* as a proportion of the non-continuing population.

The first observation is the degree of difference to the performances of full-time students; i.e. between Figure 21 and Figure 19. Students with non-traditional qualifications and students from low participation neighbourhoods both experience systematic reductions [of 65.3% and 83.3% respectively] in the proportions not returning to returning, over the four years, with little difference in their relative performances. *SWPi=Mature students* realise a more modest reduction [40%], even increasing by 10.5% in 2007/08, but remaining 29.9% below the figure in 2004/05.

Students 'in receipt of DSA' show little change over the four years whilst traditional students 'did not return' at much higher levels than each of the *SWPi* i.e. non-traditional students had an increasing trend from the baseline in 2005/06 [150.7%] to 2008/09 [186.3%].

Figure 21 Specific widening participation indicators and the percentage of non-returning part-time students, 2004/05-2007/08
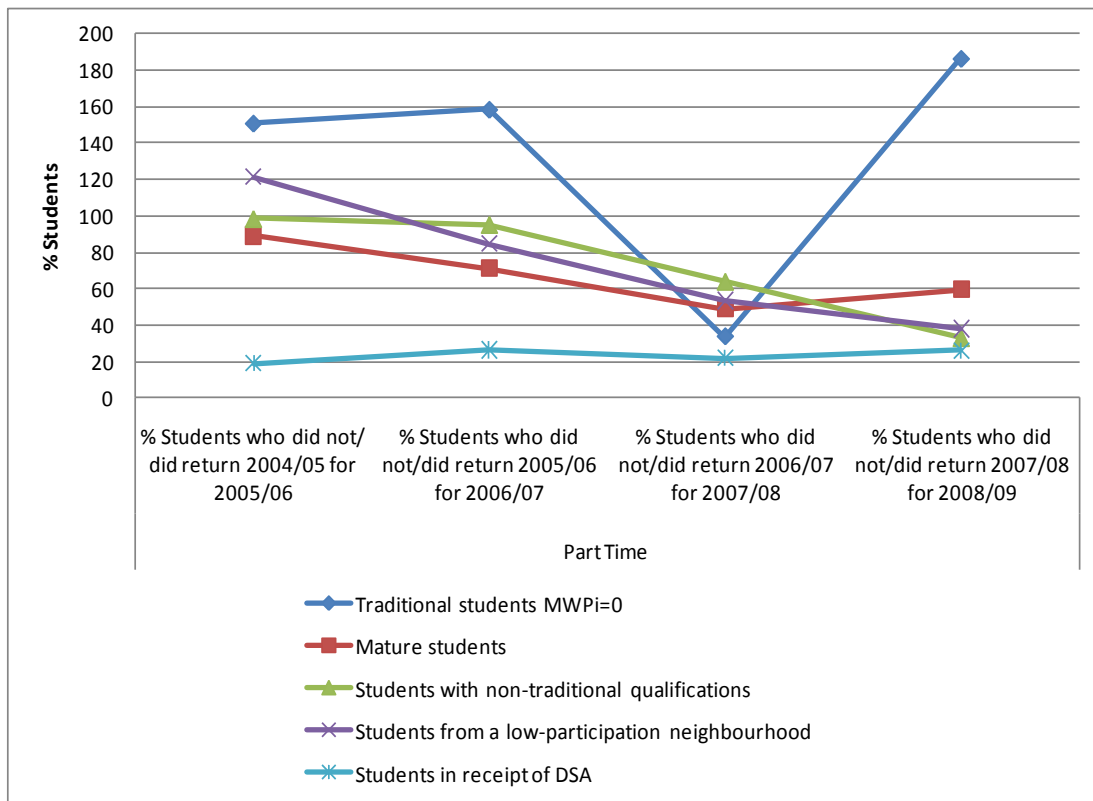
Adapted from Doc 81, Appendix G

The following analysis represents the relative contribution that each *SWPi* makes to the total part-time non-continuing student population, over the four years; it is shown graphically in Figure 22.

The representation of individual *SWPi* in the non-continuing population over the four years are broadly consistent. Mature students account for between 67.6% to 84% of the total non-continuing population [approximately 10% higher than in the full-time population]. The scale of the difference to students with non-traditional qualifications [approximately 30% of the population] was again surprising. All widening access categories (when *SWPi* does not equal 'traditional') remain broadly consistent until 2007/08 when, as was found for full-time students, the proportions changed in their

favour. The greatest reduction within the non-continuation population were for students with non-traditional qualifications [reducing by16.2%] and students from LPN [by12.1%]; a significant proportion of this improvement was gained in 2007/08. These reductions are accommodated by an increased representation, over the period, from traditional students [by 6.9%]. The *Summer 2008, project* impacts positively on reducing the non-continuates rates of widening access part-time students.

Figure 22 Specific widening participation indicators and non-returning part-time students as percentage of non-returning population, 2004/05-2007/08
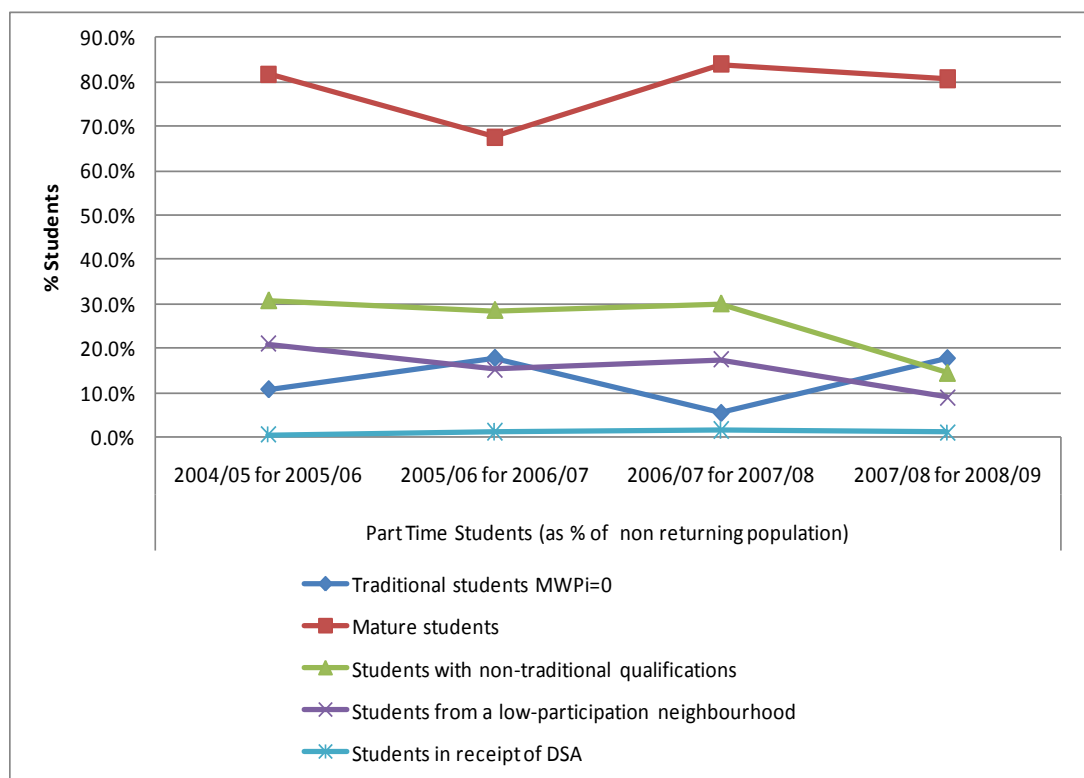
Adapted from Doc 81, Appendix G

Chapter 5, presents the case for two newly derived performance indicators, the *Multiple Widening Participation Index (MWPi)* supported by the *Specific Widening Participation Indicator (SWPi)* and evidences their relevance and impact in increasing the knowledge of both the scale and scope of participation and non-continuation performances. It supports the need for a review of the algorithm that determines the calculation of the HESA benchmarks for student non-continuation as it underplays the extent of widening access representation in the proportion of the student population. These are critical when developing retention strategies and determining management interventions.

It provides information to institutions and the sector about the extent and nature of the widening access attributes that students present with, when they enter higher education. It provides a new form of analysis that informs the evaluation of interventions, such as the '*Summer 2008 project*'. Above all else, it evidences that systematic and consistent reductions in non-continuing performances can be achieved with management interventions, and that the primary beneficiaries are non-traditional students.

This chapter, supported by Chapter 4 and Appendix A, details tangible evidence that non-continuation performance is not homogenous, impenetrable and 'out of the control' but rather a complex interchange of variables that can be influenced by management interventions, over time. The three chapters inform key aspects of an improving student retention framework that has the potential to enable step changes in performance, through enabling targeted resources for maximum benefit and thus avoiding the 80:20 [Pareto law] trap (Koch, 1998), where 80% of the inputs are spent on achieving 20% of the outputs.

Chapter 6 RESEARCH AND PRACTICE APPLICATION AND POLICY IMPLICATIONS

Widening access and student non-continuation performances of HEIs in Wales, as well as the detailed investigation into one case study, has provided the empirical framework from which this chapter is developed. Prior to the empirical and analytical presentations, there was consideration of both the theoretical and research frameworks, drawing primarily on Tinto's (1993 p.114) '*longitudinal model of institutional departure*'. The research methodology adopted a mixed methods approach using an 'interactionalist' perspective applied to a longitudinal, instrumental embedded case study.

From the outset, it was the intention to establish a model and performance framework to support management interventions for improving student retention, delivered in an efficient and effective manner. The first part of this chapter directly responds to this, asking:

> '*What could a management model include for delivering step improvements in student retention in a HEI with a strong widening access performance?*'[RQ6].

A new *Management Model for Improving Student Retention Performance* is developed. It draws on the breadth of research, practice and policy based literature, previous influential research models and is informed by the institutional case study. It brings student retention research up to date and makes it institutionally relevant. The model is holistic, embraces three categories of key actors: *students, faculty* and the *institution* and acknowledges that each are located within their respective operating environments. The model also recognises the complex interplay of influences within and across each category and elements, with time.

The model is supported by a performance framework for measuring, monitoring and reporting student retention performances. The framework is flexible and adaptive to accommodate situational variables, such as institutional type, institutional mission and strategic priorities. This will also increase the validity of the model for application

to other HEIs. The new performance framework consists of an *Improving Student Retention KPI Framework* and an *Improving Student Retention Performance Monitoring Information System.* There are also practical tools provided in support of the implementation framework, such as spider charts.

The chapter concludes with consideration of HEFCW's widening access allocations relative to the teaching grant, including the pro rata funding that HEIs received over the period 2005/06 to 2008/09. The research highlights the challenges that the existing funding formula poses to institutions that have strong widening access performances. It is timely to consider an alternative funding methodology since a new policy for higher education in Wales has been developed following the *Jones Review* (2008). The remainder of the chapter therefore speaks to research question 7:

> *'What are the implications for HEFCW related funding received by HEIs arising from the research?'[RQ7].*

6.1 A system level management model for improving student retention performance

This section discusses the development of a new system level *Management Model for Improving Student Retention Performance* that has relevance across the higher education sector, is adaptive to situational criteria, such as institution type, strategic and operational priorities and has practical transferability that is enabled by a number of implementation instruments. Before describing the model, a few comments are warranted as to its specific aims – what it is designed to do and what it is not designed to do.

First and foremost the model is designed to speak to 'systems level' strategic management that supports interventions to reduce the non-continuation of students in higher education. It is particularly relevant to HEIs with strong widening access performances. It is a holistic model that recognises the influencers within and out with the institution following student entry or immediately preceding it. The model is not concerned directly with individual student behaviours. Whether students transfer to other organisations is not of concern, other than as part of the collective performance of students as reported within the institution (i.e. non-continuation within the institution). It is not a student led model in that it does not attempt to describe why individual students leave but rather identifies that they have left and considers the influencing factors, deemed to be significant, at the level of the institution or its sub systems of schools, subjects and programmes.

Second, the new model pays special attention to the 'nature' of the non-continuation of students from higher education as recorded by the institution.

Third, the model is 'longitudinal' and 'interactive'. It emphasises the requirements for high levels of specificity in recording 'student enrolment' status, which will change over time, arising from a range of processes and interactions with various actors.

The model acknowledges that non-continuation of students, and therefore institutional performance, is dynamic. It recognises there is a range of actors, processes and systems acting on institutional level student non-continuation performance that have implications for the processes and timings for identifying and implementing management interventions. It is an interactional and time dependent process.

The model's primary goal is to describe a holistic, systems level interaction with student retention to achieve an efficient and effective step reduction in student non-continuation rates. It is policy and strategy relevant in the sense that the model speaks directly to institutional strategic managers responsible for effecting change. It is operationally relevant since it is supported by a specific, targeted, accessible and measurable performance framework that can be applied to measure the effects of interventions, as well as overall performances.

The model speaks directly to areas of potential influence and places the institution, rather than the student, at the heart of accepting responsibility for improving performance. That is not to say the student does not have responsibility; it is acknowledged that they do and assumed so in the model. However, the process of individual student departure is not central to the discussions. The model places the organisation in a central position arguing it is very much a 'direct influence on student retention'. In this regard, the systems level *Management Model for Improving Student Retention Performance* is in some agreement with Tinto's model:

> '...is intended to enable institutional officials to ask and answer the question, How can the institution be altered to enhance retention on campus?'
>
> (Tinto, 1993 p.113)

The new model provides a relevant and direct response to this question. Tinto's model contributes significantly to the general understanding of student departure (Tinto, 1993) and, although developed and applied within a USA context, has relevance to the UK. Its generalised construct limits its application by strategic managers in HEIs responsible for effective change.

The *Management Model for Improving Student Retention Performance* is shown in Figure 23. It argues that reported institutional student non-continuation rates can be defined as categories arising out of interactions and engagements between *students*, *faculty* and the *institution.* Targeted and informed management interventions by institutions can improve the performance of student retention. The model identifies specific direct influences (elements) on student retention for each category, whilst acknowledging that these are informed by what is described as the '*environment*'. It follows each category is shown to be operating within its own environment. The time dependent model operates as a system, with interactions across, between and within the various categories. These in turn, interact and engage with the environments in a multifaceted manner. Student retention is

complex, highly context dependent and dynamic. It is expected that as any number of interactions across the three categories and environments will take place at any one time, 'direct' cause and effect relationships would be difficult and, for the most part, unrealistic to measure.

The triangular structure of the model itself is one of the most physically robust: a simple truss. It allows for the transmission of forces, in this case student retention, to be transmitted through the structure with each member taking its shared responsibility in holding the load. This has great synergy with the new model as it supports interactions between 'actors' and systems. Indeed in the physical world, the 'truss members' would also be located within an environment; this is mirrored in the research model. As relationships between categories and environments change there will necessarily be responses elsewhere in the system, thus influencing student retention. To illustrate, the experience an academic gains from being an external examiner (environment), enhances the quality of feedback given to students (faculty) who in turn have a greater sense of what they need to do to achieve; the outcome of these activities may consequently improve student performance and retention. Student retention improvements are also likely to be influenced by the actors themselves (students), their previous educational experiences (environment) and opportunities to leave the institution due to the qualifications, pathways and exit routes offered (institution). These in turn are influenced by the QAA codes of practice (environment). Further examples can be found from the case study in Chapter 4.

The system is dynamic and responsive to the influencing variables at a point in time. These examples show the direct and indirect relationships between student retention and students, faculty and institution. The model enables insights into the influencing factors and assists strategic managers and others to determine interventions to improve student retention performance.

The management model for improving student retention performance

The system level *Management Model for Improving Student Retention Performance* is constructed around three categories: *students, faculty* and *institution.* Each of the categories interact with student retention and operate within their respective but mutually inclusive environmental systems. It has been developed from the literature review, empirical research and observations and interactions with professional practice. The *environments* identified are considered to be the most relevant, significant and influential within the context of a post-1992 Welsh HEI. Application to other environments may necessitate an appropriate adjustment.

The model identifies *students* as individuals with given attributes, skills, intentions, commitments and academic preparedness (drawing on Tinto's (1993) model). This new model develops the work of Tinto recognising these aspects are not independent but are influenced by other factors. For example, the attribute 'social class', is linked to areas of domicile having low higher education participation rates. The model is not intended to be predictive. Instead, it illustrates how student related variables influence student retention. It is an adaptive model with potential for the 'influencing elements' being situational specific, thus increasing its applicability to other HEIs.

Consistent with Tinto (1993), the model identifies *faculty* and the primary academic influences relating to teaching, learning, assessment and admissions processes and systems. The academic influencers are then developed further to emphasise the programme's organisation and management, offer and its target markets. *Faculty* has a crucial role in determining the programme structures. These may support or hinder student progression through curriculum design, flexibility and the provision of 'achievement stepping stones' and 'exit routes'. *Faculty* do not operate in isolation and their engagements with these aspects are likely to be influenced by a knowledge of the markets and interactions with business and the community. Interactions with other HEIs, which may include acting as external examiners or auditors, is another potential influencer.

The third category relates to the *institution*; physical properties, policies, processes and procedures and their operating or influencing environments. In many ways the institution's influences are the most obvious. Examples include the quality of the physical learning and social spaces, student residential accommodation and the

general interaction with the campus. The intellectual interaction and therefore academic engagement with the institution could be through professorial lectures, science or arts festivals in addition to social interactions such as bands and participation in student sport. This research has provided evidence that supports the case that student retention is also influenced by institutional inaction. For example the failure to respond proactively to repeated high levels of programme failure rates or continuing inappropriate arrangements surrounding coursework resubmissions during the summer period. The nature of an institution's policies and procedures, its quality assurance procedures and academic regulations all have a bearing on student non-continuation rates. These were shown to be influenced by institutional data management and reporting, assessment board decisions and levels of institutional as well as faculty student support. The model therefore identifies key responsibilities of an institution in improving student retention performance.

The *students, faculty* and *institution* categories operate within differing environments. For the institution, the environment includes the demands placed by the QAA, the audit requirements by HEFCW (or other UK devolved administrations) and the statutory returns required by HESA. There are specific and explicit demands placed on HEIs seeking taught degree awarding powers; as for the case institution. Other environmental influencers include a range of external markets (overseas, business engagement, online) and key organisations including both accrediting and professional bodies. All HEIs operate within environments that have external impositions, which in turn influence the 'elements', for example an institution's internal QA procedures are influenced by the external QAA Code of Practice. This simultaneously interfaces directly with the *faculty* environment through the requirement for programmes to be externally peer reviewed (external assessors /examiners) and with the *student* environment through the student guild/union. The environmental systems challenge each other with the aim of ensuring standards are maintained and quality is enhanced. The interconnectedness is a vital part of responding to improving student retention.

Figure 23 A systems led *Management Model for Improving Student Retention Performance*
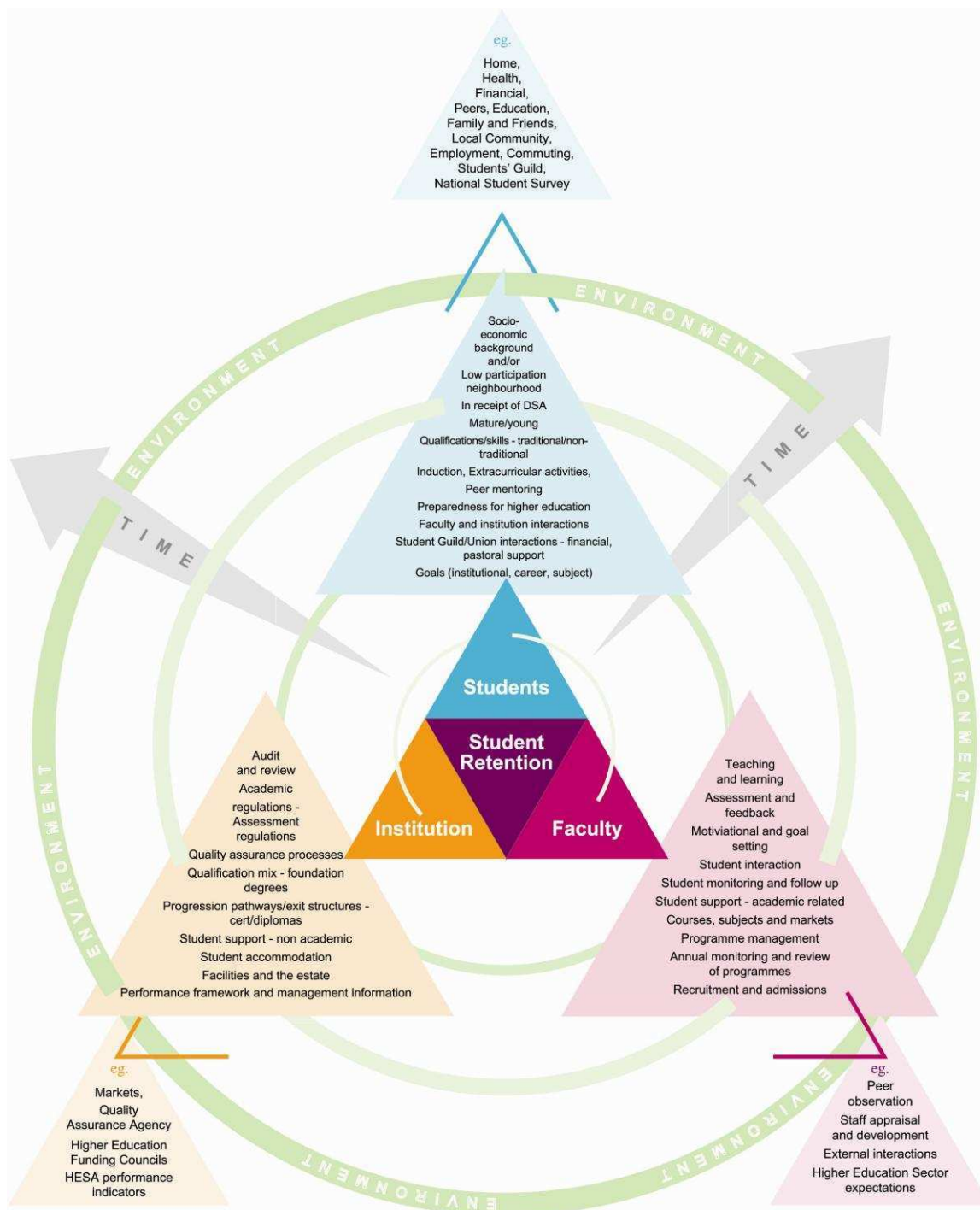
6.2 A performance framework for improving student retention performance

This section takes the systems level *Management Model for Improving Student Retention Performance* and defines a number of institutionally relevant Key Performance Indicators (KPIs). These are articulated within an *Improving Student Retention KPI Framework;* a series of high level parameters which when used in conjunction with the *Improving Student Retention Performance Monitoring Information System,* provide the 'current' and intended' institutional performance landscape and detail. The KPI framework and monitoring information system can be deployed to measure:

> '...step improvements in student retention in a HEI with a strong widening
> access performance?'[RQ6].

This is methodologically challenging since the research consistently reinforces the need to have an awareness of the complexity and contextual nature of student retention. A generic monitoring framework is both relevant and of value. The framework, for example, provides a context to cascade information within the organisation. The variant levels of institution, school, subject and programme increases the level of specificity and ensures a more targeted flow of information. This could, for example, inform the annual monitoring of programmes which in turn provides an academic health check at an institutional level. The extent to which this is possible will depend on the ability to retain a robust data set within the programme constructs.

The application of the management model and performance framework for improving student retention implicitly requires an appreciation of strategy formation (Mintzberg, Ahlstrand, & Lampel, 1998; Mintzberg, Quinn, & Voyer, 1995). Such an approach requires an analysis of the HEI, its (student - related) markets and position within them, current widening access and non-continuation performance, process and business capability and capacity. Vision, mission and strategic priorities are all critically important in the formulation of strategy. The measurement of performance against a set of KPIs provides feedback for determining management interventions and evaluating their respective effectiveness.

The performance framework for improving student retention has been derived from the policy, research and professional practice literature; the case institution's and the Welsh HEI sector's widening access and student non-continuation performances (Appendix A) as well as the case study's research findings (Chapter 4). The

performance framework has not considered directly, explicitly or equally all 'influencing elements' but concentrates on the measurement, monitoring and reporting of the impact of interventions and performances. The model and performance framework provide a holistic approach to delivering and measuring student retention improvements. It has been used (broadly) to inform the student retention strategy of the case institution and the most recent HESA data evidences considerable improvements in student retention (see Epilogue).

Previous chapters have highlighted the importance of external and internal data monitoring and how they can be brought together to support further improvements in student retention performance. At the heart of Chapters 4 and 5 is securing, reporting, understanding and interpreting data and knowing its potential role in performance improvement. From the outset, knowing what data to request in order to evidence efficient and effective step changes in student retention performance is crucial. This research shows that both external and internal data is needed to ensure that HEIs have a valid and reliable performance framework. Its timely application is required to measure the key outputs and inform appropriate management interventions. In addition to providing the performance framework that has sector-wide applicability, supplementary KPIs, incorporating the *Multiple Widening Participation Index (MWPi),* the *Specific Widening Participation Indicators (SWPi)* and associated measurement systems, are also included.

This section is aimed particularly at strategic managers responsible for strategy development and measuring, monitoring and reporting efficient and effective step improvements in student retention performance.

Improving student retention KPI framework

The *Improving Student Retention KPI Framework* draws together external and internal HEI top level performances to achieve an adaptive, timely, balanced, valid and reliable system supporting the new *Management Model for Improving Student Retention.* The KPI framework is of particular relevance to strategic managers and offers potential for deeper, more specific penetration within the HEI thus reaching schools, subjects and programmes; expanding the reach of indicators to modules could also be accommodated. It therefore provides an explicit student retention performance improvement landscape for academic managers, programme leaders and teams. The KPI framework is compatible with widening access and offers potential for all types of

HEIs, some KPIs will have more relevance than others depending on the institution's mission.

The *Improving Student Retention KPI Framework,* shown in Table 31, has been developed with specific emphasis on improving student retention, rather than monitoring steady state operations. It seeks a balance between national and internal data and, annual and monthly reporting, as well as also catering for adhocracy. It draws on the evidence provided throughout this thesis, with the KPIs offered being those considered to be most significant in improving student retention performance. They are considered applicable to all HEIs. For HEIs having strong widening access performance the KPI framework has been extended and is shown in Table 32. The numbers in brackets refer to the KPI reference numbers that are subsequently used in the *Improving Student Retention Performance Monitoring Information System* framework.

Both tables aim to support the delivery of system level performance improvements and therefore most relevant to strategic management. However, it is acknowledged that some of the KPIs may also have relevance for the Board of Governors (or equivalent). For example, a pre-1992 university, responding to 'Fair Access'[57], would not wish to experience an increase in non-continuation rates and jeopardise its ranking in league tables. Alternatively, a post-1992 institution may explicitly prioritise reducing non-continuation rates. It is possible to select one or two KPIs from Table 31, that have particular Board level relevance: KPI (3), (4) (overall rating) and (6). Each one could also be considered on the basis of individual *SWPi*.

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[57] http://www.offa.org.uk/

Table 31 Improving student retention KPI framework

Ad-hoc	Annual		In-Year
Internal/external	External Reference	Internal Reference	
1). Audit and review	3). Non-continuation of entrants beyond year of entry: First degree; Other UG.	5). Non-continuation of enrolments: First degree; Foundation degrees	9). In-year student withdrawals and suspended studies
2). Published reports	4). National student survey	6). Qualifications awarded	
		7). Progression and cohort analysis	
		8). Referrals	

Table 32 Improving student retention KPI framework- widening participation

Ad-hoc	Annual		In-Year
Internal/external	External Reference	Internal Reference	
Audit and review (as above)	Access profile for new entrants: first degree; other UG (ref. young LPN, mature). (10)	Multiple Widening Participation Index, *MWPi* (i=/>0) distribution for total enrolled population. (12)	Specific Widening Participation Indicators *(SWPi)* for withdrawn population: full and part-time. (18)
Published reports	Non-continuation of entrants beyond year of entry: other UG; total, (ref, young and NS-SEC 4,5,6 and 7; young and LPN, mature). (11)	Multiple Widening Participation Index, *MWPi* (i=/>0) proportion of enrolments eligible to return that did return: full and part-time. (13)	Multiple Widening Participation Index, *MWPi* (i=/>0) for withdrawn population: full and part-time. (19)
		Multiple Widening Participation Index, *MWPi* (i=/>0) and withdrawn enrolments: full and part-time. (14)	
		Specific Widening Participation Indicators *(SWPi)* and the proportion of enrolments not continuing: full and part-time. (15)	
		MWPi and Qualifications awarded. (16)	
		MWPi and Referrals. (17)	

The *Improving Student Retention KPI Framework* is adaptive, enabling HEIs to make substitutions, removal or additions depending on priorities. There is a danger that by the time the research data has been worked on, filtered and then amalgamated into new data sets that it becomes what might be considered as a standard and rather obvious set of KPIs. The extent of adoption should be considered alongside the level of resource, staff and budgets required to support its implementation and the timeframe for evidencing improvements. For this reason, it may be necessary for HEIs to prioritise certain KPIs deemed to be the most influential in effecting evidenced short term improvements. The case study evidenced KPIs (5), (7) and (9) to have the greatest

impact with KPI (4), providing an important student feedback context. These are recommended as a minimum set of KPIs.

A KPI framework needs be supported by an information system if it is to be of value to an organisation. It is the mechanism through which it determines where on the route map the organisation sits and from which actions can be reinforced, changed, ceased or new ones introduced. The following section describes the information and measurement system to support the model and the KPI framework.

Improving student retention performance monitoring information system

The challenge with KPIs is to understand the audience, their purpose and priorities. Responding to these, the *Improving Student Retention KPI Framework* provides for monthly, annual as well as ad-hoc reporting. However, time based analysis is not the only consideration, it is also important to take cognisance of the information and data needed by key audiences: strategic managers; individuals on senior committees such as AB, SQC, LTAC or IMG. This section therefore describes the monitoring information system which underpins the implementation and delivery of the *Improving Student Retention KPI framework*. It is defined as the *Improving Student Retention Performance Monitoring Information System*. It is an essential element of the performance framework since it determines the precise measurements associated with individual KPIs and therefore the reports required, for which audience and when. The longitudinal nature of student retention is critical and, as such, is incorporated into the information system. This is an important contribution to research since it provides key instruments and tools for managers, which hitherto have been opaque and hidden within complex theories and models, or none existent in models that are all encompassing thus giving little practical direction for implementing effective and efficient performance improvements.

The consistency of reporting and the data constructs are critical. The case study evidenced this and reference should be made to the research when identifying key (sometimes subtle) influences. During the early stages of implementation, it may be necessary to refine further, the reports. It is suggested that this is kept to a minimum and convergence on a system which provides for longitudinal monitoring should be a priority. It is unrealistic, however, to suggest that no changes are made.

The specific reports required to evidence the performance of each KPI (as determined in Table 31 and Table 32) are shown in Table 33. These provide the practitioner with

the necessary tools and instruments for determining student retention performance at a given point in the planning or performance monitoring cycle, or monitors institutional change (shift) over time. It is necessarily more detailed than the KPI table as it is instructional in relation to the content of the report, the timing and indeed where the report could be sent for consideration. These reports provide the basis on which opportunities for achieving step improvements can be identified. They provide the detail needed for targeting management interventions, including resources, and provide the basis from which other questions may be derived. There will inevitably be institutional variations in committee titles and remits. However the level of detail provided in Table 49 should be adequate to accommodate such variations.

The framework should be adaptive i.e. relevant for the situation and fit with the priorities and available resources of the institution. For example, if the institution is predominantly dominated by full-time first degree enrolments, providing reports highlighting part-time students on foundation degrees probably will not deliver the desired, efficient and effective step change in performance improvements at systems level. However, a report on the non-continuation of full-time first degree enrolments that categorises the elements of non-continuation, such as withdrawals, could provide valuable new insights to the first year experience; the potential for improvements increases significantly. Prioritising resources will be dependent on the situational context of the institution; however reference could be made to KPI (5), (7), (9) and (4) as those offering greatest potential and could therefore be considered as obligatory.

Table 33 Improving student retention performance monitoring information system

External Reference KPI *(KPI N°)*	Internal Reference KPI *(KPI N°)*
Annual Monitoring	
Non-continuation of entrants beyond year of entry: First degree; Other UG (3) (Available June/July each year but with a 22 month time lag: reported autumn to Academic Board and winter to Board of Governors)	***Non-continuation of enrolments: First degree; Foundation degrees (5)*** (Available post referral boards: reported winter to Academic Board and UMG)
• Non continuation rates of full-time first degree entrants	• Non-continuation rates of full-time first degree enrolments (across years and not only on entry)
• Non continuation rates of full-time other undergraduate entrants	• Non-continuation rates of full-time other undergraduate enrolments (across years and not only on entry)
National student survey (4)	• Non-continuation rates of part-time first degree enrolments (across years and not only on entry)
(Available June: reported July to Academic Board and autumn to Senior Executive and UMG; winter BoG Overall)	• Non-continuation rates of part-time other undergraduate enrolments (across years and not only on entry)
• Overall student satisfaction • All categories	***Qualifications awarded (6)*** (Available post referral boards: reported winter to Standards and Quality Committee (SQC) with summary to Academic Board in spring)
	• Number and proportion of full-time first degree enrolments who got an award in the three years or was still on a relevant course
	• Number and proportion of full-time foundation degree enrolments who got an award or was still on a relevant course
	Progression and cohort analysis (7) (Available post referral boards: reported winter to Senior Executive, SQC and UMG (withdrawals and suspended studies)
	• Number and proportion of full-time first degree enrolments entitled to continue from one year to the next and actually doing so
	• Number and proportion of full-time Foundation degree enrolments entitled to continue from one year to the next and actually doing so
	• Number and proportion of withdrawn and suspended studies full and part-time enrolments following the September referral Boards
	• Cohort analysis of entrants joining the programme and graduating in the monitoring year
	Referrals (8) (Available post June assessment boards: reported immediately to Senior Executive; SQC Autumn)
	• Number and proportion of referred enrolments to total enrolments (a)
	• Rank highest 20 programmes for (a)
	• Rank highest 10 programmes with the highest average number of modules referred per student
In-Year Monitoring	
	In-year student withdrawals and suspended studies (9) (Available each month (October- May inclusive) and reported to Senior Executive)
	• Number and proportion of withdrawn and suspended studies full and part-time enrolments produced monthly throughout the year
Ad-hoc Monitoring	
Audit and review (1) (Spring and reported to SQC with summary to Academic Board in summer)	
Published reports (Available ad-hoc: reported to appropriate group (TBD depending on content)	

For institutions with a strong widening access enrolment profile, the *Improving Student Retention Performance Monitoring Information System,* described above, is unlikely to provide the specific knowledge of individual student populations and respective

performances that are needed to support management interventions and allocation of appropriate resources. For this reason, the reporting instrument has been developed further to account for greater situational context variables. The balance between external validity and benchmarking capability to internal, specific and timeliness of internal performance data is a key consideration. Within an adaptive system where the institution determines relevance and importance, the balance criteria are paramount. Table 34 should be used as an extension to Table 33. It is enabling greater specificity, assisting the institution to determine its relative access and student retention performances over time.

Securing sustained student retention improvements requires short, medium and long term commitments and an acceptance that the relative importance of certain KPIs and datasets may change over time as priorities change. The two new performance indicators, *MWPi* and *SWPi,* developed in Chapter 5, have been incorporated into the *Improving Student Retention Performance Monitoring Information System* as a mechanism for the institution to assess the scale and scope of the 'access' challenges and the relationship with non-continuation rates.

Table 34 Improving student retention performance monitoring information system-widening participation

External Reference KPI *(KPI N°)*	Internal Reference KPI *(KPI N°)*
Annual Monitoring	
Access profile for new entrants: first degree; other UG (ref. young LPN, mature). (10) (Available June/July each year but with a 22 month time lag: reported autumn to Academic Board and summary to Board of Governors in winter)	*Multiple Widening Participation Index (i=/>0) distribution for total enrolled population (12)* (Available Nov to Senior Executive and Academic Board)
	Multiple Widening Participation Index (i=/>0) proportion of enrolments not continuing to total enrolments. (13): full-time part-time (Available Nov to Senior Executive and Academic Board)
• Access profile for young full-time first degree entrants from NS-SEC 4,5,6 &7 • Access profile for young full-time first degree entrants from LPN • Access profile for mature full-time-time first degree entrants	*Multiple Widening Participation Index (i=/>0) and total withdrawn enrolments (14)* (Available Nov to Senior Executive and Academic Board) full-time part-time
• Access profile for young full-time other degree entrants from NS-SEC 4,5,6 &7 • Access profile for young full-time other degree entrants from LPN • Access profile for mature full-time-time other degree entrants	*Specific Widening Participation Indicators and the proportion of enrolments not continuing (15):* (Available Nov to Senior Executive and Academic Board) full-time part-time
Non-continuation of entrants beyond year of entry: other UG; total, (ref, young and NS-SEC 4,5,6 and 7; young and LPN, mature).(11) (Available June/July each year but with a 22 month time lag: reported autumn to Academic Board and summary to Board of Governors in winter)	*MWPi and Qualifications awarded (16)* (Available Oct sent to Spring SQC then Summer Academic Board) Number and proportion of full-time first degree enrolments who got an award in the three years or was still on a relevant course
• Non-continuation of other UG degree young entrants beyond year of entry from LPN	*MWPi and Referrals (17)* • Number of referrals in each index (Available June, post assessment boards, sent to Senior Executive summer and SQC Autumn)
• Non-continuation of other UG degree mature entrants beyond year of entry	In-Year
• Non-continuation of other UG degree young entrants beyond year of entry NS-SEC 4,5,6 & 7.	*Specific Widening Participation Indicators and withdrawals (18):* (Monthly-Oct- June) • full-time • part-time (Reported to Senior Executive October to June)
	Multiple Widening Participation Index (i=/>0) and withdrawals (19): (Monthly-Oct- June) • full-time • part-time (Reported to Senior Executive October to June)
Ad-hoc	
Audit and review Published reports (Available ad-hoc: reported to appropriate group (TBD depending on content)	

When using these tables, it is important to be aware of the data definitions. These are described in Chapter 3. For the institution to be fully aware of student retention related performances, it is recommended that the data populations be defined from the date of enrolment and not late November or early December, as for the HESA KPIs. This enables the raw, fully exposed and inclusive data that embraces all enrolments and actions from the start of the academic year to be reviewed and acted upon; thus

providing greater opportunity for realising improvements in student retention performance. As described earlier, institutions may wish to prioritise resources and selectively engage with the KPIs and reports. In this case, it is suggested that KPIs (10), (11), (12), (13) and (15) are obligatory in addition to the previous prioritised selection (4, 5, 7 and 9).

The *Improving Student Retention Performance Monitoring Information System* provides an indication of the content of the reports as well as the committee to which they could be reported and, when in the academic cycle, they could be considered. They are research informed and recognise that Executives will wish to be appraised of performances from a resource perspective (cost of non-continuation); Academic Board from a standards and quality perspective, whilst the Board of Governors require top level overview reports linked to the specific mission of the institution. Achieving this balance is likely to vary with time as members of the various committees become accustomed to the data sets and priorities change.

Table 35 KPI reporting schedule: an example

KPI N°	Standards & Quality				Academic Board				Senior Executive or University Management C'ttee				Board of Governors			
	Au	Win	Spr	Sum	Au	Win	Spr	Sum	Au	Win	Spr	Sum	Au	Win	Spr	Sum
1			√					√								
2					√									√		
3								√	√					√		
4						√				√						
5		√					√									
6		√								√						
7	√											√				
8									√	√	√	√				
9					√									√		
10∗						√			√					√		
11∗						√										
12∗										√						
13∗						√				√						
14∗									√							
15∗			√					√								
16∗	√											√				
17∗									√	√	√	√				
18∗									√	√	√	√				

KPI∗ equates to widening participation context; √ **Obligatory;** √ Conditional on resources and priorities;

To assist with assessing the balance of KPI reporting and their scheduling, a grid is provided (Table 35). Adopting such an approach not only enables an overview of the reports but identifies schedule implications where referral to other committees may be

appropriate. The actual titles of the committees will vary between institutions as will their membership and detailed terms of reference; the framework is therefore offered as indicative.

Having defined and described the *Improving Student Retention KPI Framework* and its supporting *Improving Student Retention Performance Monitoring Information System*, one further consideration is to maintain a strategic perspective. This is critical if the institution is not to become blinded by data, or so embroiled in one data set that perspective and balance is lost. One further instrument is therefore recommended. A visual representation of the balance across and between performance indicators to highlight areas of interrelatedness, that may not be so obvious by data alone, would be a valuable additional instrument. Such an approach would be well served by the application of a radar or spider chart (Performance Improvement Network, 2005). Examples of its potential for application to both internal case data as well as the national external data are shown in Figure 24 and Figure 25. It will be for the institution to determine which KPIs should be presented in this way but a balance between widening access and student retention data and direct correlations, where possible, are encouraged.

Figure 24 Improving (all) student retention performance, 2006/07 (internally validated data)
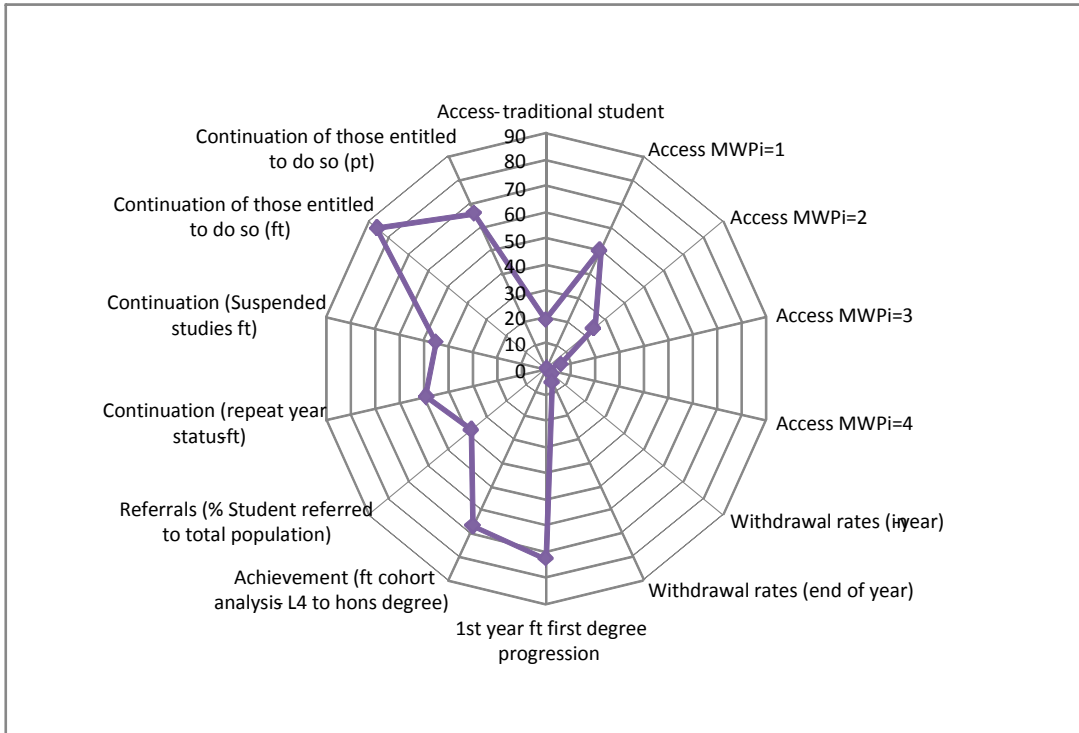
Figure 25 Improving student retention performance of full-time first degree entrants, 2006/07 (externally validated data)
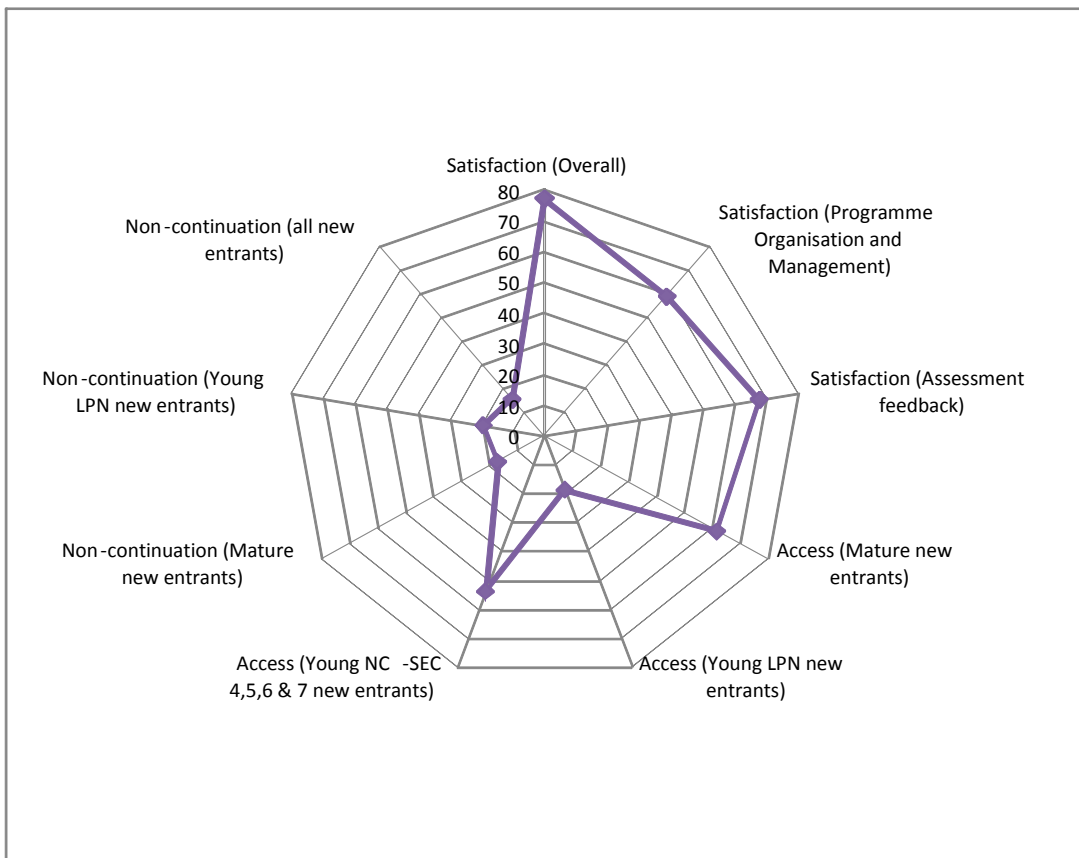
6.3 Application of the model and performance framework for improving student retention

It is beyond the scope of this research to 'test' the new model and supporting frameworks for improving student retention performance beyond that already included in the validation within the case study. The model has been derived using 'real time' and retrospective case study information and data, that in turn has been located within the broader Welsh higher education sector performance context, over a seven year period. It has included evaluations of interventions and describes changes in processes and procedures arising from recommendations.

The model is also informed by the literature and extensive knowledge of the researcher of higher education strategic management of the various internal and external contexts that inform the 'categories', 'elements' and the 'environments', described in the model. The case institution has encompassed many of the model's principles over the years with notable positive impacts, evidenced in Chapter 4[58], and as such it could be considered (elements of it) transferable to other HEIs. The performance and monitoring frameworks were also informed by the case evidence, including reports that had been specifically designed to respond to the developing student retention improvement strategy. In summary, the model has proven a certain level of robustness. The model is described as being adaptive and when applying it to other HEIs, there is a need to contextualise it in the specific institutional setting. The supporting performance framework is also designed to accommodate institutional differences. The analysis of the Welsh sector (Appendix A) has pointed out that there is considerable variety within the system, prompting those that intend to apply the model in other HEIs to consider carefully how different these HEIs are and how that may affect the application of the model.

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[58] The most recent widening access and non-continuation performances for the case institution are summarised in the Epilogue, since the HESA 2010 data was released too late for inclusion in the research analysis. Significant reductions in non-continuation rates without compromising widening access performances, are evidenced.

6.4 Policy and funding implications for widening access and participation

The final section of this research, before conclusions and recommendations are drawn, relates to the funding of widening access to higher education in Wales. Whilst it does not seek to delve into the detail of funding methodologies, it does question the funding approach taken by HEFCW including specific allocations supporting widening access.

The teaching grant provided by HEFCW to support the delivery of first degrees and other undergraduate courses is based on a unit of funding per credit. Its value is dependent upon the academic subject category of delivery and does not differentiate between full and part-time students. There is an additional pro rata allocation based on head count. In addition, HEIs charge tuition fees and these are set nationally for full-time students and at the discretion of the institution for part-time. Due to market limitations, part-time fees tend not to be pro rata of the full-time fee; for 2009/10 this was £3,225 per year. In addition to the core teaching grant, monies are made available to institutions (and regions) to support widening access policy implementation and delivery. It is beyond the scope of this research to consider the details of the funding formula, preferring instead to challenge the high level relationship between widening access allocations to institutions and widening access and student non-continuation rates.

Consideration of costs associated with widening access would be useful. In a report to HEFCW, *The Costs of Widening Access and Participation in Higher Education in Wales*, J M Consulting (2005) identified a range of activities considered as having legitimate associated widening participation related costs. The following examples were considered to be in addition to widening access related costs:

'1. *extending or developing new tutorial support systems*

2. *smaller groups in conventional taught courses*

3. *adapting course material or adapting teaching and learning methods*

4. *introducing and applying flexible learning e.g.*

PT to FT conversion; different entry points; regular recognition of achievements/intermediate qualifications (certificate, diploma); breaks in study...

5. using different assessment methods; more costly assessment (e.g. more feedback, dyslexia); additional resits or retakes; special support for first assessment, or failed assessment

6. pastoral support from academics

7. financial or personal support and counselling

8. special initiatives or procedures to identify and support failing students e.g. Administration; exit interviews; diagnostic testing; top-up courses; extra study skills.'

<div align="right">(J M Consulting, 2005 pp.20-21)</div>

The breadth of activities identified is not exhaustive. The study considers three types of institutions: highly engaged; targeted; and responding or emergent. However, the study thereafter does not correlate additional costs associated with widening access with institution type. It does, however, recognise there were variations in widening access costs between institutions, in the range 29%-64%. It recognised there was a degree of operational complexity embedded within post-1992 infrastructures, with costs rarely indentified:

'A key feature of provision for a diverse student population is flexible learning, encompassing, for example: modularisation/Credit Accumulation and Transfer (CATs) schemes; semesterisation; combined honours schemes; different entry points; flexible progression schemes (e.g. 2+2, access courses etc); the ease of PT/FT conversion; study breaks; reviews of academic regulations; resits; the number of credits for defining a full-time student; and so on.

These activities are an embedded part of the activities of a post-92 institution.'

<div align="right">(J M Consulting, 2005 p.19)</div>

One of the key findings of the report suggested that:

'...on the basis of FTE WP students, WP[59] costs are, on average, 48% of the base price[60], compared to the 2003/04 funding allocation of 19% of the base price. When the comparison is repeated on the basis of headcount in Wales, the figures are 40% and 14% respectively.'

(J M Consulting, 2005 p.13)

Following this report a revised methodology for allocating widening access funding was implemented; the outworking of the funding methodology across the sector can be seen in Figure 26 and Figure 27.

Figure 26 includes the percentage of widening access funding (excluding disability and Welsh medium allocations) to teaching grant and includes the pro rata allocations for each HEI in Wales. The differential in funding allocations across the sector is small, varying from 1.2% to 5.9%, a range of 4.7% in 2008/09. Following the introduction of the revised funding model in 2006/07, institutions' allocations have remained fairly consistent. When disability funding is also included in the calculations for 2008/09, shown in Figure 27, the variation extends from 1.35% to 6.30%, a range of 4.95%. This has the impact of increasing the upper limit by 0.40% and the lower by 0.15%; a minimal overall impact. The institutions gaining the most are University of Wales, Lampeter [0.79%], Glyndŵr University [0.54%] and Bangor University [0.44%]. It is a relatively small additional allocation.

The above examples are in stark contrast to the variation in widening access performances experienced across the sector. In 2007/08, the performances for full-time first degree entrants varied from 5.9% to18.6% [a range of 12.7%]; for young entrants from LPN the variation was from 21.6% to 53.7% [a range of 32.1%]; and for mature entrants from 11% to 61.9% [a range of 50.9%].

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[59] For the purposes of calculating funding, widening access students are those from low affluence areas: students are categorised into four affluence groups based on their home postcode and those in the least affluent group are included in the widening access premium, provided they meet other HEFCW funding criteria (home and EU fundable; active within the academic year; under-graduate; studying for 10 or more credit values; and not studying for the whole of the programme outside the UK).

[60] The base price is the unit of resource per FTE for ASC8 in 2003/04 which is deemed by HEFCW to be the best comparator for HEFCE Band D (the base price (£2808) used in the England report) (J M Consulting, 2005 p.11)

The range of participation rates evidenced across the sector is significantly higher than the range evidenced for the funding received; by as much as a factor of 10. The proportionate funding received by post-1992 HEIs compared to pre-1992 HEIs has little relevance to the relative proportions of the widening access new entrant populations.

Figure 26 Total widening access allocations as a percentage of formula teaching funding and per capita
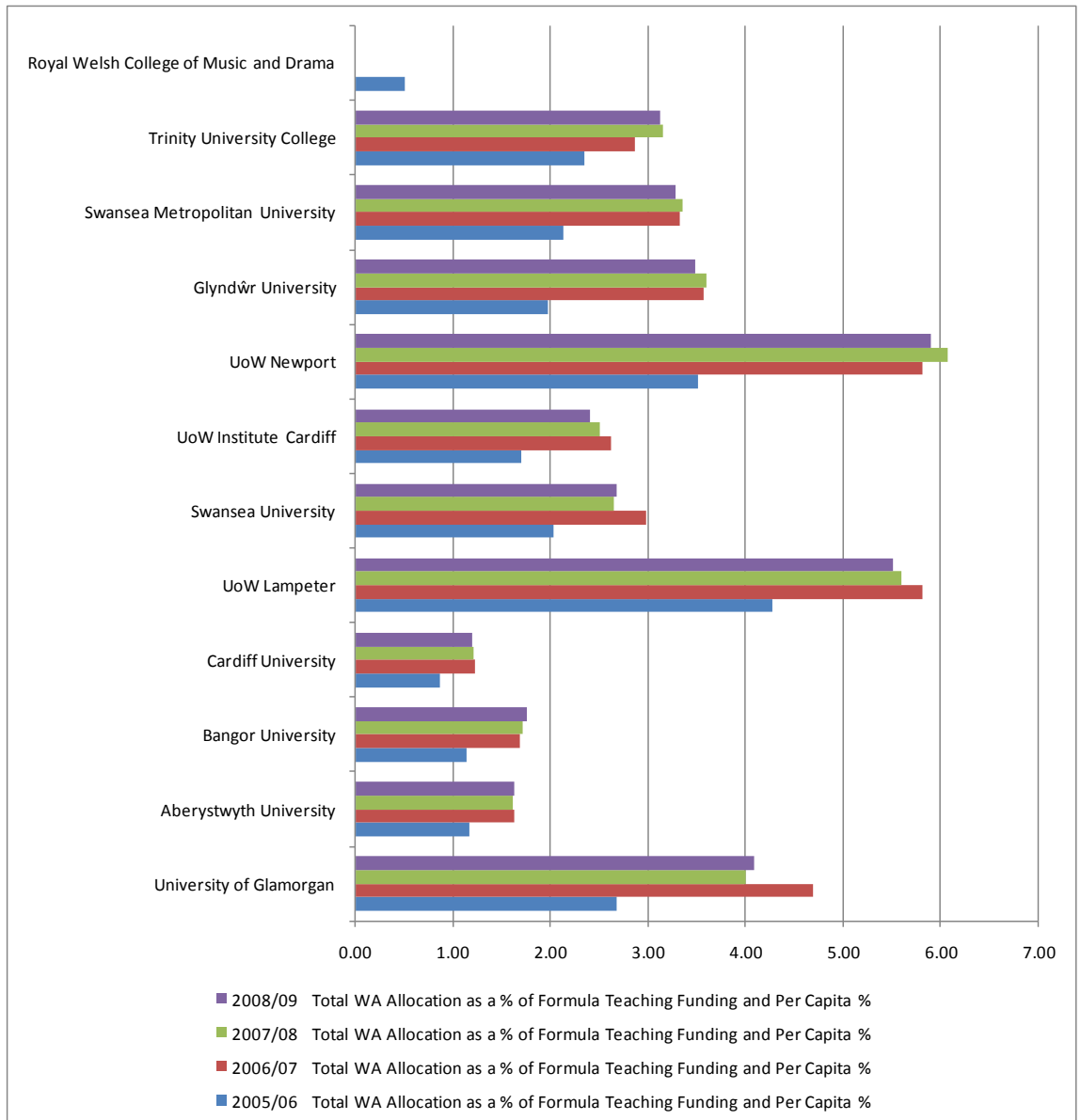
Adapted from Doc 85 Doc 86 Doc 87 Doc 88 Doc 89

Figure 27 Total widening access allocations including disability as a percentage of formula teaching funding and per capita
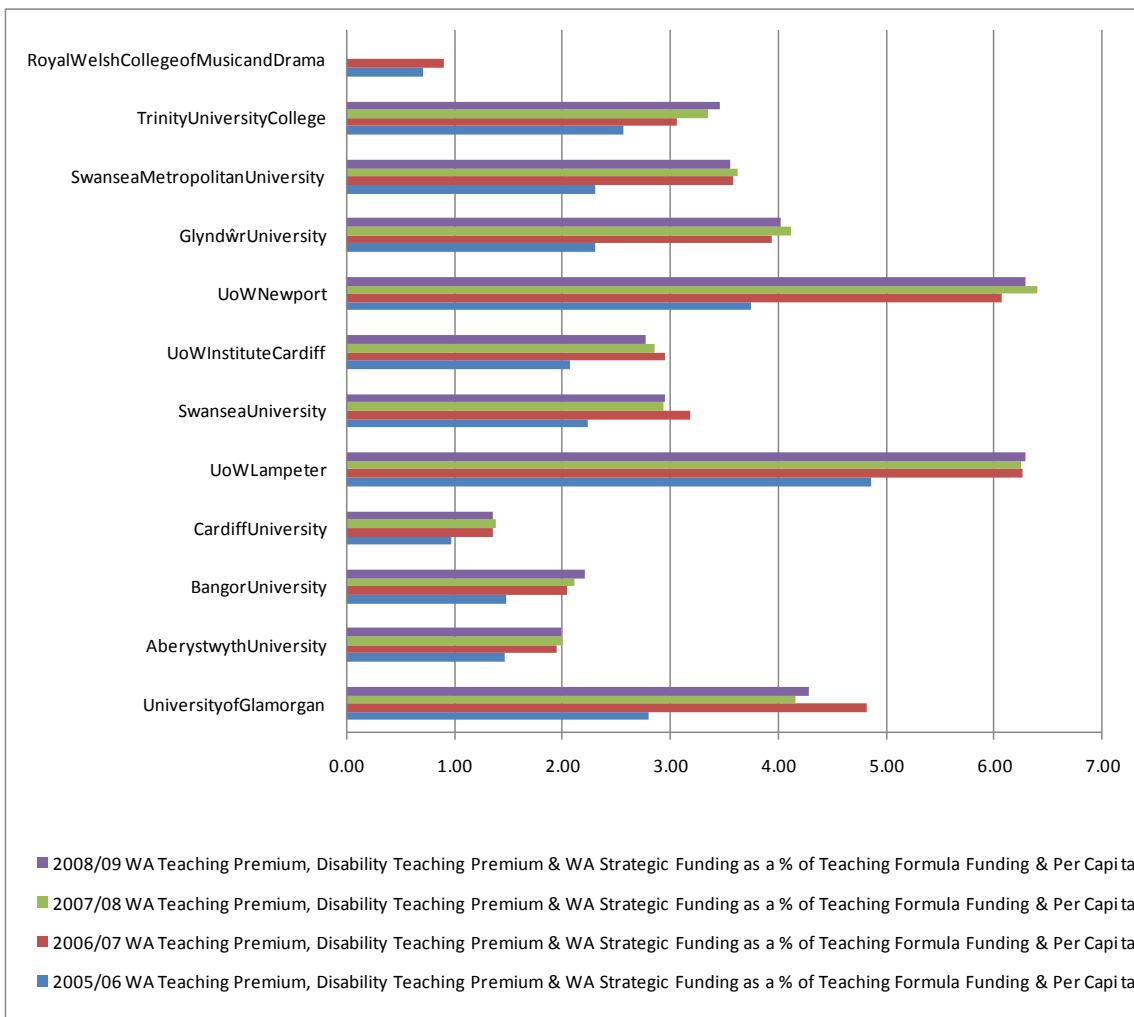
Adapted from Doc 85 Doc 86 Doc 87 Doc 88 Doc 89

The links between widening access performance and non-continuation rates are well documented and supported by empirical evidence within the Welsh HEI sector (Appendix A) and the case institution (Chapter 4). On the basis of this research, a new dimension, considering the mutuality between the two is derived and its value evidenced. Since, in general, post-1992 HEIs have high levels of widening access performances and relatively higher non-continuation rates than pre-1992 HEIs, the disproportionately low widening access allocations could be a key influencing factor.

The teaching grant and additional widening access allocations are based on full and part-time students. The case study (Chapter 4) evidences that non-continuation rates were higher for part-time than full-time students and Maguire Policy Research *et al*. (2009) identifies part-time study as a characteristic of non-continuing students

in *Student Withdrawal from Higher Education* (2009 p.26). Graham (2006) in *Independent Review of Part-Time Higher Education Study in Wales* was also concerned about part-time funding. The review recognises the importance of part-time higher education and its role in supporting widening access policy:

> 'Interest in the part-time sector in Wales continues to be significant, to an extent because of the numbers of students involved, but also because provision by higher education for that large and diverse number has responded to several priorities which underpin much of the Assembly's thinking. Lifelong learning is one, widening access is another and the extent to which part-time study is likely to be embedded in the local, social and economic environments is a third.'
>
> (Graham, 2006 p.11)

The review drew attention to concerns expressed by HEIs in Wales that:

> '...the demands of part-time students on the system were often greater than those of full-time students. Examples quoted were counselling issues, opening hours for support facilities and additional teaching provision.'
>
> (Graham, 2006 p.83)

The review recommended that public funding for HEIs should include:

> '(1) A per capita payment;
>
> (2) A teaching grant based upon the number of credits and subject studied by the student.
>
> (3) An additional funding stream intended to compensate for the lower tuition fees paid by part-time students, based on the total number of part-time credits being studied at each institution.
>
> (4) Premium for additional support for part-time students.'
>
> (Graham, 2006 p.74)

It was described as the *Combined Support Model* and offered as the preferred model for the following reasons:

> 'It should preserve the broadest range of institutional provision, address the needs of students from disadvantaged backgrounds and avoid difficulties

relating to cross-border flows. It also provides the greatest agility and responsiveness in dealing with the diverse needs of part-time students and possible future changes in study trends and national and institutional priorities.'

(Graham, 2006 p.77)

Part-time provision has relevance to widening access and is critically important to student retention. Widening access and student retention are each separately and mutually relevant to this research. So to are policy and funding. The disproportionately small additional funding allocations could be an important contributing factor to retaining the bond between access and retention.

Chapter 5 developed the concept of the *MWPi* and Figure 11 (p.174) evidenced the extent to which students eligible 'to progress' within the case study institution had more than one *SWPi*. For 2007/08, 15.5% of the student population had *MWPI=0* i.e. could be defined as traditional students. In 2005/06, 25% of full-time students and 13% of part-time students were defined as traditional students. The proportions are broadly consistent across the years. Thus, around 85% of the 'eligible to progress' student population were classed as 'non-traditional'. This is a significantly high proportion of students.

The high proportion of 'non-traditional' students in the case institution is in stark contrast to the broadly consistent 3.48% (in 2008/09; 3.6% in 2007/08) additional widening access allocation[61] received from HEFCW to support widening access. This increases to 4.02% (a total of £588,838) when the disability allocation is included. When this is considered alongside the non-continuation rates experienced at the case institution, a significant discrepancy is exposed. This investigation had not previously been undertaken in the case institution and offers new performance insights and potential for further research, particularly when considered alongside the new performance indicator, *MWPi.*

The most efficient and cost effective delivery of first degree qualifications occur when students are admitted through UCAS, study full-time and complete in three years, with no re-assessment. Students with sound 'A' levels grades are less likely

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[61] Defined as a percentage of formula funding and per capita allocations.

to need high levels of academic support and are less demanding of resources. This occurrence is most reflective of the pre-1992 HEIs, such as Cardiff and Swansea Universities. Their marketing, student recruitment, admissions and retention infrastructure demands will be disproportionately less than for the case institution. For example, at the case institution, once a student place has been accepted significant efforts go into delivering a range of pre-fresher's and fresher's events to support the transition into HE study and the institution. Once enrolled, the infrastructure supporting students is mobilised: counselling services, learning support, disability services and registry services supporting greater flexibilities of enrolment between full and part-time study. As mentioned previously, the additional resource demands on institutions from recruiting part-time students can be considerable: admissions, enrolments, receiving fee payments and, module and progression boards; all are based on 'head count' processes.

It was beyond the scope of this research to explore in detail the costs and funding formula supporting widening access and participation. However, the assumption that widening access is an additional, supplementary policy for institutions, therefore attracting a small supplementary payment, is strongly challenged by this research. The research has developed a body of new evidence that shows the challenges faced by high performing widening access institutions are more complex than the HESA performance indicators suggest and HEFCW's funding formula supports. The research proposes a move towards a more strategic investment paradigm that challenges the premise of funding being based on standard credits. As a minimum a model that introduces an appropriate level of funding for 'premium credits' for widening access enrolments should be considered. This moves on a stage the recommendations made in the Graham Review:

> *'An additional funding stream intended to compensate for the lower tuition fees paid by part-time students, based on the total number of part-time credits being studied at each institution.*
>
> *Premium for additional support for part-time students.'*
>
> (Graham, 2006 p.74)

This research also challenges widening access policies and associated funding allocations. HEFCW's commitment to widening access supports a funding methodology that provides a 'standard' funding allocation for a standard student (arguably that of a 'traditional student'). This is supplemented by additional

payments for widening access, part of which is pro rata based. This research directly challenges this methodology since for some institutions the standard learner is a 'non-traditional' student. The marginal additional funding secured cannot support the necessary infrastructure for such high proportions of 'non-traditional' students when they are not marginal services for the HEI concerned. It is perhaps therefore not surprising that non-continuation rates are higher for HEIs with strong widening access missions.

The additional funding allocation is further brought under scrutiny as a policy driver premium, given the marginal sums involved and the significant impact on student retention rates. This research exposes a significant discrepancy between the policy demands and funding allocations to individual HEIs. It also develops the student retention discourse away from the inevitably of mutuality that currently exists between widening access and higher retention rates.

Chapter 7 CONCLUSIONS AND RECOMMENDATIONS

The development of a system led *Management Model for Improving Student Retention Performance* and its supporting performance framework was motivated by an organisational need to deliver resource efficient, measurable, system level student retention improvements, without compromising widening access performance. The organisational need was matched by that of the researcher who was also an Executive Director of the case institution with responsibilities that extended to encompass widening access, student retention and strategic planning and performance. The researcher concluded that the literature was found to be in deficit in responding to the needs of the case institution for improvements in student retention performance.

The literature on student retention is extensive in history, scope and scale. The review included Tinto's seminal theory on student departure (Tinto, 1993), Bean and Metzner's (1985) theory based on an adapted organisation turnover model and Bean and Eaton's (2001) psychological model of student retention. Such models are part of a wide range of literature, presented over a 30 year period, covering qualitative research on students' experiences (Adams & Thomas, 1995; Archer et al., 2003; Baumgart & Johnstone, 1977; Bekhradnia & Aston, 2005; Christie et al., 2004; Fitzgibbon, 2009; Johnston & Pollock, undated; McGivney, 1996; Reay et al., 2005; Reay et al., 2001), faculty and student interactions (Cotten & Wilson, 2006), case studies on programmes to groups of institutions (Baumgart & Johnstone, 1977; Bekhradnia & Aston, 2005; Johnston & Pollock, undated; Palmer, 2001) and retention rates and costs of student retention (Longden, 2002, 2006; Yorke, 1998a, 2001a; Yorke et al., 2005; Yorke & Longden, 2004).

The literature review identified a gap in responding to delivering resource efficient, strategic management interventions that support the delivery of system level performance improvements. This research seeks to address this gap and provides new contributions to knowledge in the research, policy, funding and practice-based areas of student retention. A key contribution to the student retention literature is the new model and supporting performance and monitoring frameworks for improving

student retention. Derived from the literature, the case study and resultants frameworks have been informed by the Welsh HEIs' widening access and non-continuation performances.

In concluding the thesis, this chapter answers the key research question:

> *'What can a Welsh higher education institution which has a strong widening access mission and student profile, do to realise an efficient and effective step improvement in student retention performance?'*

In doing so, it draws out the three primary contributions to research (described further in sections 7.1, 7.4 and 7.5) and three that have particular significance to policy (7.2) and professional practice (7.1 and 7.3). They are not mutually exclusive and collectively respond to the key research question and its seven subsidiary research questions. A set of recommendations for further work are also formulated within each section and their predominance to research, policy and professional practice identified. The primary research, policy and practice outputs are summarised below and the recommendations are presented within the sections to which they refer.

Primary research outputs:

1. The system led *Management Model for Improving Student Retention Performance* derived from empirical data gathered by a longitudinal instrumental case study and informed by literature (described in Chapter 6 and concluded in Chapter 7.1);

2. Two new widening access KPIs, the *Multiple Widening Participation Index* and the *Specific Widening Participation Indicator,* that have particular relevance to HEIs with strong widening access performances and that challenges the algorithm used to calculate institution non-continuation benchmarks (described in Chapter 5 and concluded in Chapter 7.4);

3. The exposure of significant discrepancies between the funding allocations made by HEFCW, the demands on HEIs relating to widening participation policy and the extent of their $MWPi>0$ and retention performances (described in Chapter 6 and concluded in 7.5).

Primary policy output:

1. The broadly consistent widening access and non-continuation rates of HEIs, during 2001/02 to 2007/08 and their relative performances to benchmark, identified that whilst research-led universities consistently performed lower than the benchmarks for widening access and non-continuation rates, post-1992 institutions exceeded these benchmark standard (evidenced in Appendix A and concluded in Chapter 7.2).

Primary professional practice outputs:

1. The *Improving Student Retention KPI Framework* and the underpinning *Improving Student Retention Performance Monitoring Information System* that together provide the supporting performance framework for the *Management Model for Improving Student Retention Performance* (described in Chapter 6 and concluded in Chapter 7.1);

2. The significance and characteristics of information and data definition, collection, monitoring, analysis and reporting. This is used to inform strategy development and senior management interventions (described in Chapter 4 and concluded in Chapter 7.3).

7.1 The model and supporting frameworks

The primary outputs from this research are the system led *Management Model for Improving Student Retention Performance* (Figure 23, p.194), the *Improving Student Retention KPI Framework,* shown in Table 31 and Table 32, and the underpinning *Improving Student Retention Performance Monitoring Information System* including the data to be measured (Table 34). They are derived from a case study on a post-1992 Welsh HEI by applying a longitudinal instrumental case study methodology. Broader empirical analysis was undertaken on individual HEI performance and findings were informed by the literature. This section is the culmination of responses to all the research questions, however, specifically it responds to:

'What does the literature suggest are key factors that influence the retention of students and how does this relate to non-traditional students?'[RQ1];

'How are management interventions and delivering student retention performance improvement articulated in the literature?'[RQ2]; and

'What could a management model include for delivering step improvements in student retention in a HEI with a strong widening performance?'[RQ6].

The model and performance framework adopt a language necessary for its consistent and wider application across the sector and to support future comparative research. The model and its supporting frameworks are already informing the retention strategy of the case institution and is delivering step improvements in performances [50%, Young LPN HESA 2010] without compromising widening access. The system level management model for improving student retention, locates student retention within *institution, faculty* and *student* contexts. Each one influences the other, operating within their own environments whilst interacting with each other and is time dependent. It is a holistic model that speaks to strategic managers, recognises influencers within and out with the institution and follows student entry or immediately preceding it. The system level model is longitudinal and interactive and aims to achieve an efficient and effective step reduction in student non-continuation rates, when supported by the performance framework.

The performance framework is made up of: the *Improving Student Retention KPI Framework* and supported by the *Improving Student Retention Performance Monitoring Information System.* The former draws together external and internal

high level performance data to achieve an adaptive, timely, balanced, valid and reliable framework that support the new model. The latter provides the monitoring information system that underpins the delivery of the former. It is an essential element of the model and performance framework since it determines the precise measurements and therefore reports required for different audiences at specific times of the academic year. It is being implemented within the case institution and already informs the management information reports being presented to committees.

The model and performance framework, whilst emphasising institutional level performance improvements, can also be cascaded to support schools and programmes as part of the broader quality assurance and enhancement processes. For example, both are provided with monthly and 'end of year' 'withdrawal' status reports that are supplemented with an 'in-year' status report in May, prior to the assessment boards. Such reporting mechanisms are made possible due to the hierarchical nature of the data construct adopted within the framework.

The model and performance framework are offered as contributions to new knowledge and hence place this research in a new paradigm. System level monitoring, specific management interventions and targeted resource allocation all serve to impact on improving student retention (and reducing non-continuation) performance.

Isolating interventions

The new system level model for improving student retention identifies the *institution*, *faculty* and *students* operating within their own environments whilst also influencing each other. However, the case study showed that it was possible to isolate, evaluate and determine interventions provided that interfacing operating conditions, constraints and opportunities are broadly recognised and acknowledged. High level oversight of the isolated interventions becomes important.

This was exemplified by the review of the assessment regulations which led to the removal of the 60 credit rule that limited student progression. The '*Summer 2008 project*' enabled boundaries to be drawn, resources allocated, an evaluation to be undertaken and the impact measured as a reduction in students not returning to the institution in 2008/09. The broader institutional performance enhancement arose

from analysing the data and providing reports to Academic Board. The analysis is evidenced in Chapter 4 and includes module, programme and overall institutional level performances. The project evaluation revealed that the primary beneficiaries of the interventions were non-traditional students. The model and performance and monitoring frameworks therefore have relevance when applied in part, for isolated projects, as well as a whole*.*

Maximising connectivity potential

An important strength of the model and performance and monitoring frameworks is that interventions can be isolated. However, the case evidence shows that the identification of the issues, and therefore interventions, do not necessarily occur in isolation. Instead they are part of a wider system-led performance improvement programme, providing connectivity in many directions and levels. This connectivity is fundamental to the model and the performance and monitoring frameworks which are designed to exploit its potential. To illustrate an analysis of the non-continuation rates highlighted the high levels of 'repeat year' status students not returning. This led to an investigating of the assessment regulations and identified the '60 Credit Rule' as a barrier to progression. The partial removal of this rule led to additional academic support being provided to support affected students. An increased awareness of the number of students with 'referrals' not returning, resulted in improved contact and academic support over the summer. This necessitated the identification of all affected students and their associated referred workload. The resultant report not only exposed the levels of student referrals but information gathered informed subsequent staff development, programme re-design and changes to referral working practices.

Impact of institutional policy

The derived model includes a range of student retention influencers that arise from the institutional policy described in Chapter 4. They include: quality assurance policies (e.g. assessment regulations, curriculum design, admissions and widening access) marketing policies (e.g. bespoke programmes to meet market sector needs, positive association with the university brand and a comprehensive programme of extra mural activity) and estates policies (e.g. establishment of the Student Information Desk (SID)), provision of appropriate learning environments, buildings that are accessible to all and on campus security). Student retention requires a

holistic institutional response and therefore demands scrutiny of a wide range of policies and strategies to assess their impact on student retention.

This research explored in detail the impact on student non-continuation rates of one primary policy, that of widening access, set in the context of the case institution. This was evidenced by external and case study data, including HESA returns. Reference was made to the broader research literature. The case study institution was consistent with other HEIs in being successful in widening access. They also evidenced higher levels of non-continuation performance of part-time students compared to full-time students; mature students compared to young students and 'non-traditional' students compared to 'traditional' students, including those from 'LPN' compared to 'Other Neighbourhoods' (Appendix A).

Employer led curricula designed to accommodate CPD of employees has been shown, through the case study, to result in high student non-continuation rates for some market sectors (e.g. FdA Therapeutic Childcare). Institutional policies that support such an approach need to be mindful of the potential of high attrition rates associated with full-time employees accessing demanding part-time higher education courses. Examples were evidenced where the interface between the aspirations of the student cohort (motivations and goals including contractual obligations) and the institution's ability to accurately reflect these in programme design, structures and data capture was challenged. The policy of the institution to support employer based programmes is shown to impact adversely on student continuation rates. This should be considered when applying a performance framework to assert the academic and financial health of programmes.

The resourcing policy has an important role in reducing student non-continuation. It is acknowledged by the funding councils and external studies (Graham, 2006; J M Consulting, 2005) that widening access and student retention incurs costs above that which are recognised through the normal teaching grant. This research provides new knowledge regarding the extent of the challenges faced by widening access institutions compared to the amount widening access funding received. This is summarised later.

The application of the model to improve student retention is predicated on appropriate strategic interventions, sufficient allocations of resources and deployment of the framework by provision of practical tools for ensuring

interventions are applied as efficiently and effectively as possible. The policies and strategies employed by the institution impact on non-continuation rates. Whilst actions can and should be taken to reduce the impact, institutions with for example high part-time recruitment and employer led curriculum in particular disciplines are likely to experience higher levels of non-continuation than others.

Recommendation 1

The system led Management Model for Improving Student Retention, the Improving Student Retention KPI Framework and Improving Student Retention Performance Monitoring Information System be applied, as appropriate, by a number of HEIs and evaluated. The application by HEIs could isolate, determine and evaluate specific interventions as well as the system as a whole (Research).

Recommendation 2

HEIs to release the connectivity potential of the system led Management Model for Improving Student Retention, the Improving Student Retention KPI Framework and Improving Student Retention Performance Monitoring Information System to maximise student retention performance (Practice).

Recommendation 3

HEIs undertake impact assessments of their policies on student retention, e.g. widening access, employer engagement, quality assurance and student support (Practice).

Recommendation 4

HEIs determine the costs and impact potential of interventions prior to resource allocations in order to deliver efficient and effective improvements in student retention performance (Practice).

7.2 Welsh HEIs' widening access and non-continuation performances

The 'primary policy' based output is the finding that the broadly consistent widening access and non-continuation rates of HEIs, from 2001/02 to 2007/08, and their relative performances to benchmarks. The research led universities consistently performed lower than benchmark for widening access and non-continuation rates whilst post-1992 institutions exceeded the widening access and non-continuation benchmarks. This 'primary policy' based output also informs other research, policy and practice based outputs and recommendations outlined in this chapter.

This section draws on the evidence relating to the Welsh higher education sector, (detailed in Appendix A) and provides the widening access and non-continuation sector performance context within which the case institution is located. In doing so, it responds to:

> 'What is the widening access and student non-continuation performance of the Welsh HEI sector, including individual HEIs, over the period 2001/02 to 2006/07?'[RQ3].

The widening access and non-continuation performances associated with 'new entrants' into Welsh HEIs fall into three and sometimes four groupings. In general, post-1992 HEIs, such as Glyndŵr University, University of Glamorgan and University of Wales, Newport, experience significantly higher proportions of 'non-traditional new entrants' than pre-1992 HEIs, such as Cardiff University, University of Wales, Swansea and University of Wales, Aberystwyth. Post-1992 HEIs also experience significantly higher non-continuation rates than pre-1992 HEIs, including for 'non-traditional entrants'. It is important to note, however, that within these general categories there is evidence of increasing access by 'non-traditional entrants' into pre-1992 HEIs and systematic reductions in non-continuation by post-1992 HEIs.

In responding to widening access policies, the pre-1992 HEIs experience a greater volatility in non-continuation rates; this is particularly evident for University of Wales, Bangor when, on occasion, the rates exceeds those of post-1992 HEIs. In contrast the post-1992 sector is broadly maintaining its levels of access whilst also reducing its non-continuation rates.

Performance against benchmarks

HESA publish benchmarks, each year, for all HEIs in the UK for a range of key performance indicators, including access by non-traditional 'new entrants' and student non-continuation rates. The actual and benchmark performances of Welsh HEIs were monitored over a five year period and analysed with respect to the positive or negative performance variances (Appendix A). As in the previous section, there were clear distinctions in performances between the pre and post-1992 sectors.

The pre-1992 HEIs generally performed below their calculated benchmark for 'non-traditional new entrants' and the post-1992 HEIs performed above benchmark. This is in stark contrast to non-continuation performances. The pre-1992 HEIs performed lower than their calculated benchmark for student non-continuation rates across 'all entrants' and for 'non-traditional entrants', whilst the post-1992 HEIs performed higher than benchmark, including for 'non-traditional entrants'. The deviations from benchmark for each HEI were broadly consistent over time; however, the variations experienced by individual HEIs were greater for 'non-traditional entrants' than 'traditional entrants'.

The degree of consistency evidenced in the performance from benchmark over the five year period is notable and an important contribution to new knowledge and understanding. The research questions the algorithm determining the non-continuation benchmarks for its adequacy in representing the challenges faced by post-1992 (high levels of 'non-traditional' students).

Yorke (2001a p.148) identified that widening access and non-continuation rates were linked. A broad study on performance against benchmarks drew on entrants in 1998/99, and in it, he states:

> *'The old universities tend to draw a greater proportion of their intake direct from school (entry typically at age 18) and from those with higher point scores in the Advanced Level examinations.....The new universities and large colleges tend to have a greater proportion of mature students.....and entrants from the lower end of the socio-economic spectrum.'*

He identified that 'maturity' and 'social class' accounted for the bulk of variances in non-completion (Yorke, 2001a) and 'subject mix' for variations in completion rates

(Yorke, 2001b), quoting the study by Johnes and Taylor (1990) in their comparison of performances in the 'old universities' (pre-1992*)*. In the HEFCE benchmark calculations 'subject mix' and entry qualifications are modelled; other potential dependencies such as 'social class' and domiciled wards are not. This suggests a potential weakness in the methodology behind the benchmark calculations and underestimates the influence and impacts of widening access.

Widening access policy performance

The widening access and student non-continuation performances of the Welsh HEI sector are evidenced from 2001/02 to 2007/08 and 2001/02 to 2006/07 respectively, in Appendix A. *Reaching Higher* (Welsh Assembly Government, 2002) was the policy context during that period and includes a target of 11.5% for the proportion of 'all undergraduate entrants' who are domiciled in the Welsh Community First areas to access higher education at UK HEIs and FEIs.

Widening access

Welsh HEIs systematically increased the percentage of all new undergraduate entrants domiciled in Welsh Community First areas from 10.2% in 2000/01 to 12% in 2006/07; this translates into an increase of 885 new entrants each year up until 2006/07. The UK target of 11.5% has not been achieved and is unlikely to be met by 2010. The UK performance increased from 8.9% in 2000/01 to 10.1% in 2002/03 reaching a peak of 10.2% before reducing to 9.9% in 2005/06 (latest figures available).

The highest rate of convergence towards the widening access target was met before *Reaching Higher* (Welsh Assembly Government, 2002) was published and the corresponding *Reaching Wider* (HEFCW, 2009a) initiative introduced. The latter was supported by additional financial allocations to regional partnerships. The potential for HEIs and FEIs to collectively achieve the target is influenced by a number of factors, not least the introduction of tuition fees. The reductions experienced before the small positive increases in 'new entrants' domiciled in Welsh Community First areas, between 2003/04 to 2006/07, may well have been such a response. It is plausible that had the widening access policy and associated funding not been in place, Welsh HEIs may have experienced an overall reduction in new entrants from Community First areas. It is also possible that the substantial increase [293; 33% of

the total] experienced in 2006/07 could have been as a direct result of *Reaching Wider* (HEFCW, 2006b) and individual HEI strategies to widening access; many of which focus on aspiration raising with younger students who only now will be becoming eligible to enter higher education. The distribution of such enrolments within HEIs is not currently publically available but should be monitored going forward.

Student non-continuation

Reaching Higher (Welsh Assembly Government, 2002) does not define a policy target for student non-continuation. It does however, compare Welsh and UK performances across a number of indicators. This research builds on the Welsh HE sector non-continuation performances identified within the policy and extends the period of analysis to 2006/07. More generally, the research considers the non-continuation performances of each HEI in Wales for the period 2001/02 to 2006/07 (Appendix A). The non-continuation of full-time first degree entrants rose from 8% in 1998/99 to 10.9% in 2006/07. The overall increase included a reduction from 2003/04 [10.7%] to 2005/06 [9.5%]. Young entrants from LPN consistently had higher non-continuation rates than those from other neighbourhoods (ON) with an increasing gap for entrants in 2002/03 to 2006/07.

Recommendation 5

Pre-1992 institutions, responding to widening access, to have student retention as a strategic priority to reduce the impact potential on non-continuation rates (Policy).

Recommendation 6

The algorithms, from which the HESA benchmarks for widening access and non-continuation rates are calculated, should be investigated to ensure 'institutional type' is fully represented (Research).

Recommendation 7

HEFCW to provide access, non-continuation and achievement performance data to the sector for new entrants and students domiciled in Community First areas to inform policy and strategy development (Policy).

Recommendation 8

Research be undertaken using new entrants domiciled in Welsh Community First areas data from 2000/01 to establish participation, non-continuation and achievement rates as well as institutional/subject choice and geographical patterns of entry (Research).

Recommendation 9

HEFCW to give greater emphasis to student retention in their policies, strategies and resource allocations (Policy).

7.3 The role of monitoring and reporting to improve student retention performance

This section draws on the case study to determine the role of monitoring and reporting in delivering efficient and effective improvements in student retention performance. It identifies key issues relevant to institutions about to embark on delivering system level improvements and responds to:

> *'How did the case study institution respond to the need to reduce non-continuation rates?' [RQ4].*

One of two 'primary professional practice' based outputs is the significance and characteristics of information and data definition, collection, monitoring, analysis and reporting. This is used to inform strategy development and senior management interventions.

The literature review revealed that student retention was complex, multidimensional and operates at multi levels. The data captured and considered throughout the case study supports this and has informed the development of the model and its supporting performance and monitoring frameworks.

Importance of language and definitions

The first consideration surrounds the language and definitions. When the case institution first embarked on its journey to improve student retention, language was grounded through institutional practice, rather than research and policy. This resulted in inconsistencies in the application of definitions during the reporting processes. Such inconsistencies were found in the literature review which likewise revealed inconsistencies in the use of language. An example is the range of descriptors adopted, over time, to describe student retention such as drop out, non-continuation and retention (evidenced in Palmer, 2001; Reimann, 2004; Thomas, 2002; Tinto, 1975, 1993).

Other definitional influencers are the impositions of national requirements. For example, HESA reports the non-continuation of *full-time first degree entrants beyond the year of entry*. Each underline emphasis represents a specific definitional category. The case study evidenced the importance of measuring both positive and negative constructs of student retention for full and part-time students at a level of

granularity that exists only within a HEI. It was often the case, that the negative construct was the driver behind the identification of the necessary interventions (e.g. repeat year non-returners and the assessment regulations review) whilst the positive provided the landscape (e.g. achievement rates).

Formal definitions of KPIs are provided by HESA (2008b). These are crucial to the external monitoring environment. However, the case evidence highlights they are an inadequate tool when divorced from the internal monitoring system. Both are needed to deliver tangible effective and efficient improvements in student retention performance. The variations in definitions adopted across external reports and the literature reduced the potential for direct comparisons; this was echoed within the internal data and resulted in the commissioning of additional bespoke reports. HEIs wishing to maximise enhancement opportunities within an efficient 'resource envelope' need clarity of data objectives, definitional accuracy and consistency in approach. This is also likely to demand developments of the monitoring information systems, as was the case for the case institutions.

It was evident from the findings that the descriptors should represent the type of information being sought (e.g. withdrawals) and how it is referenced to other data (non-continuation), when in the academic cycle it relates (e.g. in-year), the level of data capture within the organisation (e.g. school/programme) and other data specific characteristics (e.g. part-time/non-traditional students). This results in a matrix structure. The vertical hierarchical data construct enables influences to be tracked into the depths of the institution, e.g. module referral performance iterated through to programme(s), schools, faculties and, where appropriate to an institutional level. The horizontal data construct identifies the variables under consideration and includes 'in-year' or end of year withdrawal rates.

The data constructs should therefore enable a range of performance data to be systematically scrutinised. Following this level of scrutiny, any associated areas of influence that provide opportunities for further investigation should be considered. This may involve further data analysis or the design of specific interventions and evaluations deemed to have potential for measureable gain.

The emergence of data influences and potential impacts

The case institution had student retention as a strategic priority from 2001. This was delivered across all management, academic and governance infrastructures. The Core Executive consider monthly withdrawal reports; Academic Board act upon progressions, referrals and cohort analysis and the Board of Governors actively monitor headline widening access and student retention KPIs. There is also detailed consideration of student retention performance, interventions and evaluations by joint meetings of Academic Board and the Institute Management Group.

The systematic consideration of student retention performance intensified in 2007 with the introduction of the SRSTFG reporting to WPARC, a sub-committee of Academic Board. This group identified the need for new reports that included cohort analysis and counselling services contact evaluations. The reports demonstrated an enthusiasm to improve student retention. It also provided a catalyst for interventions across schools to be identified and considered for wider institutional relevance. However, this proactive activity was accompanied by initiatives that could have impaired the ability to evaluate the overall impacts of interventions to improve student retention performance. Overall, a balance appears to have been achieved between high level cohort analysis, non-continuation and progression reporting at institutional and school levels and delivery of specific interventions.

From landscape to the specific; from trends to one off

Chapter 4 described an extensive range of parallel engagements with data, trends, interventions, evaluations and impacts at varying depths within the case institution. The Core Executive, supported by Academic Board and Institute Management Group, had view of the entire performance landscape (meeting enrolment contracts, financial performance, reputation, including league tables) and could determine system and policy led interventions. They could fully assess the appropriateness of resource allocations, the implications of specific interventions and strike a balance between institutional mission and the need to improve student retention performance.

The case study evidenced the importance of data structures. Improving student retention translated in practice, to reducing non-continuation rates. The national HESA KPIs present institutional level performance18months later than the year of

entry, making it redundant for supporting 'real time' interventions. However, analysing student non-continuations in 'real time', such as withdrawals and non-progressions in October at institution, school and programme levels, provide specific insights into the sources of non-continuation and the degree and extent of their influence. Analysing monthly withdrawals and suspended studies over five years evidenced the peak times of student departure. Identifying the location and nature of the issue enables local responses fully cognisant of the wider institutional context. This approach is acknowledged in the model through its holistic approach, supported by a performance framework accommodating a number of subsidiary KPIs considered to be the primary drivers to realise improvements. Ultimately, however it would be for the institution to determine the appropriateness of each KPI in relation to its mission and challenges to be faced. This approach promotes real time interventions, whilst retaining governance oversight of external KPIs. The landscape should also be supplemented by detail.

For an effective and efficient engagement with improving student retention, it is crucial the data responds to key questions for which the data requirements and definitions have been determined.

Challenges identified by a variety of evidence

A wealth of institutional data and information was obtained during the research. This included participation and retention performances at different levels within the institution and identified the influencing factors and interventions to reduce non-continuation rates. This section draws on the information from across the case study to identify patterns of performance that suggest potential for securing significant performance improvements at institution level through targeted interventions at school, subject or programme level.

Triangulation was used to compare a range of performances at school level for a number of KPIs. The KPIs chosen were: % 'in-year' withdrawals (Table 6); % 'end of year' withdrawals (Table 8); % 'in-year' 'suspended studies' (Table 7); % 'end of year' 'suspended studies' (Table 9); difference in magnitude between pre and post assessment board positions for both (Table 10); PEQ 'strongly agreed' –'Overall satisfaction with course'; % of students referred to total enrolments (Doc 61) and cohort analysis to graduation excluding 'advanced standing' students (Table 24).

There appeared to be synergies across a number of KPI performances at school level. The two schools experiencing the lowest rate of students achieving their originally enrolled qualification in the three years were S&T and C&CT. Both schools also achieved the lowest PEQ ratings of students 'strongly agreeing' that overall they were satisfied with their course, and the highest referral rates by a considerable margin. In 2007/08 the School of C&CT had the highest part-time end of year withdrawal level and S&T had the second highest full-time end of year withdrawal level. The two schools however, did not experience the highest numbers of withdrawals and suspended studies reported before and after assessment boards, indicating an on-going termination of studies. The highest number of withdrawals experienced during the assessment period was reserved for the Schools of E&C and HSCSES. Both had an additional 50 students that fell into this category, a figure greater than the total from the other five schools.

The analysis showed that by taking a horizontal data construct rather than a vertical one (i.e. across schools and programmes rather than a summation of module, programme and school data) it became evident that performances in one category could be indicative of poor performances in others. The broader and widespread performances identified at any level within the institution (e.g. school) affords opportunities to make a step change in delivering improved student retention.

Recommendation 10

HEIs to determine in advance and apply consistently throughout, as far as practicable, the objectives driving the data analysis and associated definitions in order to maximise potential for research outputs and evidence measurable improvements in student retention (Practice).

Recommendation 11

HEIs implementing the performance measurement system to ensure an appropriate balance between longitudinal analysis and 'one off' bespoke reports and, between continuation and non-continuation data constructs and, the broad landscape and the detail necessary to determine specific interventions for the various student constituencies i.e. full or part-time (Practice).

Recommendation 12

HEIs to consider the data definitions and requirements as they may demand developments in the measuring system and therefore a prioritising of reports should inform the phasing of the introduction of any new measuring, monitoring and reporting systems (Practice).

Recommendation 13

Programme achievements rates or cohort analysis based on the total originally enrolled population provide the summative impact of student non-continuation and should be a priority in determining resource allocations and interventions (Practice).

Recommendation 14

HEIs to recognise that improving institutional level student retention performances requires leadership at the highest academic, strategic and operational management levels of the HEI (Practice).

Recommendation 15

The HEIs and their respective challenges and aspirations for improvements should determine the extent, both depth and breadth, of data analysis required and the availability of resources when implementing the Management Model for Improving Student Retention Performance and its supporting performance monitoring frameworks (Policy).

Recommendation 16

HEIs developing capability and capacity for institutional level research will support in achieving a research informed and methodologically enhanced approach to improving student retention (Policy).

7.4 A new performance indicator for institutions

One of three 'primary research' outputs of this inquiry is the development of a new widening access KPI that has particular relevance to HEIs with strong widening access performances and that challenge the algorithm used to calculate institution's non-continuation benchmarks. This section draws on the research provided in Chapter 5 in determining the above conclusion and in doing so responds to research question 5:

'What is the case for a new performance indicator and measurement system supporting widening participation performance?[RQ5]'

It has been recognised by numerous studies and texts that 'non-traditional' students deal with complexities beyond those experienced by 'traditional' students. Yet the use of empirical data to measure the extent of challenges is limited to a number of HESA KPIs; for example 'young entrants from LPN' or 'mature entrants from LPN'. However, it was evidenced that some students were 'mature', from LPN and socio economic class NEC 4,5,6 and 7 and 'in receipt of DSA'; this level of complexity introduced challenges beyond the linear dimension suggested by the HESA KPIs. It follows that the algorithm for calculating the published benchmarks for access and retention could be flawed, with the resources needed to support widening access significantly under estimated.

A new performance indicator, the *Multiple Widening Participation Index (MWPi)* is defined by the research. The index has a value from 0 to x where x is determined by the number of *Specific Widening Participation Indicators (SWPi)* a student possesses e.g. 'in receipt of DSA', 'mature' or 'LPN'. Both these definitions are key contributions to research and practice knowledge and identify new degrees of challenge; it will also be shown to have institutional and higher education funding policy implications.

The case institution, a post-1992 institution, was found to have high levels of 'non-traditional' students and non-continuation rates. This was also evidenced more generally for 'new entrants' into post-1992 institutions (Appendix A). Pre-1992 institutions had low levels of non-traditional new entrants and non-continuation rates. Empirical research was therefore undertaken to understand the relationships in the context of the *MWPi*.

Multiple Widening Participation Index *(MWPi)* and participation

The case institution's population data 2004/05 to 2007/08 was analysed using this new performance indicator. Full and part-time students were included and considered for all taught programmes. The data population focused on students with 'progression' status 2004/05 to 2007/08; it did not therefore include graduating or withdrawn students.

It was found that the proportion of 'traditional' students in the institution ranged from 15.5% to 18.5%, and for the part-time population this reduced to 13%. The degree to which the population had some form of *MWPi* was surprising. Students with an index, *MWPi=1* were in the order of 49%, *MWPi=2* varied from 24% to 28% and *MWPi=3* and 4 accounted for 8% of the population. The performance over the four year period remained broadly consistent.

The extent of widening access representation of each *SWPi* is institutional mission dependent (Appendix A). However, the degree and coverage of *MWPi>0* across institutions is not yet known beyond those defined by the HESA KPIs and is limited to 'new entrants'. Based on the evidence in Appendix A and Chapter 4, it is not unreasonable to assert that there will more students with higher degrees of *MWPi* in post-1992 than pre-1992 institutions. By considering the HESA KPI tables, it was possible to determine the degree to which new entrants with particular *SWPi* were represented in a HEI. However, only by adopting the *MWPi* approach could the true extent of the impact of widening access be determined. The current HEFCW funding methodologies may not, therefore, be appropriately supporting such HEIs to deliver a key policy of both Westminster and Cardiff Governments.

Multiple Widening Participation Index *(MWPi)* and non-continuation

The following conclusions and recommendations are drawn from two different data populations: the case institution and the Welsh higher education sector.

The case institution

The non-continuation performances for full and part-time students are very different. It is necessary therefore to consider each one separately.

Full-time student population

The representation of each *MWPi* across the student population and those not continuing are very similar. For example in 2005/06, 25% of the student population had *MWPi=0,* 40% had *MWPi=1,* 26% had *MWPi=2* and 8% had *MWPi=3* whilst in the non-continuation population the same *MWPi* were 24%, 44%, 24% and 7% respectively.

The evidence over the four years (2004/05-2007/08) detailed that all *MWPi* showed reductions in the percentage of students not-continuing to those continuing; the greatest being realised by *MWPi=* 1,2 and 3*.* A dramatic reduction was experienced in 2007/08 to 2008/09 following specific management interventions- most notably the '*Summer 2008 project'.* The levels of reductions experienced in the representation of student non-continuing to continuing were 12.4% for *MWPi=1,* 12.3% for *MWPi=2,* 10.1% for *MWPi=3* as compared with only 2.2% for traditional students, *MWPi=0.* The '*Summer 2008 project'* had an important impact on reducing non-continuation of 'non-traditional' students that was not matched by traditional students. By 2007/08 to 2008/9 the students having the lowest non-continuation to continuation representation were those with the highest *MWPi, (=2,3 and 4).* Since these represent 35% of the entire student population the tangible impact on reducing non-continuation rates is significant, and likely to have influenced the reductions reported in the HESA KPIs (epilogue).

The impact of individual *SWPi* on the proportion of students not continuing to continuing is shown in Figure 37 and Figure 39. Students in receipt of DSA for three out of the four years had the lowest non-continuation level whilst mature students had the highest each year and accounted for approximately 70% of the total full-time non-continuing population. From 2004/05 to 2007/08, there was a broadly consistent trend of reducing non-continuation levels across all *SWPi* categories within the range of 10.2% to 12.6%. All *SWPi* categories showed notable reductions in 2007/08 to 2008/09: 2.4 for 'mature' students, 3.5 for students with 'non-traditional' qualifications, 3.7 for students from LPN, and 5.8 for students 'in receipt of DSA'.

The degree of consistency in the trends and size of reductions across each *SWPi* and most *MWPi* suggests a positive direct relationship between the general introduction of management interventions and reducing non-continuation rates.

However, the degree of positive impact is variable between 'traditional' and 'non-traditional' students, the latter being the primary beneficiaries.

Part-time student population

On average, excluding traditional students, 8.5 times as many part-time students do not continue/continue; for traditional students the rate is 24.8. This is considerably higher than for full-time students. The representations of each *MWPi* across the part-time student population to those not continuing are very similar. For example in 2005/06, 13% of the student population had *MWPi=0,* 58% had *MWPi=1*, 24% had *MWPi=2* and 5% had *MWPi=3*. In the non-continuation population the same *MWPi* were 11%, 52%, 29% and 8% respectively. A greater variation is experienced for part-time than full-time students.

Traditional students, *MWPi=0,* had the highest non-continuation to continuation representation, reaching 186.3%. Over the four years all *MWPi* groups reduced their representation of non-continuation to continuation with the exception of traditional students. By 2007/08 to 2008/09 the groups with the lowest non-continuation representation were those with the highest *MWPi*. This is consistent with full-time students. Consistently strong reductions were realised for students from LPN and students with 'non-traditional' qualifications (83.3% and 65.3% respectively). Students 'in receipt of DSA' showed little change but were already at a level significantly lower than other indicators. For example in 2004/05 to 2005/06, 19.2% of students 'in receipt of DSA' did not continue to continue, whilst for 'mature students' the comparable figure was 89.4%, students with 'non-traditional' qualifications were 98.5%, students from LPN were 121.4% and 'traditional' students were 150.7%. Traditional part-time students experienced an overall increase and in 2007/08 to 2008/09 almost twice (186.3%) as many 'traditional' students did not continue as did continue.

Welsh higher education sector

This section considers the non-continuation of full-time first degree entrants 2002/03 to 2005/06 with reference to both *MWPi* and *SWPi* as detailed in Chapter 5. The scaling up of the application of *MWPi* and *SWPi* to sector level enhances the transferability potential of the research findings to other HEIs and the sector as whole, including policy implications for HEFCW. This may offer policy challenges.

Mature entrants

The non-continuation of 'mature' full-time entrants with no previous experience of HE averages 16.2%. For the same 'mature entrants' who define themselves as 'disabled' the average reduces to 15.6%. When the population also includes entrants 'in receipt of DSA', the non-continuation rates reduce further, to an average of 12.2%. The lowest non-continuation rates were experienced by 'mature entrants' with 'no previous experience of HE, domiciled in a LPN and in receipt of DSA. The influence of DSA on this group reduces the average to approximately 10%.This is in stark contrast to mature entrants with no previous HE and from low participation neighbourhoods who were consistently found to experience the highest non-continuation rates ranging from 20% to 15.7%.

The impact of students 'in receipt of DSA' on what is otherwise the same standard population is a notable contribution to research and policy development. The greatest reduction is experienced by mature entrants with the greatest *MWPi*. This finding at a sector level reinforces the importance of the case study which also identified this correlation.

Young entrants

The non-continuation rate for 'young entrants' averages 8.1%, was broadly consistent over the four years and was half that for mature students. Young entrants 'in receipt of DSA' reduced the average performance to 5.9%. Young entrants from 'NS-SEC Classes 4,5,6 and 7' have an average non-continuation rate of 8.0%, which was broadly consistent over the years. However, when the same population was also 'in receipt of DSA', the average reduced to 6.4%. In all but one year, 2005/06, the non-continuation rates for 'young entrants' from 'NS-SEC 4,5,6 and 7' and 'in receipt of DSA' were lower than for those not 'in receipt of DSA'. Young entrants from LPN experienced consistently higher (3.3%) non-continuation performances than for 'all young entrants'. However, when the same population was also 'in receipt of DSA' the non-continuation rates reduced to an average of 8.6%, a reduction of 2.8%.

The impact of students 'in receipt of DSA' is positive across all indicators. It consistently reduced the non-continuation rates of the base population, even when experiencing *MWPi=2*. This is an important contribution to new knowledge that

considers the mutuality between widening access and non-continuation rates (and by implication student retention).

Recommendation 17

HEIs to analyse their student population and non-continuation rates with respect to the newly defined MWPi to determine the degree of representation across the Specific Widening Participation Indices (SWPi), including when MWPi=0 (i.e. traditional student) and use to inform the student retention strategy (Practice).

Recommendation 18

HEFCW to consider the degree of representation of MWPi>0 and its impact within institutions when developing policy and deriving funding methodologies (Policy).

Recommendation 19

Research be undertaken to understand the relationship between 'in receipt of DSA' and other SWPi in relation to retention performances for mature and young entrants and students and including consideration of 'institutional type' (Research).

Recommendation 20

Research be undertaken specifically to understand the nature, scale and scope of support available to students 'in receipt of DSA', at various levels such as personal, institutional and national and to consider its broader applicability to student retention strategies (Research).

Recommendation 21

HEFCW to provide information to the sector that recognises the influence of MWPi on non-continuation rates including specifically the interrelation between SWPi when a number of indices act simultaneously (Policy).

7.5 Funding implications of the mutuality between widening access and student retention

The case showing the mutuality between widening access, student retention and non-continuation rates has already been made. This section draws on Chapter 6 in evidencing new knowledge and research contributions in the areas of institutional funding, widening access and student non-continuation performances.

The third and final 'primary research' based output of this inquiry is the exposure of significant discrepancies between the funding allocations made by HEFCW, the demands on HEIs relating to widening participation policy and the extent of their *MWPi>0* and retention performances. In determining the above conclusion this section responds specifically to research question 7:

> *'What are the implications for HEFCW related funding received by HEIs arising from the research?'[RQ7].*

HEFCW currently fund the sector and individual HEIs on the basis of traditional students and allocates additional funding to support widening access. This research evidences the scale of widening participation (access) in the case institution. Typically the traditional students (i.e. not widening access) represent as few as 15.5% of the student population[62]. Since there are strong widening access performances across post-1992 HEIs (Appendix A), it is possible that low levels of traditional students similarly exist. In such cases a 'standard' student would typically be a 'non-traditional' student. In 2007/08, the variation in performances for full-time first degree entrants across Welsh HEIs ranged from 5.9% to18.6% for 'young entrants from LPN'; 21.6% to 53.7% for 'young entrants from NS-SEC classes 4,5,6 & 7' and 11% to 61.9% for 'mature entrants'. Wide discrepancies across the sector are experienced with the post-1992 institutions experiencing the higher widening access performances.

The above findings were considered alongside the teaching grant and additional widening access funding allocations to each HEI. Specifically, the additional widening access allocations as a percentage of 'formula funding and per capita'

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[62] As defined in Chapter 5

received by each Welsh HEI were compared. In 2008/09, the additional funding received by HEIs varied across the sector from 1.35% to 6.3%, a range of 4.95 %. This degree of variation is in stark contrast to the variation in widening access participation rates, which reached 50%. For the case institution, the additional funding amounted to 4.02%, £588,838 in real cash terms, to support approximately 85% of the student population *(MWPi>0)* and associated widening access and participation infrastructure costs. This type of investigation had not previously been undertaken in the institution and offers new research knowledge potential, particularly when considered alongside the new performance indicator, *MWPi.*

HEFCW's commitment to widening access supports a funding methodology that provides a 'standard' funding allocation for a standard ('traditional') student, supplemented by additional payments for widening access, part of which is pro rata based. This research directly challenges this methodology since for some institutions the standard student is a 'non-traditional' student experiencing a number of *SWPi (MWPi>0)*. The marginal additional funding secured cannot support the necessary infrastructure for such high proportions of 'non-traditional' students when they are not marginal services for the HEI concerned. It is perhaps therefore not surprising that non-continuation rates are higher for HEIs with strong widening access missions.

This research exposes a serious discrepancy between the policy demands and funding allocations to individual HEIs. It also develops the student retention discourse away from the inevitably of mutuality that exists between widening access and higher retention rates.

Recommendation 22

HEFCW to work with HEIs to revisit the true costs of widening participation and develop a revised funding strategy that more fully reflects the broad variations in participation rates (Policy).

Recommendation 23

Research be undertaken into the effects of MWPi on non-continuation and achievement rates for individual HEIs as well as groups based on 'institutional type' (Research).

Recommendation 24

HEFCW to encourage institutional research grounded in research literature and enable sector wide learning in widening access and student retention alongside the practitioner based good practice guides that are developed (Policy).

EPILOGUE

This research was inspired by the need to reduce student non-continuation rates without compromising my institution's position as a lead HEI for widening access. As Executive Director with responsibilities that include widening access, student retention and strategic planning, I had both motive and opportunity to make a contribution to the research literature, policy and professional practice.

The impact of this research on the case institution has been significant. The most recent data evidences that student non-continuation rates have, for some categories of widening access students been reduced by as much as 50%, without compromising widening participation rates. The HESA 2010 KPI data was released too late in 2010 for inclusion in the research analysis, however, it is included here to evidence the most recent performances of the case institution. The headline impacts on the non-continuation rates (i.e. no longer in HE) for full-time entrants to first degrees, include:

- An overall systematic reduction of 5.9% for 'all entrants', from 17.2% in 2003/04 to 11.3% in 2006/07 (2.1% higher than the Welsh sector average); 1.1% lower than benchmark- the only year to have achieved a performance less than benchmark;
- a reduction of 7.7%, for 'mature entrants' from 18.1% in 2002/03 to 10.4% in 2006/07 (4.5% lower than the Welsh sector average); 3% lower than benchmark-the only year to have achieved a performance less than benchmark;
- a reduction of 10.3%, for 'young entrants from low participation neighbourhoods' from 19.4% in 2006/07 to 9.1% in 2007/08 (1.9% lower than the welsh sector average); 3.9% lower than benchmark-the lowest achieved.

These reductions have been achieved whilst also increasing widening access across most *Specific Widening Participation Indicators.* Mature entrants are the exception. They experienced a reduction of 3.1%, from 61.9% in 2007/08 to 57.8%

in 2008/09. However, this level of participation is in excess of 30% higher than the Welsh sector average. The representation from 'mature entrants with no HE and from LPN' increased by over 3%. For the very first year under consideration (2001/02-2008/09 entrants), the case institution performed above benchmark for widening access and student retention simultaneously and the extent of the variances from benchmarks were not shared by any other HEI in Wales. The scope and scale of the impacts arising from the research, together with the implementation of the strategic drive to improve student retention, has been impressive.

It was beyond the scope of this research to develop and rigorously test the model for improving student retention performance and its performance framework, i.e. independently apply them to another HEI. However, since the case institution has encompassed many of its principles for the past three years, with considerable positive impacts as evidenced above, I would argue that (elements of) the model is transferable to other HEIs. Indeed, the model is derived from the case institution's interventions, literature and extensive knowledge of the researcher of higher education strategic management of the various internal and external contexts that inform the categories, elements and the environments described in the model. The performance and monitoring frameworks were informed by the case evidence, including reports that had been specifically designed to respond to the developing student retention improvement strategy. In summary, the argument is that the model has proven a certain level of robustness. There is no doubt when applying the model there is a need to contextualise it in the specific institutional setting. The analysis of the Welsh sector (Appendix A) has pointed out that there is considerable variety within the system, prompting those that intend to apply the model in other HEIs to consider carefully how different these HEIs are and how that may affect the application of the model.

The privileged position of being researcher, senior manager and professional practitioner afforded considerable benefits, insights and influences that otherwise would have been at least difficult and worst impossible, to achieve. The opportunities to engage with longitudinal retrospective and 'real time' case data enabled the commissioning of bespoke reports to supplement case documents. The research also benefited from my increasing profile in Wales, achieved for my work on strategy, widening access and student retention and, membership of HEFCW's Widening Access Committee. This enabled access to policy makers in HEFCW and Welsh Assembly Government, researchers and practitioners in other HEIs.

However, the overarching benefits were realised from being researcher, whilst operating at a strategic management level for eight years in a HEI undergoing major change. Strategies and management interventions were paramount and performance improvements had to be evidenced. As a senior manager with lead responsibility for widening access and student retention, I was readily able to secure committee support for the introduction of new reports as the research deemed necessary. The implementation and timely evaluations of management interventions was also possible. This activity enabled me to both develop the model whilst simultaneously testing parts of it. The performance framework has been designed to assist HEIs with the application of the model. It is accompanied by a suggested schedule of reports to specific committees. The application of the model will be supported in due course by 'a manual or handbook' that is developed and supported by the case study material.

The research continues to be transferred into institutional policy and practice. It is supporting firstly, the development of a revised student retention strategy and secondly, a new programme commissioning process, believed to be the only one of its kind in the UK[63]. It includes high level screening of all taught programmes against a number of KPIs including student retention measures: student non-continuation, progression and achievement. The data construct for programme performance has been translated into one appropriate to measure module performances. The first run of the commissioning model has been undertaken and a number of programmes have been decommissioned to make room for expansion and new innovations; student retention is key in the new 'capped' funding policy environment. The commissioning process will be annual and provides a transparent objective way of prioritising resources to meet the university's vision and strategic priorities.

Crucial to my development as a researcher has been the commitment to publish and engage with academic peers by delivering [one] journal, conference and research papers throughout the DBA study period. I valued the encouragement and support provided by the DBA team. The support extended to me by being joint author (with Prof. J. Huisman) of a journal paper subsequently led to my involvement as a peer reviewer on another paper from the USA. A research paper, given in 2009, also led to me being asked to peer review an ESRC research grant relating to widening

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[63] QAA feedback on a recent institutional visit, 2010.

access, submitted by the University of Bristol. The references are cited in the thesis as they are relevant to the key research question and research inquiry process.

The DBA has been influential in giving me a critical research discipline that is also benefiting my policy making and professional practice as well as supporting my academic, professional and career ambitions. Finally, I have thoroughly enjoyed the journey and have every intention to continue to publish.

THE APPENDICES

Appendix A Welsh higher education sector performance: widening access and student non-continuation

Appendix B Case study: student profile, 2007/08

Appendix C Case study: sensitivity of programme performance on the school and institution performances

Appendix D Case study: 'in-year' total of student withdrawals and suspended studies, May, 2006-2009

Appendix E Case study: students' reasons for withdrawing, September to December 2007

Appendix F Case study: referrals, 2007/08

Appendix G Case study: progression of non-traditional students, 2004-2008

Appendix H Welsh higher education sector data: progression of non-traditional students, 2002-2006

Appendix A Welsh higher education sector performance: widening access and student non-continuation

Appendix A details individual Welsh HEIs' widening access and student retention performances. It is not the entire participation and retention performances (HESA, 2008a) concentrating on participation and non-continuation of full-time first degree entrants. The description of the data and definitions is detailed in Chapter 3.

It is divided into two main sections: widening access and non-continuation. Each main section describes three areas: performance of mature and young entrants; performance against policy; and performance against the UK performance indicators and benchmarks. Direct comparisons across access and non-continuation are not always possible, limited by definitions and the availability of data from HESA (2008a).

It draws on preliminary work presented at HEFCW's Reaching Wider conference (H. James, 2007b), a paper submitted in partial fulfilment of Part 1 of the DBA in Higher Education Management (H. James, 2007a) but extends the analysis by three academic years to include 2006/07 entrants. This extended period of longitudinal data and the comparison of HEIs in Wales introduce new knowledge and understanding.

A.1 Welsh higher education sector performance, 2001/02- 2007/08: widening access

There has been a steady growth of over 2,500 new full-time first degree entrants into the Welsh higher education sector since 2001/02; shown in Figure 28. This is despite the introduction of tuition fees and top up fees (for non Welsh domiciled entrants) and a no growth in public funding policy from the HEFCW. The growth in new students, however, is not consistent across the sector or country and this is evidenced in Figure 29.

Figure 28 Full-time first degree entrants to Welsh HEIs, 2001/02-2007/08

Data Source: Heidi v3: Derived Statistics; Performance Indicators; Table 1a/www.hesa.ac.uk/www.hefce.ac.uk
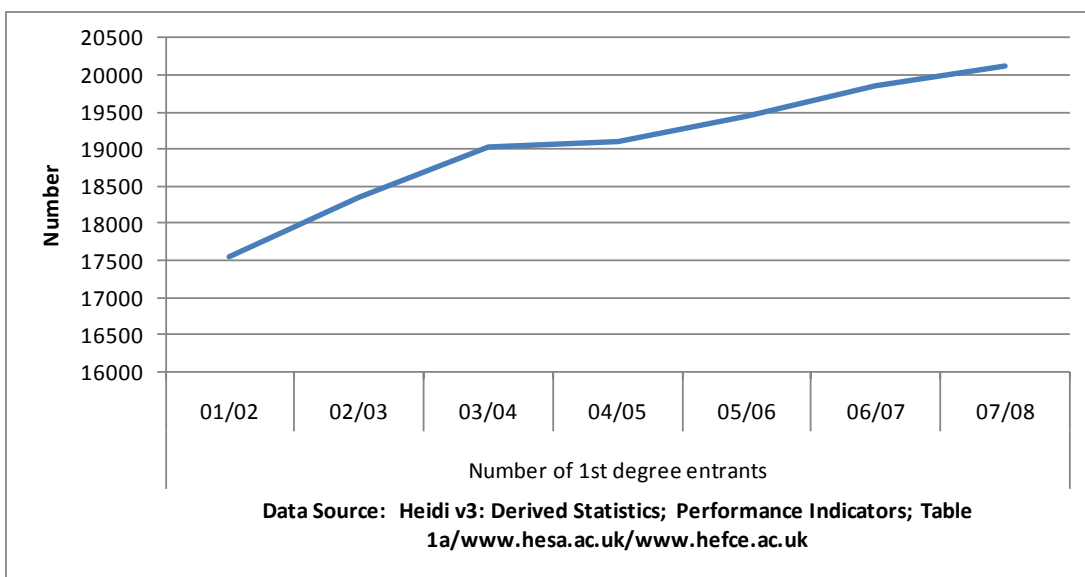
The Universities having increased their numbers most are: Swansea University [620], Cardiff University [485], Bangor University [470] and UWIC [375]. Three of the four are in South Wales; two are located in and around Cardiff, the capital city of Wales and all but one would be deemed to be research led Universities whilst the fourth, UWIC, it could be argued, has benefited from Cardiff's recruitment policies as well as being located in the capital city. The University of Wales, Newport having showed small increases 2004/05 to 2006/07 reduced in 2007/08. Other universities, including Glyndŵr University, Trinity University College, University of Wales, Lampeter and Swansea Metropolitan University show fairly static overall positions throughout this period. Aberystwyth University is the only one evidencing a firm reduction over time.

This Chapter requires being able to work across access to, and non-continuation in higher education data. Since this is only possible with full-time entrants' data this imposes a limitation of the interpretation of size of the different HEIs in Wales; some HEIs have significant proportions of part-time entrants, as much as 50% of the total student enrolments. Not only is the number of students and study mode variable across the sector but so too is the extent to which widening access is evident in the student mix and non-continuation populations.

Chapter 3 introduces the concept of the *Specific Widening Participation Indicator (SWPi)* which describes students' attributes as mature; from low participation neighbourhood or in receipt of DSA. This forms the basis of the analysis which follows and is presented for both mature and young entrants.

Figure 29 Full-time first degree entrants to individual Welsh HEIs, 2001/02-2007/08
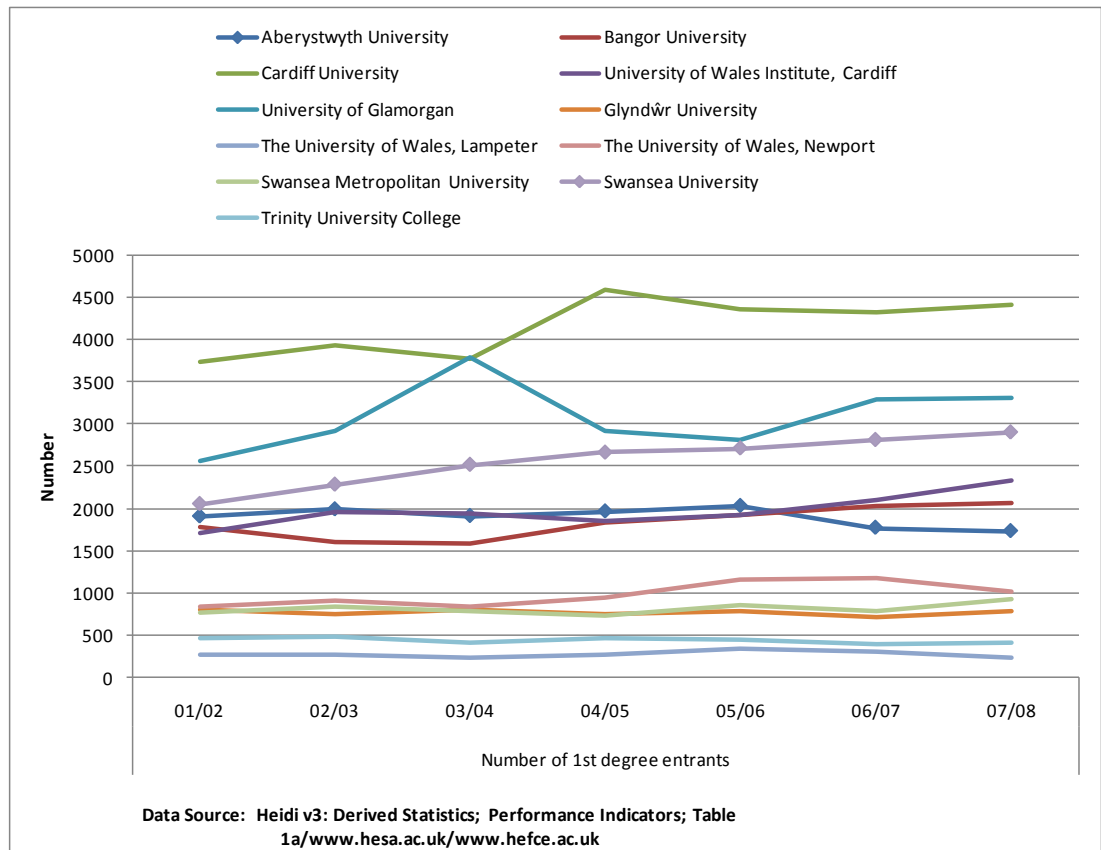
Participation of under-represented groups in higher education: mature full-time first degree entrants, 2001/02-2007/08

Figure 30 shows that new mature entrants into the Welsh HEI sector increased from 22% in 2001/02 to 25.5% in 2003/04 falling back to 24% in 2007/08. This small degree of variation was experienced by Bangor University, Aberystwyth University and University of Wales Institute Cardiff. Other Universities such as University of Glamorgan from a peak of 46.5% in 2003/04 reduced to 35.8% in 2007/08 and Glyndŵr University from a position of 47.3% in 2001/02 increased to 61.9% in 2007/08. Cardiff and Swansea Universities both increased their percentage of mature entrants over the period but both fall below the Welsh average. The degree of variations year by year evidenced by some universities may well be as a result of the relatively small 'new entrants' population.

Figure 30 Participation of under-represented groups in higher education: mature full-time first degree entrants 2001/02-2007/08
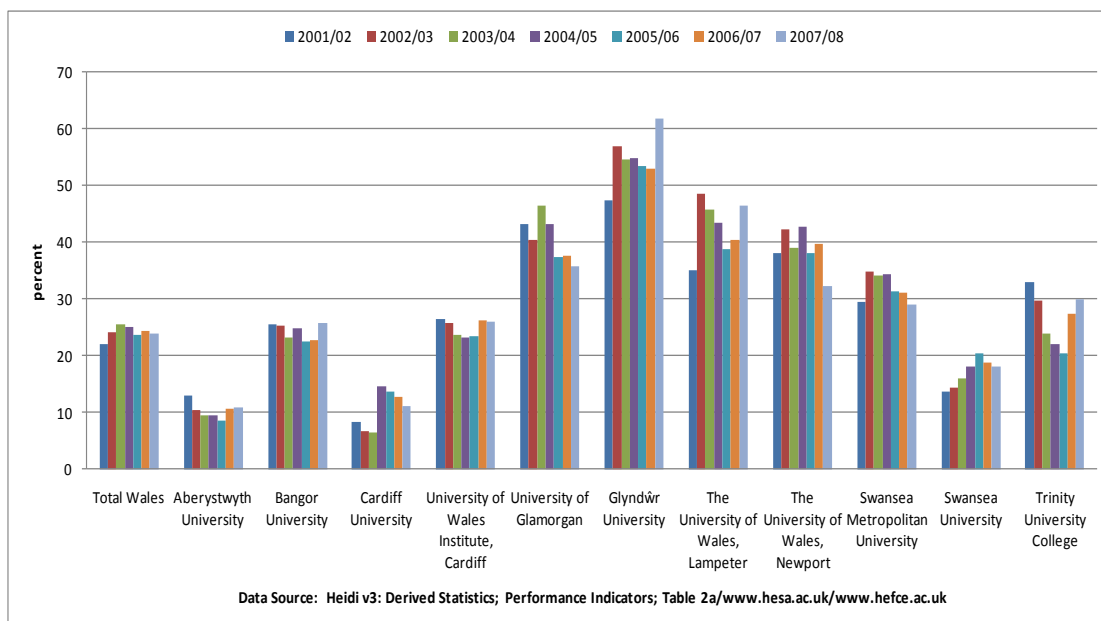
Considering the relative performances of each HE, Figure 30 highlights four distinct groups. These are:

- Group 1 [in the range 6.4% to 20.5%]: Aberystwyth University, Cardiff University, Swansea University and Royal Welsh College of Music and Drama;
- Group 2 [in the range 20.3% to 34.8%]: Bangor University, UWIC, Swansea Metropolitan University and Trinity College Camarthen

- Group 3 [in the range 32.2% to 48.6%]: University of Glamorgan, University of Wales Lampeter and University of Wales, Newport; and

- Group 4 [from 53% to 61.9%]: Glyndŵr University which has consistently stood on its own over the period with a considerable 8.9% increase experienced in 2007/08 on the previous year.

Previously high performing institutions, University of Glamorgan and University of Wales, Newport have both showed strong reductions in the proportion of mature entrants in recent years. Since a student can be mature and possess other *SWPi,* Figure 31 shows the percentage of mature entrants who have had no previous experience of higher education and who are from low participation neighbourhoods.

Figure 31 Participation of under-represented groups in higher education: mature full-time first degree entrants no previous HE and from LPNs, 2001/02-2007/08 (POLAR 2 introduced 2006/07)

Data Source: Heidi v3: Derived Statistics; Performance Indicators; Table 2a/www.hesa.ac.uk/www.hefce.ac.uk

The overall performance of the sector and therefore the total for Wales varies from 16% to 20.9% until 2005/06 and thereafter following the introduction of the new POLAR 2 method for determining the LPN reduces to 12.5%. The data shows more variability related to each institution but less variation across the HEIs. In 2005/06 the greatest range is 16.8% which rises from 13.1% experienced by Aberystwyth University and 29.9% by the University of Glamorgan.

Although the performances across the HEIs are less distributed it is still possible to place them within groupings:

- Group 1 [10% to 15%]: Aberystwyth University, Trinity University College;
- Group 2 [15% to 20%]: Bangor University, Cardiff University, UWIC, Glyndŵr University, University of Wales Lampeter, Swansea Metropolitan University and Swansea University; and
- Group 3 [20% to 30%]: Glamorgan University and University of Wales, Newport.

The new method for determining LPN has had a dramatic impact on the performance presented in the HESA PIs for Welsh institutions, as shown below:

- Group 1: Aberystwyth University, University of Wales Lampeter, Swansea Metropolitan University, Swansea University andTrinity University College;
- Group 2: Bangor University, Cardiff University, UWIC, Glamorgan University and University of Wales, Newport;
- Group 3: Glyndŵr University, the only university which seems to have benefited.

The five HEIs experiencing the strongest participation rates of mature entrants are: Glamorgan University, Glyndŵr University, University of Wales, Newport and University of Wales, Lampeter.

Participation of under-represented groups in higher education: young full-time first degree entrants, 2001/02-2007/08

Since the total entrant population is either mature or young it goes without saying that the distribution of the young entrants would be the remaining percentage from Figure 30. Since young entrants would be classed as 'traditional', another being 'A' level qualified, there is little to be gained for this research by focusing on this group alone. Therefore consideration is now given to the *SWPi* of *young full-time first degree entrants from low participation neighbourhoods*. This section considers other *SWPi* for young entrants not available from HESA for mature entrants.

Participation of under-represented groups in higher education: young full-time first degree entrants from low participation neighbourhoods (LPN)

Figure 32 shows the percentage of entrants who are young and are from a LPN. The overall sector participation rate varies little, moving from 15% in 2001/02 to 16.8 in 2005/06. Although evidencing similar proportion to mature students from LPN it is a few percentage points lower for both POLAR 1 and 2 methods.

For the most case variations experienced year on year are within 5% and for a number of HEIs there is a gradual increasing trend evident: University of Glamorgan, Glyndŵr University, Swansea Metropolitan University and University of Wales, Newport.

Consistent with the analysis for mature entrants the distribution of performances was considered in relation to defined groups. For POLAR Method 1, there are:

- Group 1: Aberystwyth University, Bangor University, Cardiff University, UWIC;
- Group 2: University of Wales, Lampeter, University of Wales, Newport Swansea Metropolitan University, Trinity University College and Glyndŵr University; and
- Group 3: University of Glamorgan has a performance clear of any of the other HEIs. In 2005/06, it was 3.6% higher than the next performing HEI and 13% higher than the sector average.

Following the introduction of POLAR Method 2, there were still three distinct groups, however the membership changed, particularly notable for groups 1 and 3:

- Group 1 [in the range 5.9% to 10.7%]: Aberystwyth University, Bangor University, Cardiff University, UWIC, University of Wales, Lampeter and Trinity University College
- Group 2 [in the range 12.8% to 16.2%]: Swansea Metropolitan University, University of Wales, Newport and University of Glamorgan; and
- Group 3 [17%+]: Glyndŵr University having a performance of 18.6%.

Whilst the distribution of access of young entrants from LPN will be, to some extent, dependent on the number of size of the LPNs and their proximity to universities, the new POLAR 2 method of calculation has had a dramatic impact on the performance of a number of universities.

Figure 32 Participation of under-represented groups in higher education: young full-time first degree entrants from LPNs, 2001/02-2007/08 (POLAR 2 introduced 2006/07)
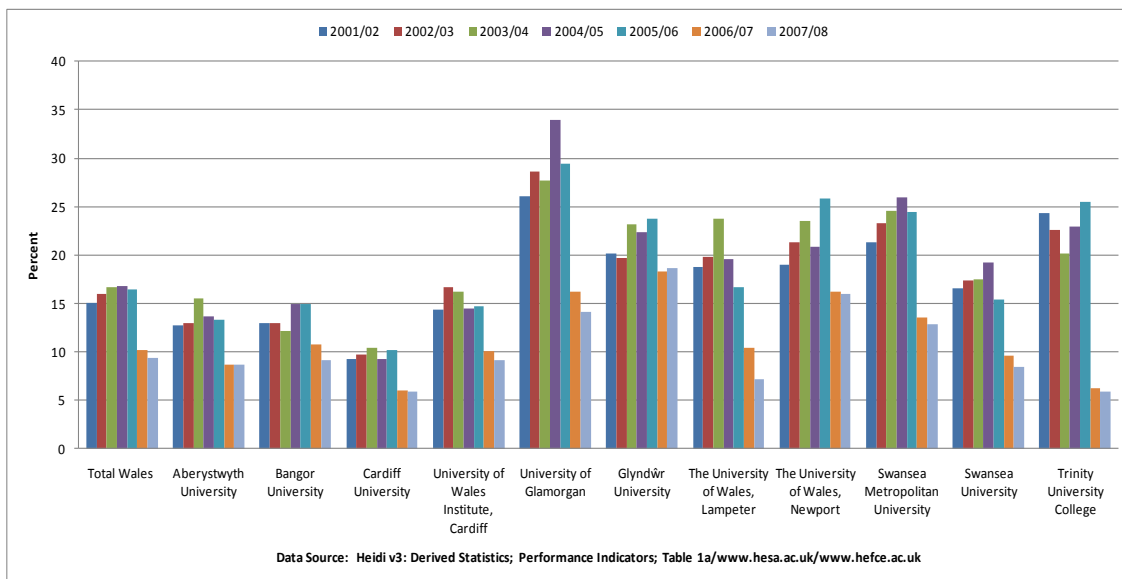
Data Source: Heidi v3: Derived Statistics; Performance Indicators; Table 1a/www.hesa.ac.uk/www.hefce.ac.uk

Participation of under-represented groups in higher education: young full-time first degree entrants from lower socio-economic groups NS-SEC 4, 5, 6 & 7.

The third *SWPi* considered is young entrants from NS-SEC 4, 5, 6 & 7 with the graphical representation shown in Figure 33.

Figure 33 Participation of under-represented groups in higher education: young full-time first degree entrants from NS-SEC 4,5,6 &7, 2001/02-2007/08
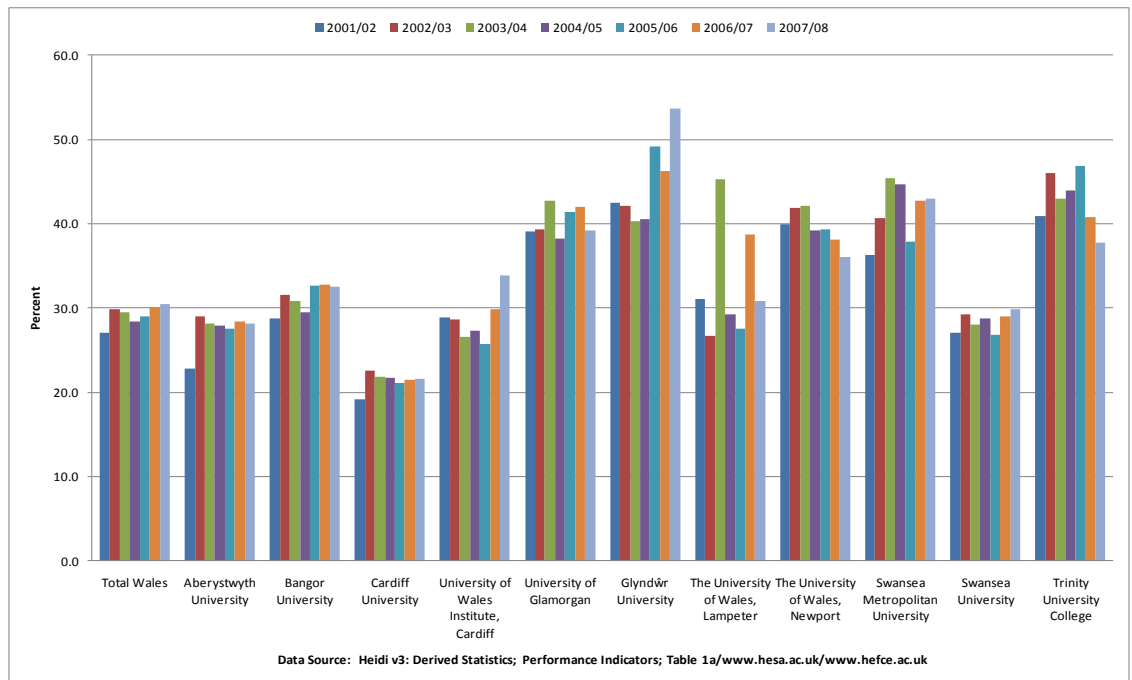
Figure 33 shows a greater proportion of the young people entering Welsh HEIs are from NS-SEC 4, 5, 6 & 7 than experienced for LPN; it is acknowledged that there will be entrants who appear in both groups. The proportion of entrants changes very little over the period 2002/03 to 2007/08, following an increase of 2.8% from 2001/02 to 29.8% in 2002/03. As in previous sections the performance of the sector average masks the diversity of performances experienced by individual institutions.

The performances experienced by each HEI also appear to be more consistent year on year than other SWPi. There are startling exceptions to this which are Glyndŵr University and University of Wales, Lampeter where the former experienced a step increase from 2005/06 whilst the latter experienced spikes; one in 2003/04 and the other in 2006/07. It is helpful to consider the performances of HEIs in groups so comparisons can be made now and later when non-continuation rates are considered. There are two groups that increase to three for 2005/06:

- Group 1[in the range 21.7% to 29.9%]: Aberystwyth University, Cardiff University, UWIC and Swansea University all performing below the sector average;

- Group 2 [in the range 26.7% to 45.4%]: University of Wales, Lampeter, University of Glamorgan, University of Wales, Newport, Swansea Metropolitan University and Trinity University College; and

- Group 3 [to 53.7%]: Glyndŵr University performs consistent with group 2 until 2005/06. In 2007/08 its performance was10.7% higher than the closest performing HEI and 23.3% higher than the sector average in the same year.

The five HEIs experiencing the strongest participation rates of young entrants from LPN or NC-SEC 4,5,6 and 7are: University of Glamorgan, Glyndŵr University, University of Wales, Newport, Swansea Metropolitan University and Trinity University College.

The three HEIs that consistently perform across both mature and young entrants which also have *SWPi* linked with regional or individual, social or economic measures of deprivation are University of Glamorgan, Glyndŵr University, University of Wales, Newport.

The following section continues with the widening access performance of the Welsh HEI sector but advances the case towards the performance against UK calculated benchmarks. In other words, based on a standard set of information from HEIs across the UK what levels of new widening access entrants could be expected? This potentially provides considerable opportunities for comparison between similar HEIs rather than the focus thus far in the thesis: to compare all the Welsh HEIs with each other and the sector total.

Participation of under-represented groups in higher education: performance indicators and benchmark performance, 2001/02-2007/08

This section considers the widening access performances of all the HEIs in Wales against their UK calculated benchmarks. It was evident from the previous sections in this Chapter that certain HEIs in Wales had strong widening access performances whilst others less so; the distribution seemed to follow a general pattern with the research intensive HEIs having low performances whilst the post-1992 HEIs had high performances.

The UK benchmark calculations provide a guide to HEIs as to how their performance relates to what might be expected of them given certain operating parameters. This also provides for comparisons with similar institutions. The data is available to HEIs through HESA and in that sense it is not new. The presentation of the data however is original. It provides new longitudinal based insights for HEIs not only of the actual performance against benchmark but more specifically the variation of performance from benchmark on positive and negative scales. Both approaches are presented for each of the participation *SWPi* with the exception of mature only which is not available.

Mature full-time first degree entrants with no previous HE and from LPN

The participation rates of mature entrants with no previous HE and from LPN against benchmarks into Welsh HEIs 2001/02 to 2007/08 is shown in Table 36.

The benchmark calculations evidence a tighter distribution of data than the actual performances, for example in 2005/06 the benchmark range was 14 to 21.5 whilst the actual performance range was 13.1 to 29.9; in 2004/05 the benchmark range was 15.1 to 20.2 whilst the actual performance range was 12.9 to 28.9. There are similar performances across the other years. The introduction of the new POLAR 2 method did not influence this greatly: in 2006/07 the benchmark calculation ranged from 10.4 to 15.1 whilst the actual performance ranged from 4.3 to 21.2.

The variation in ranges experienced also on the face of it seemed relevant to individual HEIs. To investigate this more fully the variations from benchmarks were plotted across the years 2001/02 to 2007/08 and are evidenced in Figure 34.

Table 36 Participation of under-represented groups in higher education: mature full-time first degree entrants with no previous HE and from LPN performance against benchmarks, 2001/02-2007/08

Welsh HEIs: full time first degree mature entrants	% with no previous HE and from LPNs													
	Polar 1										Polar 2			
	2001/02		2002/03		2003/04		2004/05		2005/06		2006/07		2007/08	
	%	BM	%	BM	%	BM	%	BM	%	BM	%	BM	%	BM
Total Wales	16		18.3		18.8		20.8		20.9		12.5		12.5	
Aberystwyth University	9.2	17.8	11.5	17.3	13.1	16	12.9	16.5	13.1	17.1	8.5	13	7.4	13.9
Bangor University	15.1	15.8	14	17.2	14.8	19.7	17.8	20.2	18.5	21.5	12.9	15.1	12.5	15.5
Cardiff University	14.9	12.8	12.3	14.1	7.2	10.7	17.3	15.3	16.4	14	10.7	10.8	13.1	13.2
University of Wales Institute, Cardiff	10.1	10.6	12.8	11.1	11.9	12.4	19.2	17.9	18.4	17.3	13.6	11.5	13.4	11.5
University of Glamorgan	20.8	13.8	25.3	13.2	25.1	16.2	28.9	16.6	29.9	17.2	13.5	11.1	14.7	11.4
Glyndŵr University	15.3	13	17.3	13.2	19.8	13.8	21.4	16.2	19.4	17.3	21.2	12.5	15.3	12.8
The University of Wales, Lampeter	18.3	17.5	17.4	17.7	22.9	20.2	17.3	15.1	18.1	15.3	9.5	13	8.7	13.8
The University of Wales, Newport	16.2	13.2	26.5	16.5	26.2	16.6	25.9	16.1	22.7	15.8	14.8	10.4	11.8	10.3
Swansea Metropolitan University	16.2	13.2	19.8	16.4	18.6	19.4	19.4	16.8	21.9	17.2	7.5	10.4	10.8	12.2
Swansea University	17	17.5	18.5	17.7	22.3	18.9	19.3	18.2	19	17.2	6.8	11.7	8	12.7
Trinity University College	15	17.7	17.1	19.1	14	18.7	15.1	18	14.6	19.6	4.3	10.9	5.8	14.6

Figure 34 Participation of under-represented groups in higher education: mature full-time first degree entrants with no previous HE and from LPN performance against benchmarks, 2001/02-2007/08
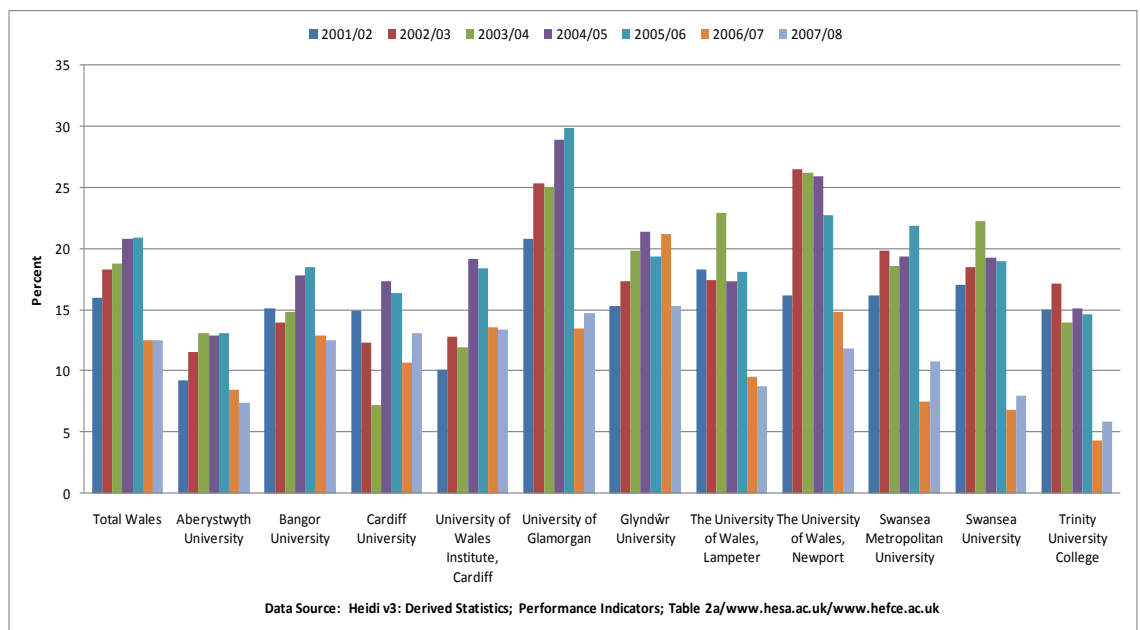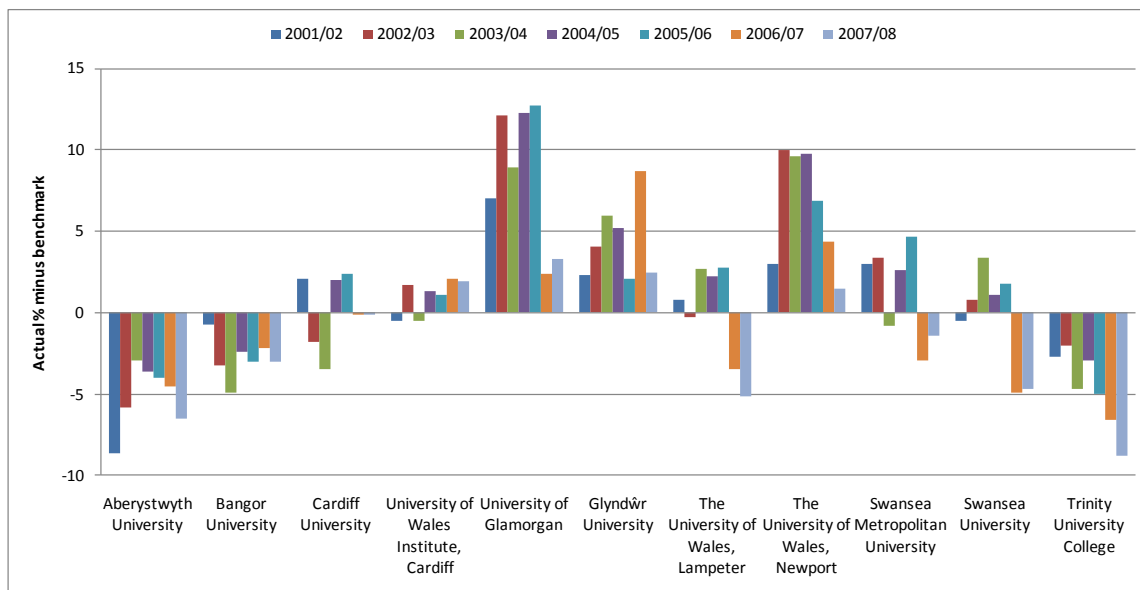

Figure 34 shows a stark variation in performances reported against benchmark calculations. The first conclusion relates to institution type and under and over performance. In general the research intensive HEIs underperform against benchmark and the post-1992 institutions over perform. The question which naturally falls out of this stark differentiation in performance is the degree to which the benchmark calculations truly reflect the context of Wales. Alternatively, the algorithm which is used to determine the benchmarks maybe flawed in some way.

The second conclusion is obvious but needs to be stated and that is that the University of Glamorgan, Glyndŵr University and the University of Wales, Newport consistently outperform the benchmark, often exceeding the 5% threshold which HESA advise as being significant, whilst Aberystwyth University and Trinity University College consistently and significantly underperform against benchmark.

Young full-time first degree entrants from LPN

The participation of young entrants from LPN against benchmarks into Welsh HEIs 2001/02 to 2007/08 is shown Table 37. As was the case for mature entrants the benchmark range appears to be tighter than the actual performances. For example in 2005/06 the benchmark range was 11.6 to 17.7 whilst the actual performance range was 10.2 to 29.4. The new POLAR 2 method also experienced difference; in 2007/08 the benchmark range was 7.5 to 12.8 whilst the actual performance range was 5.9 to 18.6.

Table 37 Participation of under-represented groups in higher education: young full-time first degree entrants from LPN performance against benchmarks

Welsh HEIs: full-time first degree young entrants	% from LPNs													
	Polar 1										Polar 2			
	2001/02		2002/03		2003/04		2004/05		2005/06		2006/07		2007/08	
	%	BM	%	BM	%	BM	%	BM	%	BM	%	BM	%	BM
Total Wales	15		16		16.7		16.8		16.4		10.2		9.4	
Aberystwyth University	12.7	12.7	12.9	13.1	15.5	13.6	13.7	13.6	13.3	14	8.6	9.3	8.7	9.9
Bangor University	12.9	14.1	12.9	14.3	12.1	15	14.9	14.8	14.9	15.4	10.7	10.1	9.1	10.9
Cardiff University	9.2	10.3	9.7	11.1	10.4	11.7	9.2	11.4	10.2	11.6	6	7.4	5.9	7.5
University of Wales Institute, Cardiff	14.4	14.6	16.7	15.1	16.2	15.9	14.5	15.4	14.7	15.9	10.1	10.4	9.1	11.4
University of Glamorgan	26.1	16.3	28.6	16.2	27.7	18.2	33.9	17.5	29.4	17.6	16.2	11.5	14.1	12
Glyndŵr University	20.2	16.2	19.7	16.6	23.2	17.3	22.4	17.7	23.7	17.7	18.3	11.9	18.6	12.8
The University of Wales, Lampeter	18.7	14.6	19.8	14.9	23.7	15.4	19.6	15.3	16.7	15.9	10.4	10.3	7.1	12.7
The University of Wales, Newport	19	15.6	21.3	16.1	23.5	16.2	20.9	16.2	25.8	17	16.2	11.7	16	12.2
Swansea Metropolitan University	21.3	16.4	23.3	15.8	24.6	16.7	25.9	16.8	24.4	17.4	13.5	11.3	12.8	12.2
Swansea University	16.6	13	17.4	13.8	17.5	14.6	19.2	14.4	15.4	14.3	9.6	9.6	8.4	9.9
Trinity University College	24.3	16.9	22.6	16.8	20.1	16.6	22.9	17	25.5	17.6	6.2	11.7	5.9	12.2

Data Source: Heidi v3: Derived Statistics; Performance Indicators; Table 1a/www.hesa.ac.uk/www.hefce.ac.uk

Consistent with the case for mature students there also seemed to be considerable differences between the actual performance and benchmark expectations for some HEIs. This is shown in Figure 35.

Figure 35 Participation of under-represented groups in higher education: young full-time first degree entrants from LPN performance against benchmarks, 2001/02-2007/08
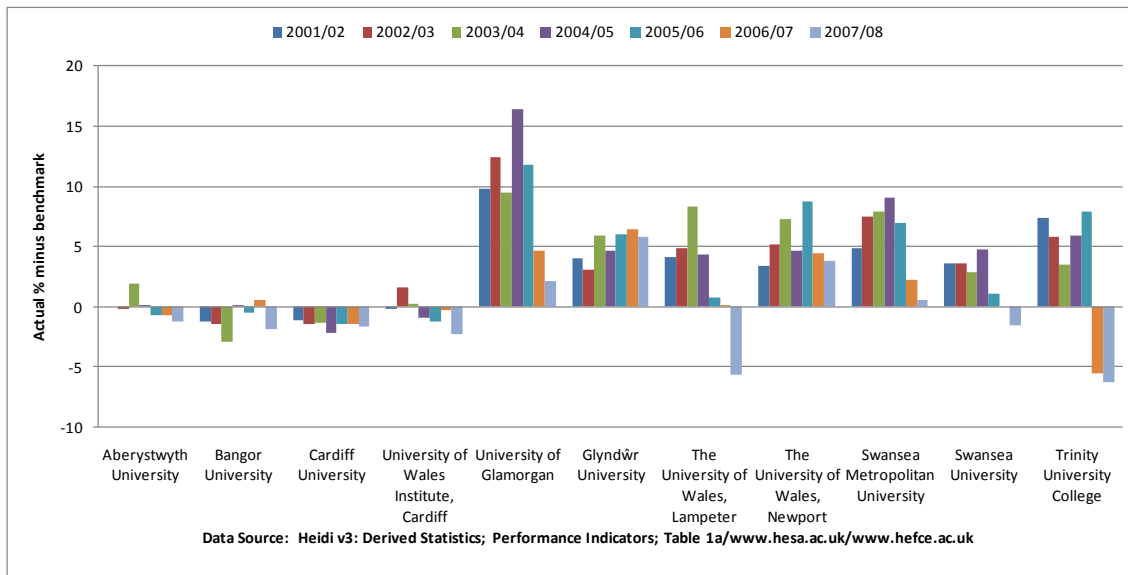
The variations from benchmark are small for the research intensive HEIs with only Swansea University performing consistently above benchmark but below the 5% threshold. UWIC although not research intensive is city based and likely to benefit from the more traditional application which may arise from a rejection from Cardiff University and has a performance close to benchmark. The differentiation for the other HEIs are all well above benchmark expectation with some such as University of Glamorgan experiencing a 16.4% variation. All the other HEIs regularly exceed the 5% threshold.

The introduction of POLAR 2 has resulted in Trinity University College moving from an exceeding benchmark position to performing well below benchmark. Other HEIs such as University of Glamorgan, Swansea Metropolitan University and University of Wales, Lampeter have experienced converging performances to benchmark. Only Glyndŵr University maintained the differential; which also happened to be above the 5% threshold.

Young full-time first degree entrants from lower socio-economic groups NS-SEC 4, 5, 6 & 7.

The third aspect of non-traditional participation relates to young entrants from lower socio-economic groups NS-SEC 4,5,6 & 7; the performance against benchmarks into Welsh HEIs 2001/02 to 2007/08 is shown in Table 38. Consistent with the other

sections, consideration is given first of all to the range differential which is followed by the variation from benchmarks for all the HEIs.

In 2007/08, the most recent year of data, the benchmark ranged from 24.4 to 37.3 whilst the actual performance ranged from 21.6 to 53.7 and in 2006/07 the benchmark ranged from 25.6 to 37.7 whilst the actual performance range was 21.5 to 46.2. Both evidence considerable variance from the benchmarks.

Table 38 Participation of under-represented groups in higher education: young full-time first degree entrants from NS-SEC 4,5,6 & 7 performance against benchmarks

Welsh HEIs: full-time first degree young entrants	% from social class categories IIIM,IV,V		% from NS-SEC classes 4,5,6 & 7												
	2001/02		2002/03		2003/04		2004/05		2005/06		2006/07		2007/08	
	%	BM	%	BM	%	BM	%	BM	%	BM	%	BM	%	BM
Total Wales	27.0		29.8		29.5		28.4		29.0		30.1		30.4	
Aberystwyth University	22.8	25.2	29.0	28.2	28.1	28.6	27.9	28.4	27.6	29.8	28.4	30.5	28.1	30.3
Bangor University	28.7	27.6	31.6	30.2	30.8	30.1	29.5	29.6	32.7	30.8	32.8	31.9	32.5	32.1
Cardiff University	19.1	20.8	22.5	23.7	21.8	24.5	21.7	24.0	21.1	24.9	21.5	25.6	21.6	24.4
University of Wales Institute, Cardiff	28.9	29.7	28.6	32.4	26.6	33.0	27.3	33.0	25.7	33.8	29.8	34.8	33.8	35.2
University of Glamorgan	39.1	32.4	39.3	34.7	42.7	35.1	38.2	33.1	41.4	35.5	42.0	36.2	39.2	35.4
Glynd?r University	42.5	32.7	42.1	38.7	40.3	36.0	40.6	35.6	49.2	36.4	46.2	37.7	53.7	37.3
The University of Wales, Lampeter	31.1	27.5	26.7	29.3	45.3	30.2	29.3	28.6	27.5	30.0	38.7	30.0	30.8	30.1
The University of Wales, Newport	39.9	31.4	41.9	34.4	42.1	34.9	39.2	34.9	39.3	35.1	38.1	35.7	36.1	35.5
Swansea Metropolitan University	36.3	33.5	40.7	37.2	45.4	35.5	44.7	36.3	37.9	37.0	42.7	37.7	43.0	37.0
Swansea University	27.1	25.7	29.3	29.3	28.0	29.8	28.7	29.6	26.8	30.2	29.0	31.1	29.9	30.5
Trinity University College	40.9	31.9	46.0	34.9	43.0	35.5	44.0	34.7	46.9	35.7	40.8	36.6	37.7	36.1

Data Source: Heidi v3: Derived Statistics; Performance Indicators; Table 1a/www.hesa.ac.uk/www.hefce.ac.uk

Figure 36 Participation of under-represented groups in higher education: young full-time first degree entrants from NS-SEC 4,5,6 & 7 performance against benchmarks, 2001/02-2007/08
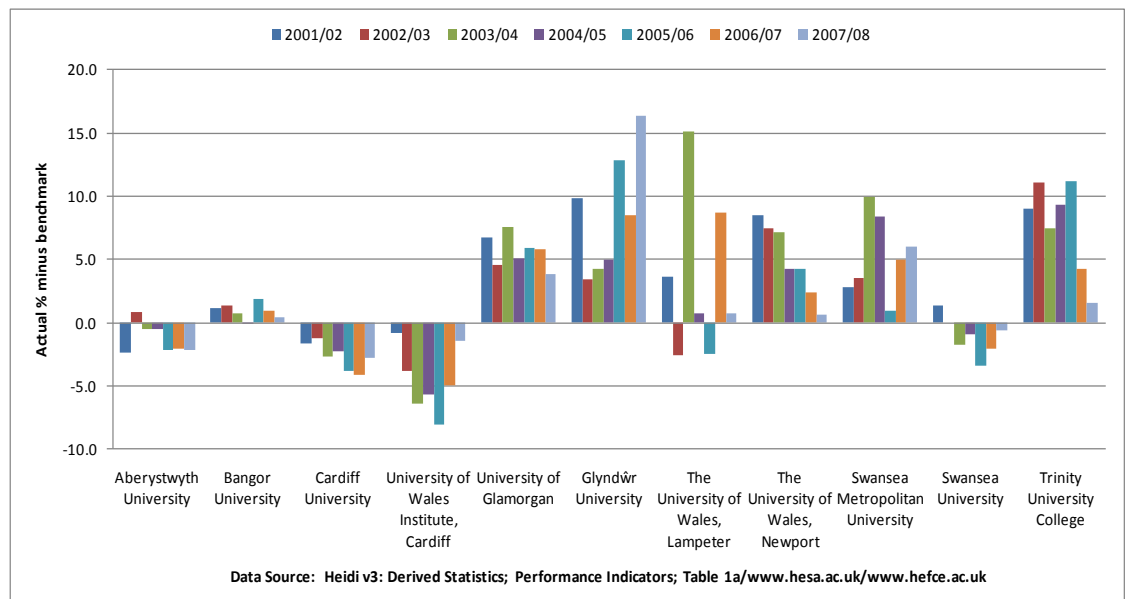
Data Source: Heidi v3: Derived Statistics; Performance Indicators; Table 1a/www.hesa.ac.uk/www.hefce.ac.uk

When the analysis is progressed to consider the actual performances against benchmarks for each HEI in Wales the extent of the variations relevant to each HEI is exposed. The post-1992 HEIs (with the exception of UWIC) have responded considerably better than benchmark and the research intensive universities worse than benchmark.

The University of Glamorgan, Glyndŵr University, The University of Wales, Newport, Swansea Metropolitan University and Trinity University College experienced consistently strong access performances for young entrants from NS-SEC 4,5,6 & 7. Glyndŵr University reached and exceeding 10% for three years and exceeded 15% in 2007/08. Trinity University College exceeded 10% in 2002/03 and 2005/06.

Such extreme performances could reasonably expect to place significant demands on an institution, above what would be reasonably considered appropriate against a teaching grant that provides a standard formula payment for all students; only the subject carries a weighting.

The performances of two universities, University of Glamorgan and Glyndŵr University, evidence extreme achievement against benchmark for widening access indicators; young full-time first degree entrants from LPN and young full-time first degree entrants from NS-SEC 4,5,6 & 7 respectively.

This section evidences the performances against benchmark are differentiated with respect to mission. There is a general and consistent trend for research intensive universities to perform below benchmark and the post-92 institutions to perform above the benchmark, the exception is UWIC. However it is located in the capital city and likely to be benefiting from Cardiff's (university and city) expansion over recent years. Both groups include performances which exceed the HESA +,- 5% threshold for significance. Extreme performances are only experienced by two post-92 institutions.

Adherence to this pattern over a seven year period suggests that the benchmark algorithm maybe left wanting and should be investigated. It is possible that the variables are overly influenced by the large HE sector in England and thus not adequately capturing the appropriate variable sensitivities of the Welsh sector or geography which may include border flow influences.

Welsh Assembly Government policy performance

The widening access priorities of the Welsh Assembly Government are laid down in *Reaching Higher* (Welsh Assembly Government, 2002) and supported by the *Reaching Wider Initiative* (HEFCW, 2009a) and individual HEI's strategies and plans. In the context of this research there is only one defined target:

> *'The percentage of all Welsh domiciled undergraduate new entrants to HE courses at UK HEIs or FEIs who are domiciled in the Welsh Community First areas to rise from 8.9% in 2000/01 to 11.4% in 2010/11.'*

<div align="right">(HEFCW, 2008 p.18)</div>

It is an all-age target and includes full and part-time new entrants. Individual HEIs set their own targets each year, included in their annual strategic plan return to HEFCW. The actual performance of the sector since 2000/01 and its progresses towards meeting the widening access policy agenda is set out each year in the respective HEFCW Annual Report, the latest of which is HEFCW's *Annual Report 2007-08* (2008 p.18). The performance to date of the relevant target is represented below in Table 39a. From this data it was possible to determine the increase year on year as well as the increase in new entrants from Communities First areas entering in 2006/07 compared to 2000/01. This is shown in Table 39b.

Table 39 Performance of the Welsh HE sector towards meeting the widening access target 'To increase the number of all undergraduate new entrants to higher education to courses at UK HEIs and FEIs who are domiciled in the Welsh Communities First areas
a)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Welsh HEIs Number	2733	3036	3408	3401	3448	3325	3618
Welsh HEIs Total	26848	27857	28903	29577	29687	28937	30197
UK HEIs and FEIs Number	3484	4053	4364	4450	4351	4224	
UK HEIs and FEIs Total	39056	42181	43077	44300	42589	42912	
Welsh HEI (%)	10.2	10.9	11.8	11.5	11.6	11.5	12
UK HEIs and FEIs (%)	8.9	9.6	10.1	10.0	10.2	9.9	

b)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Welsh HEIs Increased number on previous year	2733	+303	+372	-7	+47	-123	+293 (885)
UK HEIs and FEIs Total	3484	+569	+311	+86	-99	-127 (740)	

New entrants to UK higher education include those entering HEIs and those to directly funded Further Education Institutions (FEIs). HEIs in Wales have responded to the policy with a modest increase from 10.2% in 2000/01 to 12% in 2006/07 which amounts to an additional 885 new entrants; an overall increase of 32% into Welsh HEIs from the most deprived areas of Wales. However, when UK HEIs and FEIs are also included, the percentage performance is weakened but with data a year behind, there was an overall increase of 21% despite the total percentage of new entrants reducing to 9.9%. The comparable data for UK HEIs and FEIs 2006/07 was not available.

There are a number of important conclusions to be drawn from the information provided in Table 39. Firstly, the highest rate of convergence towards the target was experienced before *Reaching Higher* (Welsh Assembly Government, 2002) and the corresponding *Reaching Wider* (HEFCW, 2009a) initiative. This indicates the Welsh sector was already responding to its markets, perhaps its social and economic conscience and earlier UK calls to widening access (Dearing, 1997). Since the data for individual institutions was not available it was not possible to determine if the increase experienced over the period was uniform or institution specific.

Secondly, the performance over the period 2003/04 to 200/07 has direct widening access relevance as it relates to the period of considerable debate in the media over the future funding of higher education and in particular the concept of introducing student fees. Lord Dearing's report (1997) proposed that students should pay approximately 25% of the cost of tuition but that grants should remain in place. Following its publication the education secretary David Blunkett announced the introduction of means-tested tuition fees (to begin in September 1998). This was followed on January 22nd 2003 by Labour's white paper setting out proposals allowing universities to set their own tuition fees up to a cap of £3,000 a year. From January 2003 there was considerable media attention given to the higher education bill which was approved on January 27th 2004 (Alley & Smith, 2004).

'Top up fees' was introduced to English HEIs in 2005/06 and, 2006/07 for Wales. It is difficult to assess the impact of tuition fees on the achievement of the Communities First target other than the reduction experienced was, arguably a general response to the introduction of student fees. It is possible that had the policy and funding not been in place Wales could have experienced an overall reduction.

Thirdly, a number of 'Reaching Wider' initiatives focused on raising the aspirations of school pupils. These young people will now be coming of age for entry into higher education. It is possible therefore that the increase in new entrants from Community First areas in 2006/07 maybe as a direct result of 'Reaching Wider' initiatives. It will be important to consider the trends post 2006/07 entry.

A.2 Welsh higher education sector performance: non-continuation following year of entry

Having previously considered the participation profiles of new entrants to the Welsh sector and its constituent HEIs, this section provides the retention context; it does so by considering the percentage of new 'entrants' no longer in higher education. The presentation of the sector performance focuses on three key areas with particular interest on the patterns of performance across the HEIs as well as to their respective widening access performances. First is the non-continuation of full-time first degree students, 2001/02 to 2006/07; second the non-continuation performance against benchmarks, 2001/02 to 2006/07 followed by performances which have relevance to policy statements. The analysis is structured around the total full-time first degree entrants before considering specific under represented populations, such as mature or young entrants from low participation neighbourhoods..

Non continuation following year of entry: full-time first degree entrants (all), 2001/02-2006/07

The performance of the sector as a whole together with individual HEIs is shown in Figure 37. The total for the Welsh sector hovers around the 10% mark; having shown signs of improvement for 2005/06 entrants to 9.5%, it increased to 10.9% for 2006/07. The highest non-continuation rate recorded for all full-time first degree entrants was 19.4% and in the same year the lowest recorded was 4.3%. These performances also capture extremes of mission: the former strong widening access and the latter research led. This divide is represented in the distribution of HEIs performing either side of the Welsh total. In general, the more research led HEIs appear below the total and those with strong widening access missions above the total. The HEIs with the strongest widening access profiles also have the highest student non-continuation rates: University of Glamorgan, Glyndŵr University, University of Wales, Lampeter and Swansea Metropolitan University.

Figure 37 highlights that a number of HEIs in Wales have consistently reduced their non-continuation rates significantly over the past four years and none more so than University of Glamorgan. NEWI and University of Wales College, Newport also evidenced systematic reductions, although not of the same order. The same HEIs also had high levels of non-traditional students. University of Wales, Bangor shows an erratic pattern of non-continuation rates for the past four years with increases

between years of almost 5%. It is worth noting that that the same university increased its percentage of mature and young full-time entrants from LPN in this same period.

Figure 37 Non-continuation following year of entry: all full-time first degree entrants, 2001/02-2006/07

Notes to HESA-data-sourced tables and charts	related changes since previous year:						
2006/07 - 2007/08	North Wales Institute of Higher Education (NEWI) changed its name to Glyndŵr University						
	Royal Welsh college of Music & Drama merged with University of Glamorgan						
	Swansea Institute of Higher Education changed its name to Swansea Metropolitan University						
	Young LPN/ON total UK figures exclude Scotland						
	Table 6 - Bangor University figures were notified as incorrect, and Glamorgan figures ommitted due to data quality issues						
2005/06 - 2006/07	Introduction of Polar 2 method of identifying LPN						
	University of Wales, Swansea changed its name to Swansea University						
	University of Wales, Aberystwyth changed its name to Aberystwyth University						
	University of Wales, Bangor changed its name to Bangor University						
2003/04 - 2004/05	University of Wales College of Medicine merged with Cardiff University						

Considering the relative performances of each HEI to each other, Figure 37 highlights three groups:

- Group 1 [in the range 4.3% to 8.2%]: Aberystwyth University, Cardiff University, Swansea University and Royal Welsh College of Music and Drama;

- Group 2 [in the range 8% to 12%]: Bangor University, University of Wales Lampeter and Trinity College Camarthen;

- Group 3 [in the range 11.9 to 17%]: UWIC, SIHE, University of Wales, Newport and NEWI;

- Group 4 [upto19.4%]: University of Glamorgan. However, significant reductions over the past four years brought the level down to 16% which is less the SIHE.

Not only is the overall non-continuation of entrants important but so too is the performance of its constituent populations, particularly relating to under-represented groups.

Non continuation following year of entry: full-time first degree mature entrants, 2001/02-2006/07

The non-continuation performances for mature entrants to the Welsh sector and for individual HEIs are shown in Figure 38. It shows the non-continuation rate for Total Wales, having reduced slightly in 2004/05 and 2005/06, rose in 2006/07 almost reaching the peak level of 17.2% which had been reached in 2002/3 and is approximately 6 percentage points higher than for all entrants. The influence on the sector average has changed over time. In 2003/04 to 2005/06 the post-1992 institutions nudged the average upwards whereas in 2006/07 the greatest increases in non-continuation rates were experienced by the pre-92, traditional universities.

Figure 38 Non-continuation following year of entry: mature full-time first degree entrants, 2001/02-2006/07
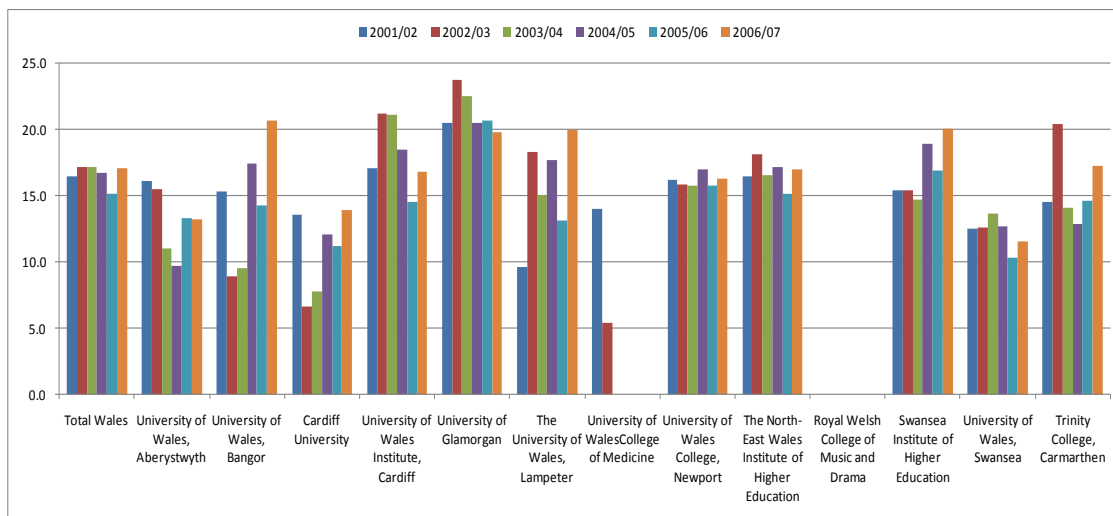
The performances experienced by the more traditional, research led universities, with the exception of Swansea University, from year to year were considerably variable. Also, over the time period the University of Wales, Bangor and The University of Wales, Lampeter experienced an increase in excess of 10% whilst Cardiff University was 7%; University of Wales, Swansea slightly reduced their rates. When this data was considered in light of Figure 31 and Figure 34 it would appear that the increase in non-continuation rates of mature entrants is accompanied by increased participation rates of mature entrants and in particular

mature entrants from LPN. This is in contrast to the University of Wales, Swansea which experienced an increase in participation rates, although reducing over the most recent years. In 2004/05 for the first time, a traditional university, a research led university exceeded the post-1992 HEIs for not retaining mature students; it was the University of Wales, Bangor.

In comparison, in all but one post-1992 institution (SIHE) non-continuation rates were reduced, or at least not increased, over the period; UWIC and University of Glamorgan evidenced strong and systematic reductions over the past 3 and 4 years respectively. Grouping of HEIs is difficult due to the lack of consistency in performance over the period; however the University of Wales College Newport and NEWI do show consistency around the sector average.

Non continuation following year of entry: full-time first degree young entrants, 2001/02-2006/07

The non-continuation rates for 'young entrants' into the Welsh HEI sector are shown in Figure 39. The first observation is that the Welsh sector average is consistently approximately half that experienced for 'mature entrants'. Secondly, there is less volatility in the performances within HEIs, particularly in the traditional universities; some post-1992 HEIs evidence systematic reductions, namely University of Glamorgan and University of Wales College Newport whilst UWIC evidence a systematic increase.

The Welsh sector average is influenced by individual institution performance and since the sector is relatively small it is possible to identify specific influencing institutions.

Figure 39 shows the non-continuation rates for young entrants rising by 1.7% from 2001/02 to 2006/07; this is despite the systematic reduction [2.8%] from 2002/03 experienced by the largest post-1992 institution and a reduction of 3% over the same period for the University of Wales, College Newport. The sector increase appears to be particularly influenced by two post-1992 institution (UWIC and SIHE) and one traditional university (UWB); all have influential levels of young entrants which when acting together could influence the Welsh sector average. Trinity College, Camarthen also experiences large increases [4.5%]; however, the number of young entrants is small, in comparison.

Figure 39 Non-continuation following year of entry: young full-time first degree entrants, 2001/02-2006/07

Notes to HESA-data-sourced tables and charts	related changes since previous year:					
2006/07 - 2007/08	North Wales Institute of Higher Education (NEWI) changed its name to Glyndŵr University					
	Royal Welsh college of Music & Drama merged with University of Glamorgan					
	Swansea Institute of Higher Education changed its name to Swansea Metropolitan University					
	Young LPN/ON total UK figures exclude Scotland					
	Table 6 - Bangor University figures were notified as incorrect, and Glamorgan figures ommitted due to data quality issues					
2005/06 - 2006/07	Introduction of Polar 2 method of identifying LPN					
	University of Wales, Swansea changed its name to Swansea University					
	University of Wales, Aberystwyth changed its name to Aberystwyth University					
	University of Wales, Bangor changed its name to Bangor University					
2003/04 - 2004/05	University of Wales College of Medicine merged with Cardiff University					

The range of non-continuation rates in 2006/07 varied from 4.9% [Cardiff University] to 15% [SIHE]. It is possible to group the performances within this range:

- Group 1 [in the range 4% to 5.8%]: University of Aberystwyth and Cardiff University;

- Group 2 [in the range 5.0% to 9.7%]: University of Wales, Bangor, University of Wales, Lampeter, University of Wales, Swansea and RWCMD;.

- Group 3 [in the range 8.4% to 15.0%]: UWIC, University of Wales, College Newport, SIHE, Trinity College Camarthen;

- Group 4 [in the range 12.1% to 17.9%] University of Glamorgan and NEWI; however, both reduced their rates in 2006/07 to 13.8% to 13.9% respectively.

The data for young entrants is further divided with respect to those domiciled in low participation neighbourhoods.

Non-continuation following year of entry: full-time first degree young entrants from LPN2001/02-2006/07 (POLAR1 and POLAR 2 methods)

The non-continuation of young full-time first degree entrants from LPN following year of entry is shown in Figure 40.

The total sector average increased from 9.5% in 2001/02 to 11.8%, reducing to 11.6% in 2006/07. As experienced with mature entrants, another non-traditional entry category, individual HEI performances show greater variability. As might be expected some of the trends highlighted in Figure 39 are evidenced below although less consistently since they are modified by young entrants from other neighbourhoods. Of particular note is the steady rise of 6% experienced by UWIC.

The traditional university, Cardiff University again shows vulnerability with retaining non-traditional students; it experienced an increase from 3.9% in 2001/02 to 10.7% in 2006/07. University of Wales, Bangor experienced spiked increases. University of Wales, Swansea following a reduction evidences three years of increases, from 6.9% in 2003/04 to 9.5% in 2006/07.

The comparisons across the sector evidence three groups:

- Group 1 [in the range 2.9% to 13.5%]: University of Aberystwyth, Cardiff University, University of Wales, Bangor, University of Wales, Lampeter and University of Wales, Swansea;
- Group 2 [in the range 10% to 19%]: UWIC, NEWI, SIHE, University of Wales, College Newport and Trinity College Camarthen;
- Group 3 [up to 20.6%]: University of Glamorgan.

University of Wales, Lampeter was difficult to group due the significant variability of non-continuation profile but on balance it was considered to be more in line with group 2 than group 1. The introduction of POLAR 2 influenced the groupings and University of Glamorgan, UWIC, NEWI and SIHE all subsequently appear in Group 3 with a range 13.7% to 20.2%.

Figure 40 Non-continuation following year of entry: young full-time first degree entrants from LPN, 2001/02-2006/07 (2005/06-2007 POLAR 2 Method)

Notes to HESA-data-sourced tables and charts	related changes since previous year:					
2006/07 - 2007/08	North Wales Institute of Higher Education (NEWI) changed its name to Glyndŵr University					
	Royal Welsh college of Music & Drama merged with University of Glamorgan					
	Swansea Institute of Higher Education changed its name to Swansea Metropolitan University					
	Young LPN/ON total UK figures exclude Scotland					
	Table 6 - Bangor University figures were notified as incorrect, and Glamorgan figures ommitted due to data quality issues					
2005/06 - 2006/07	Introduction of Polar 2 method of identifying LPN					
	University of Wales, Swansea changed its name to Swansea University					
	University of Wales, Aberystwyth changed its name to Aberystwyth University					
	University of Wales, Bangor changed its name to Bangor University					
2003/04 - 2004/05	University of Wales College of Medicine merged with Cardiff University					

The significant achievements on widening access such as for mature entrants and entrants from LPNs impact on student non-continuation rates. Figure 38, Figure 39 and Figure 40 show the actual percentage on non-continuation for mature entrants, mature entrants from LPN and young entrants from LPN without any normalising processes being applied; such as for entry qualifications or subject mix both of which known to impact on non-continuation rates. Following the introduction of POLAR 2 methodology the gap between non-continuation rates for non-traditional entrants into post-1992 institutions compared to traditional or research led universities is considerably reduced. HESA provide normalized performances in the form of benchmarks which are calculated using the UK sector data. This is explored in the next section.

Full-time first degree student non-continuation beyond year of entry: performance indicators and benchmark, 2002/03 to 2006/07

Wales consistently has a higher non-continuation rate for *all* new entrants than for the UK; the gap has increased over time, with the exception of 2005/06. However, neither has experienced considerable swings towards increased non-continuation despite enhanced widening access performance. The size of the traditional university sector could be a significant influencing factor. Table 40 evidences the actual non-continuation performance for all full-time first degree entrants into Welsh HEIs shown alongside the calculated benchmarks. For comparison, the Total Wales and Total UK are also shown.

Table 40 Non-continuation following year of entry: all full-time first degree entrants performance against benchmark, 2002/03-2006/07

Welsh HEIs: Full-time first degree student	All									
	2002/03		2003/04		2004/05		2005/06		2006/07	
non-continuation beyond year of entry:	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm
Total UK	9.5		9.5		8.8		8.6		9.0	
Total Wales	10.2		10.7		10.3		9.5		10.9	
University of Wales, Aberystwyth	6.5	8.1	4.9	7.9	6.2	7.6	6.1	7.6	5.9	8.4
University of Wales, Bangor	7.0	9.8	6.5	9.7	11.0	9.1	7.6	8.8	12.2	9.7
Cardiff University*	4.3	5.9	5.6	6.5	5.5	6.0	5.1	6.0	6.1	6.4
University of Wales Institute, Cardiff	12.8	10.4	12.5	11.2	12.5	10.4	11.9	10.0	13.6	10.5
University of Glamorgan	19.4	13.9	19.4	17.3	18.1	14.8	17.5	12.9	16.0	12.9
University of Wales, Lampeter	13.1	14.3	11.2	14.0	10.7	11.6	9.3	12.9	12.1	14.1
University of Wales College of Medicine	4.6	7.9								
University of Wales, Newport	14.6	12.0	13.6	12.5	13.4	11.7	11.9	11.6	12.8	12.0
NEWI	16.6	13.9	17.2	14.3	15.9	13.4	15.6	12.8	15.5	12.4
Royal Welsh College of Music and Drama	10.6	8.2	7.1	8.2	3.4	7.7	6.6	8.1		
Swansea Institute of Higher Education	13.0	13.3	14.1	13.9	15.8	12.6	13.6	11.8	16.6	12.9
University of Wales, Swansea	6.1	8.7	7.6	8.7	7.3	8.3	6.5	8.0	8.2	8.3
Trinity College, Camarthen	15.1	11.6	11.6	10.7	10.1	10.1	10.5	9.5	13.9	10.4

Whilst the actual performances against benchmarks are important for individual HEIs to consider, HESA cautions against using the data for a one off year and suggests performances of +- 5% are significant. Informed by the previous sections and the identified convergence trends between traditional and post-1992 HEIs for non-continuation, the variation from benchmark was plotted. Figure 41 shows the variation in performances from actual to benchmark for each HEIs in Wales. This provides new information and insights; although arguably the data has been available for many years.

Despite the statistical cautions from HESA, Figure 41 shows a broadly consistent pattern of performance. There are variations of performance and benchmark

calculations within HEIs over the years as would be expected, however the extent and consistency of traditional HEIs performing better than benchmark and post-1992 HEI worse than benchmark was surprising. The only HEI to show compelling evidence against the pattern is University of Wales, Bangor who for two years had a modest venture on to the 'other side'.

This data is important as it provides a new insight into the non-continuation performance. For example, it was shown in Figure 38 and Figure 39 that the University of Glamorgan had reduced its non-continuation rates. However, Figure 41 evidences that when the qualifications on entry and the subject mix within the University is taken into account its performance is diverging from benchmark; although still within the 5% threshold. On the other hand University of Wales, Newport had not only reduced non-continuation rates but also converged towards the calculated benchmark. NEWI evidenced a small reduction in non-continuation performance and neither increased or reduced maintained its distance from benchmark.

Figure 41 Non-continuation following year of entry: all full-time first degree entrants performance from benchmark, 2002/03-2006/07

Performance indicators in higher education in the UK: (2003/04,2004/05,2005/06,2006/07,2007/08): Non-continuation rates: Table T3a - Non-continuation following year of entry: Full-time first degree entrants. (From www.hesa.ac.uk).
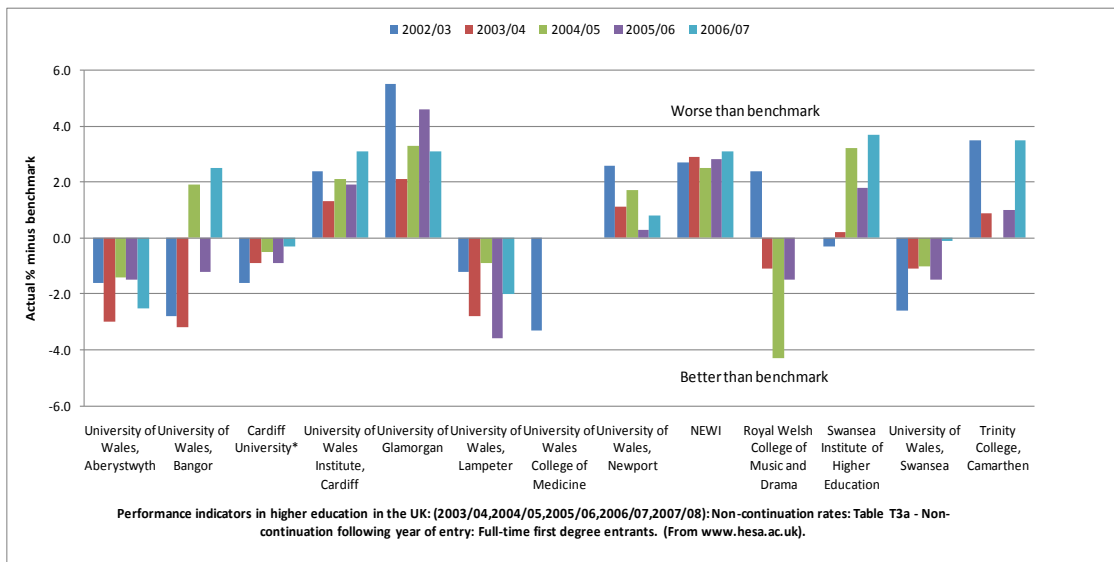
The overall reduction in non-continuation rates for 'all entrants' experienced by University of Wales Aberystwyth and University of Wales, Lampeter is not necessarily translated into variation from benchmark. However, since they already perform better than benchmark any improvements would increase the distance from zero.

In general, the pre-1992 universities performance better than benchmark whilst the post-1992 institutions performance worse; there are only a few exceptions and these tend to be for a specific year rather than a trend, e.g. Bangor University in 2004/05 and 2006/07. Whilst HESA indicates that performance only becomes significant when reaching + or - 5%, it is suggested that reasons beyond the scope of this thesis are considered. Since the pattern is so consistent it is suggested that the algorithm used to calculate the benchmarks may not be adequately embracing *SWPi;* preferring rather to concentrate on entry qualifications and subject mix of the university.

Full-time first degree student non-continuation beyond year of entry: mature entrants

The variation in performance from benchmark for mature entrants is shown in absolute terms in Table 41. Whilst this data is important the graphical presentation, Figure 42, provides a greater visual sense of trends.

Since 2002/03, three post-1992 institutions have consistently performed at or outside benchmark (University of Glamorgan, NEW and University of Wales Newport) whilst the other two, UWIC and SIHE were within benchmark for all but one and two years respectively. In contrast, the traditional universities performed within benchmark although with less consistency and scale than for 'all entrants'; Bangor University was outside benchmark from 2004/05, Swansea University was marginally out in 2003/04 and Cardiff was out in 2006/07.

Table 41 Non-continuation following year of entry: young and mature full-time first degree entrants performance against benchmark, 2002/03-2006/07

Welsh HEIs: Full-time first degree student	Young										Mature									
	2002/03		2003/04		2004/05		2005/06		2006/07		2002/03		2003/04		2004/05		2005/06		2006/07	
non-continuation beyond year of entry:	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm
Total UK	7.8		7.7		7.2		7.1		7.4		15.4		15.6		14.4		14.3		14.8	
Total Wales	8.0		8.5		8.2		7.8		8.9		17.2		17.2		16.7		15.2		17.1	
University of Wales, Aberystwyth	5.4	7.2	4.2	7.3	5.8	6.9	5.4	6.9	5.1	7.4	15.5	16.6	11.0	14.2	9.7	15.2	13.3	14.9	13.2	17.1
University of Wales, Bangor	6.3	8.1	5.6	8.2	9.0	7.3	5.7	7.3	9.7	8.3	8.9	15.0	9.5	14.3	17.4	14.4	14.3	13.9	20.7	14.6
Cardiff University*	4.2	5.4	5.4	5.8	4.4	4.8	4.2	5.0	4.9	5.5	6.6	13.5	7.8	12.0	12.1	12.5	11.2	12.3	13.9	12.7
University of Wales Institute, Cardiff	9.9	9.1	9.9	9.8	10.7	8.8	11.1	8.5	12.5	8.8	21.2	14.3	21.1	15.8	18.5	15.7	14.5	14.8	16.8	15.5
University of Glamorgan	16.5	11.6	16.6	14.7	16.3	12.9	15.7	10.9	13.8	10.8	23.8	17.4	22.5	20.4	20.5	17.3	20.7	16.3	19.8	16.6
University of Wales, Lampeter	7.6	9.9	7.9	10.6	5.4	9.1	6.8	10.5	6.8	11.0	18.3	18.6	15.1	18.1	17.7	14.9	13.1	16.7	20.0	18.7
University of Wales College of Medicine	3.5	6.1									5.4	9.2								
University of Wales, Newport	13.5	10.5	12.1	10.4	10.7	10.1	9.5	10.1	10.5	10.4	15.9	13.9	15.8	15.8	17.0	13.7	15.8	14.0	16.3	14.4
NEWI	14.5	11.9	17.9	11.8	14.4	11.8	16.1	10.9	13.9	10.7	18.1	15.4	16.6	16.4	17.2	14.8	15.2	14.4	17.0	13.8
Royal Welsh College of Music and Drama	9.0	7.8	5.8	7.6	3.1	7.3	6.5	7.7												
Swansea Institute of Higher Education	11.8	11.4	13.8	14.1	14.3	10.7	12.0	10.0	15.0	11.2	15.4	16.9	14.7	18.6	18.9	16.2	16.9	15.7	20.1	16.6
University of Wales, Swansea	5.0	7.9	6.3	7.8	6.1	7.3	5.6	7.1	7.4	7.4	12.6	13.6	13.7	13.5	12.7	12.9	10.3	11.7	11.6	12.1
Trinity College, Camarthen	12.9	10.0	10.8	9.4	9.3	8.6	9.4	8.3	12.7	8.9	20.4	15.4	14.1	15.0	12.9	15.5	14.6	13.9	17.3	14.4

Data source as Figure 17.

Figure 42 Non-continuation following year of entry: mature full-time first degree entrants performance from benchmark, 2002/03-2006/07

Performance indicators in higher education in the UK: (2003/04,2004/05,2005/06,2006/07,2007/08): Non-continuation rates: Table T3a - Non-continuation following year of entry: Full-time first degree entrants. (From www.hesa.ac.uk).
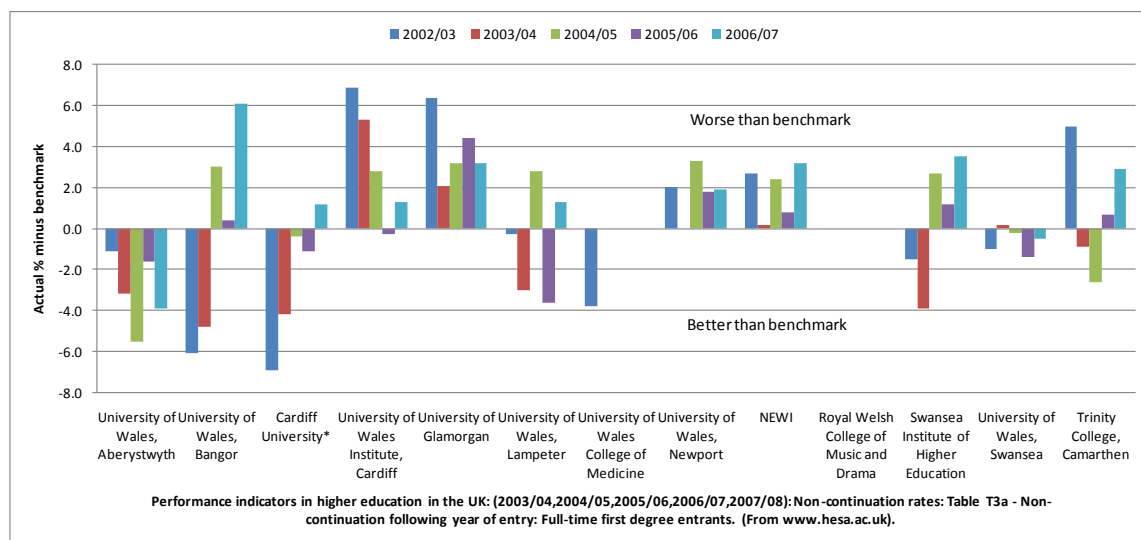
Full-time first degree student non-continuation beyond year of entry: young entrants

The presentation of the data focuses on the deviation of performance from benchmark and is shown in Figure 43. The shape of the graph is consistent with 'all entrants' (Figure 41) in that in general the post-1992 institutions perform outside benchmark and the pre-1992 institutions perform within benchmark; the data is also less dispersed than experienced for mature entrants. A key exception is Trinity College, Camarthen who performs outside benchmark in all years.

Figure 43 Non-continuation following year of entry: young full-time first degree entrants performance from benchmark, 2002/03-2006/07
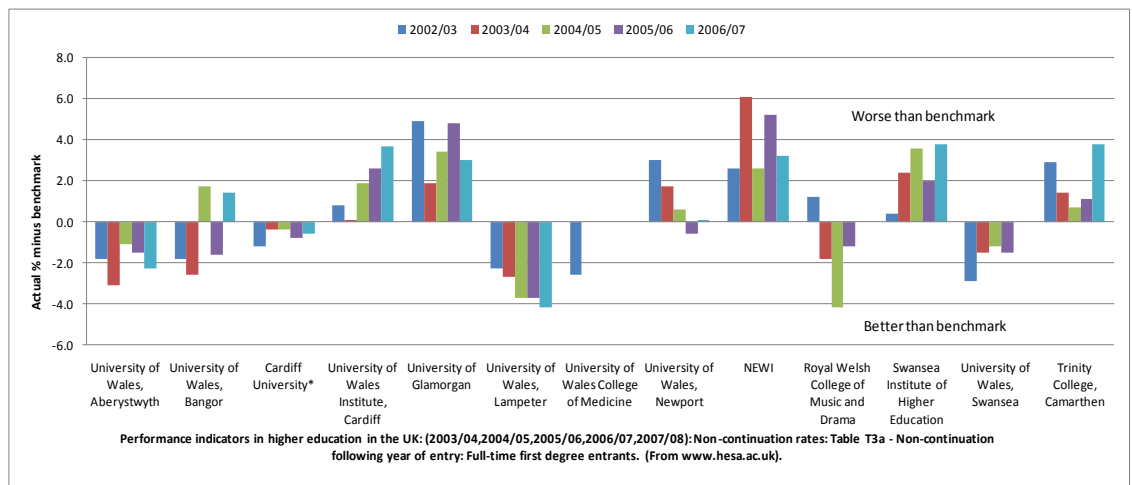
Full-time first degree student non-continuation beyond year of entry: young entrants and from LPN and ON

The non-continuation performances for full-time first degree young entrants 2002/03 to 2006/07 are summarized from the HESA tables and shown in Table 42; the data is shown for 'entrants from LPN' and 'Other Neighbourhoods (ON)'. 'Young entrants from LPN' consistently have at least 3% higher, non-continuation rates than 'entrants from ON' when the data is considered for the Wales total.

As in previous sections, the post-1992 HEIs, in general, perform worse than benchmark although NEWI achieved rates within benchmarks for 'young entrants from LPN' for 2003/04 and 2004/05 but following the new POLAR 2 method swung to outside benchmark by 5.4% and 7.4% for 2005/06 and 2006/07 respectively. The University of Glamorgan also experienced a marked increase [6.4%] in performance from benchmark in 2005/06 which also coincided with its peak non-continuation rate of 20.2%; both the performance and deviation was reduced in 2006/07 [14%; +1.8%]. The University of Wales, Newport performs within benchmark following the introduction of the new methodology.

Consistent with earlier sections the data is now presented as variation from benchmark for each HEI over the period. This is shown in Figure 44 as a continuum despite the methodologies pre and post 2005/06 being different. The distribution of the data both within each HEI and across HEIs is less consistent than that experienced for 'all young entrants'.

Table 42 Non-continuation following year of entry: young full-time first degree entrants from LPN and ON performance against benchmark, 2002/03-2006/07

Welsh HEIs: Full-time first degree student non-continuation beyond year of entry:	Young LPN										Young ON									
	2002/03		2003/04		2004/05		2005/06		2006/07		2002/03		2003/04		2004/05		2005/06		2006/07	
	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm	%	Bm
	POLAR 1						POLAR 2				POLAR 1						POLAR 2			
Total UK (excluding Scotland for 2006/07)	10.8		10.5		10.3		9.7		9.8		7.3		7.2		6.6		6.8		7.0	
Total Wales	10.4		11.5		11.8		11.8		11.6		7.0		7.3		7.0		7.3		8.6	
University of Wales, Aberystwyth	5.1	9.3	6.5	8.9	8.1	9.1	2.9	9.2	3.7	9.3	5.5	6.9	3.9	6.9	5.6	6.4	5.6	6.6	5.2	7.0
University of Wales, Bangor	6.9	10.8	6.6	10.4	13.5	10.2	5.0	9.6	9.7	9.1	6.1	7.6	5.1	7.8	8.3	6.8	5.6	7.0	9.8	7.8
Cardiff University*	3.9	6.6	8.3	8.0	4.3	6.5	8.3	7.7	10.7	7.4	3.9	5.1	4.6	5.4	4.4	4.4	3.9	4.9	4.6	5.1
University of Wales Institute, Cardiff	12.2	11.5	11.9	12.4	15.8	10.4	16.4	11.9	15.9	10.5	9.4	8.5	8.9	9.2	8.8	8.0	10.7	8.2	12.1	8.3
University of Glamorgan	17.8	14.5	20.6	16.3	19.2	16.9	20.2	13.8	14.0	12.2	14.6	10.9	14.5	13.5	13.9	11.3	14.7	10.6	13.8	10.2
University of Wales, Lampeter	16.7	13.1	3.7	10.2	3.7	11.7	4.5	14.4			4.1	9.4	9.2	9.9	5.4	8.7	5.7	9.7	5.8	10.5
University of Wales College of Medicine											2.6	5.8								
University of Wales, Newport	16.4	12.8	13.9	11.1	14.7	12.2	10.7	11.8	10.5	11.6	10.1	9.9	9.0	9.7	6.2	9.3	9.4	9.8	10.5	10.1
NEWI	16.4	14.1	13.2	13.8	11.6	14.0	17.4	12.0	19.4	11.7	13.8	11.6	18.7	11.3	14.6	11.0	15.8	10.8	12.6	10.3
Royal Welsh College of Music and Drama											8.2	7.6	5.5	7.4	1.9	6.7	6.2	7.5		
Swansea Institute of Higher Education	14.9	14.5	11.7	12.9	16.2	13.0	15.9	11.4	13.7	12.1	12.3	10.7	14.4	11.2	13.9	10.0	11.6	9.9	15.2	10.7
University of Wales, Swansea	7.3	10.2	6.9	9.5	8.1	9.1	8.6	8.6	9.5	9.0	3.9	7.5	6.1	7.4	5.5	6.7	5.3	6.8	7.2	7.0
Trinity College, Camarthen	11.0	12.5	18.3	11.5	12.0	9.4	15.4	9.4			13.6	9.6	9.7	9.1	8.8	8.2	8.5	8.2	12.4	8.6

HESA Ltd: *Perfomance indicators in higher education in the UK: (2003/04,2004/05,2005/06,2006/07,2007/08): Non-continuation rates: Table 3b - Young full-time first degree entrants*. (From www.hesa.ac.uk)

Figure 44 Non-continuation following year of entry: young full-time first degree entrants from LPN performance from benchmark, 2002/03-2006/07

Performance indicators in higher education in the UK: (2003/04,2004/05,2005/06,2006/07,2007/08): Non-continuation rates: Table T3a - Non-continuation following year of entry: Full-time first degree entrants. (From www.hesa.ac.uk).
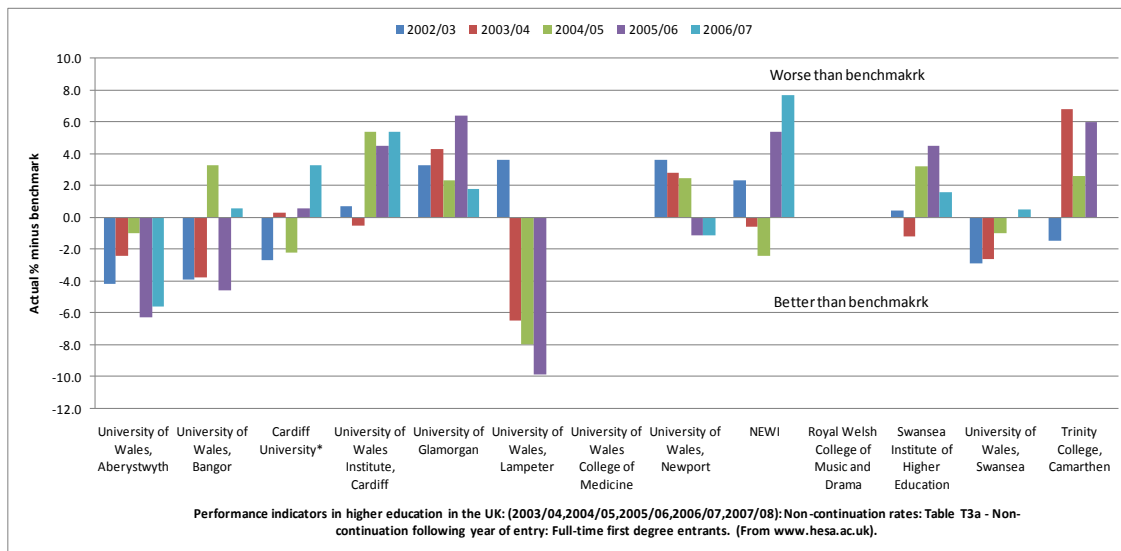
Some pre-1992 universities experience the greatest drift from benchmarks: Cardiff University performs outside benchmarks for three of the past five years and was 3.3% outside for 2006/07; Bangor University was outside for two years [3.3% in 2004/05) and Swansea University was at benchmark for 2005/06 but slipped over by 0.5% in 2006/07. Only the University of Wales, Aberystwyth consistently performed within benchmarks and in many cases by a significant margin [6.3% in 2005/06].

Welsh Assembly Government policy performance

Reaching Higher (Welsh Assembly Government, 2002) does not include a specific target for student non-continuation nor more broadly for student retention. It does however state, that 'Retention is as important as recruitment' (Welsh Assembly Government, 2002 p.9) and goes on to identify areas where it is thought that HEIs could improve performance.

Although specific targets are not identified, *Reaching Higher* (Welsh Assembly Government, 2002 p.167) does include celebrated references to non-continuation rates for 1998/99. These have been incorporated in a time series graph and brought up to date with the latest figures, shown in Figure 45. The break in data between 2005/06 and 2006/07 is due to the move from POLAR 1 to 2 methods.

In *Widening Access & Participation: Student Retention* (H. James, 2007a p.21), an internal report considered widening access and student retention and highlighted the performance of the sector against the Welsh policy and strategy. It suggested that '*the increase in non-continuation rates has been underway since 1998/99*'. However in bringing the data up to date, Figure 45 shows the sector consistently reduced its non-continuation rates for 'young' and 'mature' (all) 'entrants' from 2003/04 to 2005/06 before experiencing an increase in 2006/07.

The non-continuation rates of young entrants from LPN are consistently at least 3% higher than those from ON and at its maximum approximately 5%. It would appear that the non-continuation rates for young entrants from LPN is reducing whilst the rates for young entrants from ON increases. This is also clearly influencing the overall young entrant non-continuation rates due to proportionate representation. It is also evident that all performances are considerably higher than those 'celebrated' in *Reaching Higher* (Welsh Assembly Government, 2002).

Figure 45 Non-continuation following year of entry: Full-time first degree entrants 1998/99-2006/07

Data Source: HESA Ltd: Performance indicators in higher education in the UK. (From www.hesa.ac.uk)
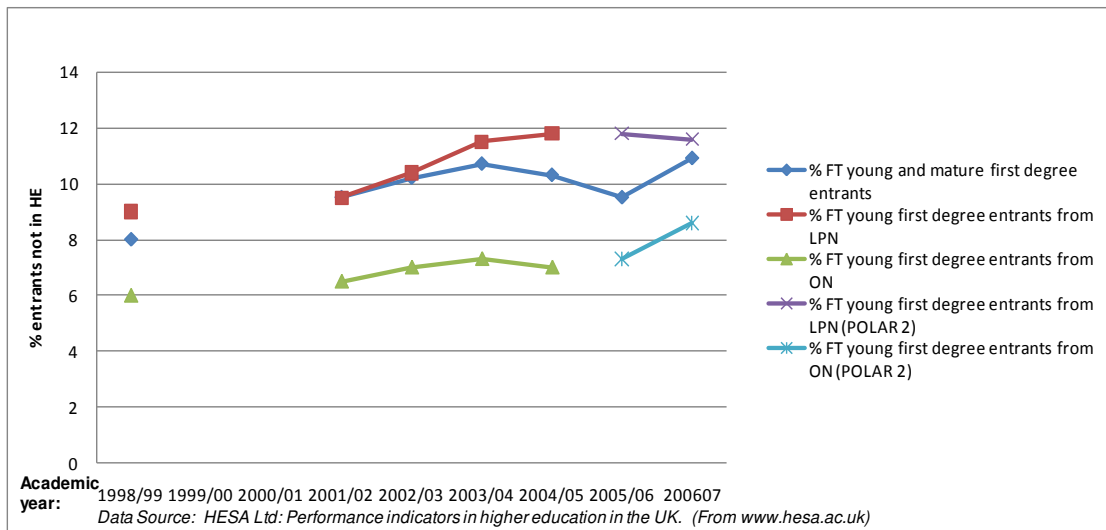
A.3 Summary

Appendix A has presented an overview of both access to and non-continuation from each HEI in Wales as well as the Welsh sector as a whole for the period 2001/02 to 2007/08 as the data permits. For example an entrant in 2001/02 would not appear as a non-continuation until the data in 2002/03 and the latest available data for new entrants is 2007/08. It has also provided an overview of the performance trends which were celebrated in *Reaching Higher* (Welsh Assembly Government, 2002) bringing the data up to date.

Appendix A set out to provide the Welsh HE sector performance context supporting the case study, of one HEI with a strong widening access mission. However, in doing so a number of remarkably consistent performances and trends were evidenced which warrant further investigation in future research. The evidence supports other sector wide empirical work (National Audit Office, 2002a, 2002b, 2007, 2008) but extends it into a systematic consideration of performance against benchmarks. This latter work revealed the potential for a new research dimension which could have implications for the key performance indicator calculations in the future.

Appendix B Case study: student profile, 2007/08

Country of Domicile

	Full-time	Part-time	Total
Wales	1603	2099	3702
England	652	773	1425
Scotland	2	2	4
Northern Ireland	2	0	2
Channel Islands / Isle of Man	1	0	1
Other European Union	213	1420	1633
Non-European Union	284	212	496
Grand Total	2757	4506	7263
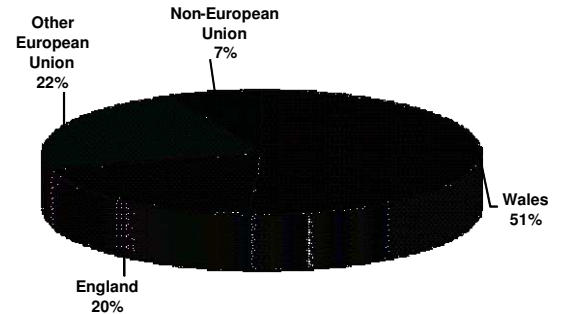
Gender and Age by Mode of Attendance

Gender	Age band	Full-time	Part-time	Total
Female	<18	0	40	40
	18-20	473	218	691
	21-24	378	337	715
	25-29	195	342	537
	30+	528	1160	1688
	Unknown	0	1	1
	Total	**1574**	**2098**	**3672**
Male	<18	1	74	75
	18-20	349	763	1112
	21-24	460	658	1118
	25-29	162	296	458
	30+	211	617	828
	Unknown	0	0	0
	Total	**1183**	**2408**	**3591**
Grand Total		**2757**	**4506**	**7263**
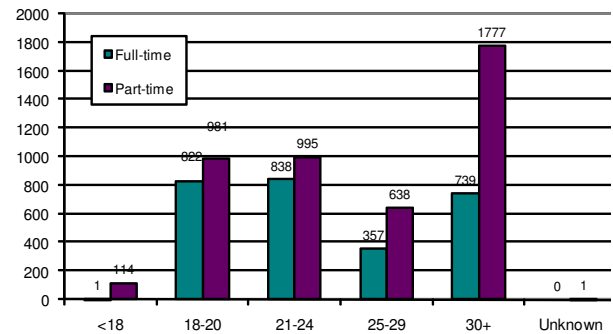
Mode of attendance, gender and age by school

Mode	Gender	Age band	PhDs	Art & Design	Business	Computing	Education	Health	Humanities	Sci & Tech	Total
Full-time	Female	<18									**0**
		18-20		99	36	13	170	94	46	15	**473**
		21-24	3	51	49	13	107	93	25	37	**378**
		25-29	4	10	20	8	37	101	5	10	**195**
		30+	9	70	10	4	89	275	41	30	**528**
	Female Total		**16**	**230**	**115**	**38**	**403**	**563**	**117**	**92**	**1574**
	Male	<18								1	**1**
		18-20		56	37	65	20	48	17	106	**349**
		21-24	1	55	71	119	13	36	18	147	**460**
		25-29	5	19	31	32	12	11	7	45	**162**
		30+	10	35	19	34	13	50	8	42	**211**
	Male Total		**16**	**165**	**158**	**250**	**58**	**145**	**50**	**341**	**1183**
Full-time Total			**32**	**395**	**273**	**288**	**461**	**708**	**167**	**433**	**2757**
Part-time	Female	<18			2	1	21		5	11	**40**
		18-20			21	29	19	8	66	75	**218**
		21-24	2	7	45	33	63	40	88	59	**337**
		25-29	2	8	63	33	75	56	73	32	**342**
		30+	15	75	126	87	337	283	193	44	**1160**
		Unknown						1			**1**
	Female Total		**19**	**90**	**257**	**183**	**515**	**388**	**425**	**221**	**2098**
	Male	<18				4	11	1	20	38	**74**
		18-20		1	14	86	12	3	224	423	**763**
		21-24		5	31	83	22	9	215	293	**658**
		25-29	4	2	28	48	36	9	71	98	**296**
		30+	10	16	48	48	171	123	96	105	**617**
		Unknown									**0**
	Male Total		**14**	**24**	**121**	**269**	**252**	**145**	**626**	**957**	**2408**
Part-time Total			**33**	**114**	**378**	**452**	**767**	**533**	**1051**	**1178**	**4506**
Grand Total			**65**	**509**	**651**	**740**	**1228**	**1241**	**1218**	**1611**	**7263**

Country of domicile by school

	PhDs	Art & Design	Business	Computing	Education	Health	Humanities	Sci & Tech	Total
Channel Islands / Isle of Man		1							**1**
England	14	211	109	83	340	344	93	276	**1470**
Non-European Union	14	10	169	66	21	3	150	58	**491**
Northern Ireland		1						1	**2**
Other European Union	8	13	68	240	2	4	567	732	**1634**
Scotland				1				2	**3**
Wales	29	273	305	350	865	890	408	542	**3662**
Grand Total	**65**	**509**	**651**	**740**	**1228**	**1241**	**1218**	**1611**	**7263**

Total enrolment figures by school 2007/08
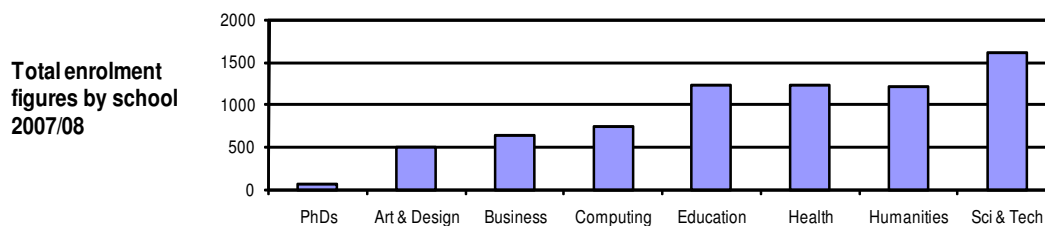
Data provided from the student records system and correlates with those returned to HESA.

(Doc 90 student enrolment statistics 2007-08.xls)

Appendix C Case study: sensitivity of programme performance on the school and institution performances

Table 43 Sensitivity of programme performance on the school and institution performances

	No.	Programme withdrawal Rate	% of School withdrawals
2006			
HND Computer Technologies (PT)	10	15%	
Cert/PG Cert Post-Compulsory Education & Training (PT)	18	17%	
NEWI Professional Cert in Effective Practice (PT)	21	22%	
Three programmes account for 37% of all PT withdrawals			
2007			
HND Computer Technologies (PT)	10	23%	
Cert/PG Cert Post-Compulsory Education & Training (PT)	18	14%	
FdA Therapeutic Childcare (PT)	10	10%	
Three programmes account for 33% of all PT withdrawals			
2008			
Education and Childhood Studies Degree Programme (FT)	8	14%	44% (FT)
Cert/PG Cert Post-Compulsory Education & Training (PT)	18	10%	49% (PT)
FdA Therapeutic Child Care (PT)	11	17%	
HNC Building Studies (PT)	9	27%	
Three programmes account for 28% of all PT withdrawals			
2009			
MSc Management (FT)	6	60%	50% (FT)
HND Computer Technologies (PT)	5	22%	
Cert/PG Cert Post-Compulsory Education & Training (PT)	7	19%	
HNC Engineering Technology (PT) Franchised	5	21%	50% (PT)
HNC Engineering Technology (PT)	4	15%	total
Three programmes account for 20% of all PT withdrawals			

Appendix D Case study: 'in-year' total of student withdrawals and suspended studies, May, 2006 - 2009

The suspended studies option for students provided a legitimate mechanism for schools to reduce and hence mask the true rates of in-year student withdrawals. However, in doing so the uncertainty of end of year enrolment projections increased. Table 44 represents the maximum potential in-year student withdrawal performance as at May each year assuming all full and part-time students suspending studies turn into withdrawals.

Table 44 'In-year' total of student withdrawals and suspended studies

School	Full Time									Part Time							
	24th May 2006	%	21st May 2007	%	15th May 2008	%	15th May 2009	%		24th May 2006	%	21st May 2007	%	15th May 2008	%	15th May 2009	%
Art and Design	24	5.6	27	6.3	27	6.3	24	5.5		15	9.7	6	4.2	10	9.0	5	6.7
Business	14	7.0	24	11.9	15	5.3	15	4.8		26	6.6	31	8.4	18	5.2	10	3.5
Communications Technology	15	4.2	11	3.3	10	3.0	13	3.7		21	7.0	18	6.1	34	6.8	7	2.9
Education and Community	19	4.5	22	4.8	31	6.7	14	3.0		48	5.2	61	7.2	56	6.6	39	5.4
Care and Sports and Exercise	34	4.3	60	8.2	47	6.3	44	5.8		48	8.0	25	3.2	26	5.6	19	3.6
Humanities	8	5.4	5	2.8	12	6.9	6	3.4		4	5.5	4	2.0	25	3.9	17	1.9
Science and Technology	21	4.1	12	2.5	33	7.2	24	4.8		20	3.0	18	2.9	27	3.8	23	3.5
	135		161		175		140			182		163		196		120	

% of enrolments for course (where >5%)

Adapted from Doc 27,Doc 28,Doc 29,Doc 30.

It shows the total volume of withdrawals and suspended studies in May each year steadily increased from May 2006 to May 2008, most notably for full-time (30%) enrolments but this was reduced in overall terms in May 2009, with a dramatic reduction experienced for part-time students. It is suggested that the performance in Table 44 may represents a more accurate projection of non-continuation rates than Table 6 alone.

Appendix E Case study: students' reasons for withdrawing, September to December 2007

In January 2008, the Senior Executive commissioned a survey with withdrawn student to assert their reasons for departure. The survey was conducted by the Widening Participation Manager (Student Retention) and reported to Academic Managers Group (Doc 43). The period September to December 2007 was scrutinised as there had been a notable increase on the previous year; this was evidenced in Figure 5 (page 103).

The survey drew on existing information captured on the individual 'student withdrawal/suspended studies form' authorised by the Head of School. On receipt of the information and as far as possible ensuring any sensitive issues such as bereavement or serious illness had been screened contact with withdrawn students was made. This involved writing, emailing and making personal telephone contact, as far as practicable with each student. The report whilst indicating the broad categories of withdrawal also exposed a deeper insight into the multitude of withdrawal influencers, including the tragic realities of life.

> *'Most of the withdrawals in the period September to December 2007 appear at first inspection to fall into categories relating to personal reasons (21), transfers to other institutions (6), and apparent dissatisfaction with either course or problems related to accommodation or social networks (11). Only one student has specified finance as an issue, (commonly thought to be a major reason why students withdraw). Four students were written off after lapse of time and two student deaths occurred. Three students could be classified under 'other reasons' (section 4.) and this possibly indicates issues not previously identified. Three students could not be tracked.'*
>
> (Doc 43 p.2)

The report highlighted that decisions were a result of a number of factors some wholly within the realm of individual responsibility and others where the institution's actions has had influence.

> *"One male student enrolled on BA Business and moved into student accommodation. After discovering that the course timetable and contact hrs did not warrant paying for full-time accommodation, he tried commuting from home. Consequently he experienced difficulties in coping with travelling,*

alongside personal and health problems, and these influenced his decision to leave."

(Doc 43, p.3)

The reported highlighted that some students challenged the academic decisions of staff whilst others failed to acknowledge the published course literature.

'Two male students withdrew from the BA Business programme originally applying for accreditation of existing work and requesting entry into the 2nd yr. They did not meet the entry criteria were unhappy at being told to start at level 4 in the 1st yr. so later withdrew.........Two female students enrolled for Estate Management and despite being told at the outset the course did not have RICs accreditation they became dissatisfied with this aspect. They argued that course should have this accreditation, and finally chose to withdraw.'

(Doc 43, p3)

The report provides a qualitative insight into why students withdraw in the first few months. It is for many reasons, often acting simultaneously and not always within the control of the institution. This additional insight can support when and how effective and efficient strategic interventions should be made. For example, Table 45 highlights three programmes which dominate the withdrawal data: one undergraduate degree in Business, one post graduate degree in Business and one post graduate degree in C&CT; in each case a number of withdrawn students cited course dissatisfaction although not exclusively.

Table 45 In-year student withdrawals, December 2007

Schools	Number Withdrawn	Level of Programme
Art and Design	2	2 UG: 1 programme
Business	15	9 UG: 1 programme 6 PGT: 1 programme
Computing and Communications Technology	7	2 FD: 1 programme 5 PGT: 1 programme
Education and Community	10	8 UG: 3 programmes 1 Diploma 1 FD
Health, Social Care, Sport and Exercise Sciences	6	6 UG: 4 programmes
Humanities	4	4 UG: 1 programme
Science and Technology	10	7 UG: 5 programmes 3 FD: 1 programme

Adapted from Doc 43

It is possible therefore from close scrutiny of withdrawals on programmes that early indicators of issues can be determined and intervention actions taken. Arguably this should be undertaken at programme and school level however it is the experience within the case institution that this occurs following problem identification at Senior Executive level (which includes Heads of Schools). Thus, even from early data it is possible to identify programmes and schools where investment of resources could induce a step reduction of withdrawals in future years as well as minimising further escalation. The cumulative impact of such strategic interventions could result in a marked reduction in the reported non-continuation rates of students at the case institution.

Appendix F Case study: referrals, 2007/08

Table 46 Module referrals, 2007/08

Summary of module referrals

School	06/07 (trailing modules)	07/08	Total referrals	% of Total	Number of students referred *	Total enrolments in 2007/08	% of students referred to total enrolments	Ave modules per student referred
Art & Design	11	149	160	6%	119	497	23.94%	1.34
Business	36	160	196	8%	196	586	33.45%	1.00
Computing & C. Tech.	65	418	483	19%	477	839	56.85%	1.01
Education & Community	17	169	186	7%	251	1240	20.24%	0.74
Health, Social Care etc.	45	285	330	13%	334	1133	29.48%	0.99
Humanities	9	283	292	11%	288	950	30.32%	1.01
Science & Technology	34	878	912	36%	864	1330	64.96%	1.06
Grand Total	217	2342	2559	100%	2529	6643	38.07%	1.01

Total full-time:	2018
Total part-time:	541

* extracted from SITS on 1st July 2008

Modules with the highest numbers of referrals

Mod. code	Module title	European	Home	International	Unknown	Grand Total
HUM154	Academic English and British Cultu	70		66	28	164
ENG599	Computer Analytical Tools A	20	11	1		32
ENG502	Structures	12	11	4		27
ENG539	Application Toolkit	11	14	2		27
YCW140	Understanding Local Practice		23			23
ENG573	Computer-Based Manufacturing	13	6	2		21
ENG575	Analytical Techniques	8	9	2		19
ENG504	Engineering Dynamics	8	8	1		17
ENG510	Aerodynamics A	8	9			17
ENG512	Control Engineering A	7	10			17
BUS325	Operations Management	1	2	13		16
BUS355	Employee Relations and Change	1	2	13		16
ENG508	Engineering Design	9	6	1		16
SOC160	Criminal Justice and Law		16			16
BUS351	Strategic Management and Intern	2	5	8		15
COM215	Computer Systems 2	10	3	2		15
COMM52	Networking Hardware and Software			15		15
ENG576	Thermo - Fluid Mechanics A	9	5	1		15
ENG613	Signals and Systems	9	5	1		15
YCW142	Sociology of Youth and Community	15				15

Table 47 Programme referrals, 2007/08
Courses with the highest numbers of referrals

Crs code	Course title	Number of referrals	Number of students referred	Total enrolments	% of students referred to total enrolments	Average number of modules per student
BEFAMC	BEng Aeronautical and Mechanical Engineering	212	46	87	52.87%	4.61
SUPHUM	Short Undergraduate Course Humanities	168	168	603	27.86%	1.00
BAFBUS	Business Undergraduate Degree	126	49	115	42.61%	2.57
BSFCOM	Computer Technologies Undergraduate Programme	122	45	124	36.29%	2.71
BAFHUM	Humanities Degree Programme	114	32	159	20.13%	3.56
BAFEDS	Education and Childhood Studies Degree Programme	96	40	143	27.97%	2.40
BACJ2	BA Criminal Justice	84	32	83	38.55%	2.63
BEFPCT	BEng Performance Car Technology	77	25	36	69.44%	3.08
BEFELE	BEng Electrical and Electronic Engineering	76	14	33	42.42%	5.43
BSSU2	BSc Studio Recording and Performance Technology	73	19	40	47.50%	3.84
FDFCOM	FdSc Computer Technologies	64	23	59	38.98%	2.78
BSFMDM	BSc Motorsport Design and Management	59	13	21	61.90%	4.54
MSFCNW	MSc Computer Networking	58	17	41	41.46%	3.41
FDSU2	FdEng Sound/Studio Technology	48	13	31	41.94%	3.69
BSECOM	Computer Technologies European Programme	47	31	68	45.59%	1.52
BSST2	BSc Substance Use Studies	43	16	31	51.61%	2.69
BEEENG	BEng Engineering European Programme	39	24	141	17.02%	1.63
HCPENT	HNC Engineering Technology	39	17	128	13.28%	2.29
BEFAVS	BEng Aeronautical and Electrical Engineering (Avionics)	36	12	27	44.44%	3.00
BSEM2	BSc Estate Management	34	9	34	26.47%	3.78
FDFPCT	FdEng Performance Car Technology	34	4	6	66.67%	8.50
MSNETCOM2 - MSc Internet Computing		34	7	13	53.85%	4.86

From Doc 45, Doc 54

Appendix G Case study: progression of non-traditional students, 2004-2008

The following report was commissioned from the case institution in order to explore the dimension of *Multiple Widening Participation Index* (*MWPi)* and *Specific Widening Participation Indicators (SWPi)* and their relationship to student non-continuation.

Students who were eligible to return from 2004/05 to 2005/06 at the 'Case Institution'

All eligible students

	Full-time				Part-time				Grand Total	
	Students who returned for 2005/06		Students who did not return for 2005/06		Students who returned for 2005/06		Students who did not return for 2005/06			
	#	%	#	%	#	%	#	%	#	%
(PhDs)		0.0%		0.0%		0.0%		0.0%	0	0.0%
Art & Design	252	17.8%	20	8.1%	86	7.8%	40	3.8%	398	10.4%
Business	89	6.3%	14	5.7%	176	15.9%	149	14.2%	428	11.2%
Computing	137	9.7%	47	19.0%	82	7.4%	97	9.2%	363	9.5%
Education	243	17.1%	33	13.4%	269	24.3%	486	46.2%	1031	26.9%
Health	432	30.4%	55	22.3%	185	16.7%	107	10.2%	779	20.4%
Humanities	80	5.6%	19	7.7%	48	4.3%	13	1.2%	160	4.2%
Sci & Tech	186	13.1%	59	23.9%	262	23.6%	161	15.3%	668	17.5%
Total	**1419**	**100.0%**	**247**	**100.0%**	**1108**	**100.0%**	**1053**	**100.0%**	**3827**	**100.0%**
	85.2%		14.8%		51.3%		48.7%			

WIDENING PARTICIPATION INDICATORS:

1. Mature students

	Full-time				Part-time				Grand Total	
	Students who returned for 2005/06		Students who did not return for 2005/06		Students who returned for 2005/06		Students who did not return for 2005/06			
	#	%	#	%	#	%	#	%	#	%
Mature	830	58.5%	166	67.2%	963	86.9%	861	81.8%	2820	73.7%
Not mature	589	41.5%	81	32.8%	145	13.1%	192	18.2%	1007	26.3%
Total	**1419**	**100.0%**	**247**	**100.0%**	**1108**	**100.0%**	**1053**	**100.0%**	**3827**	**100.0%**

2. Non-traditional qualifications

	Full-time				Part-time				Grand Total	
	Students who returned for 2005/06		Students who did not return for 2005/06		Students who returned for 2005/06		Students who did not return for 2005/06			
	#	%	#	%	#	%	#	%	#	%
Students with non-traditional qualifications	412	29.0%	64	25.9%	328	29.6%	323	30.7%	1127	29.4%
Students with traditional qualifications	1007	71.0%	183	74.1%	780	70.4%	730	69.3%	2700	70.6%
Total	**1419**	**100.0%**	**247**	**100.0%**	**1108**	**100.0%**	**1053**	**100.0%**	**3827**	**100.0%**

3. Low-participation neighbourhoods

	Full-time				Part-time				Grand Total	
	Students who returned for 2005/06		Students who did not return for 2005/06		Students who returned for 2005/06		Students who did not return for 2005/06			
	#	%	#	%	#	%	#	%	#	%
Students from low-participation neighbourhoods	308	21.7%	44	17.8%	182	16.4%	221	21.0%	755	19.7%
Students not from low-participation neighbourhoods	1111	78.3%	203	82.2%	926	83.6%	832	79.0%	3072	80.3%
Total	**1419**	**100.0%**	**247**	**100.0%**	**1108**	**100.0%**	**1053**	**100.0%**	**3827**	**100.0%**

4. In receipt of Disabled Student's Allowance

	Full-time				Part-time				Grand Total	
	Students who returned for 2005/06		Students who did not return for 2005/06		Students who returned for 2005/06		Students who did not return for 2005/06			
	#	%	#	%	#	%	#	%	#	%
In receipt of DSA	169	11.9%	14	5.7%	26	2.3%	5	0.5%	214	5.6%
Not in receipt of DSA	1250	88.1%	233	94.3%	1082	97.7%	1048	99.5%	3613	94.4%
Total	**1419**	**100.0%**	**247**	**100.0%**	**1108**	**100.0%**	**1053**	**100.0%**	**3827**	**100.0%**

How many of the above 4 Widening Participation Indicators are met by each individual student?

	Full-time				Part-time				Grand Total	
	Students who returned for 2005/06		Students who did not return for 2005/06		Students who returned for 2005/06		Students who did not return for 2005/06			
	#	%	#	%	#	%	#	%	#	%
0	369	26.0%	60	24.3%	75	6.8%	113	10.7%	617	16.1%
1	529	37.3%	108	43.7%	641	57.9%	552	52.4%	1830	47.8%
2	388	27.3%	59	23.9%	321	29.0%	306	29.1%	1074	28.1%
3	118	8.3%	18	7.3%	68	6.1%	82	7.8%	286	7.5%
4	15	1.1%	2	0.8%	3	0.3%		0.0%	20	0.5%
Total	**1419**	**100.0%**	**247**	**100.0%**	**1108**	**100.0%**	**1053**	**100.0%**	**3827**	**100.0%**

Notes:

1. Students who were in the final year of their course have not been included in the overall population above. Students who were eligible to return have been identified as those with the "Reason for Termination" code left blank in the student data return to HESA.

2. It is possible that students transfer from one course in one year to a different course the following year. These students have been included as returning, unless they only returned to do a "Welsh for Adults" (Further Education) course.

3. Enrolment figures are only provisional until the academic year in question has been completed.

4. Mature students (for 2004/05) are defined by HESA as having a date of birth of 30th September 1983 or earlier.

5. Non-traditional qualifications are defined by HESA as being: HE Foundation course; Access course; GCSE/'O' levels/SCE 'O' grades; NVQ/SVQ level 2; Accreditation of Prior Learning; other non-advanced qualification; mature student admitted because of previous experience; no formal qualification.

6. Low-participation neighbourhoods are defined based a low level of affluence, within the UK. Students from outside the UK have all been counted as "not from low-participation neighbourhoods".

7. The category "not in receipt of DSA" includes students who are disabled but are not claiming DSA, and students who are not disabled.

Students who were eligible to return from 2005/06 to 2006/07 at 'Case Institution'

All eligible students		Full-time				Part-time				Grand Total	
		Students who returned for 2006/07		Students who did not return for 2006/07		Students who returned for 2006/07		Students who did not return for 2006/07			
		#	%	#	%	#	%	#	%	#	%
	(PhDs)	4	0.3%		0.0%		0.0%		0.0%	4	0.1%
	Art & Design	248	17.1%	30	11.4%	104	8.4%	28	2.6%	410	10.2%
	Business	97	6.7%	29	11.0%	170	13.8%	232	21.6%	528	13.1%
	Computing	144	9.9%	49	18.6%	149	12.1%	128	11.9%	470	11.7%
	Education	244	16.9%	21	8.0%	235	19.1%	379	35.3%	879	21.9%
	Health	401	27.7%	56	21.2%	213	17.3%	58	5.4%	728	18.1%
	Humanities	95	6.6%	13	4.9%	43	3.5%	149	13.9%	300	7.5%
	Sci & Tech	215	14.8%	66	25.0%	318	25.8%	99	9.2%	698	17.4%
	Total	**1448**	**100.0%**	**264**	**100.0%**	**1232**	**100.0%**	**1073**	**100.0%**	**4017**	**100.0%**
		84.6%		*15.4%*		*53.4%*		*46.6%*			

WIDENING PARTICIPATION INDICATORS:

1. Mature students		Full-time				Part-time				Grand Total	
		Students who returned for 2006/07		Students who did not return for 2006/07		Students who returned for 2006/07		Students who did not return for 2006/07			
		#	%	#	%	#	%	#	%	#	%
	Mature	894	61.7%	173	65.5%	1017	82.5%	725	67.6%	2809	69.9%
	Not mature	554	38.3%	91	34.5%	215	17.5%	348	32.4%	1208	30.1%
	Total	**1448**	**100.0%**	**264**	**100.0%**	**1232**	**100.0%**	**1073**	**100.0%**	**4017**	**100.0%**

2. Non-traditional qualifications		Full-time				Part-time				Grand Total	
		Students who returned for 2006/07		Students who did not return for 2006/07		Students who returned for 2006/07		Students who did not return for 2006/07			
		#	%	#	%	#	%	#	%	#	%
	Students with non-traditional qualifications	385	26.6%	53	20.1%	321	26.1%	306	28.5%	1065	26.5%
	Students with traditional qualifications	1063	73.4%	211	79.9%	911	73.9%	767	71.5%	2952	73.5%
	Total	**1448**	**100.0%**	**264**	**100.0%**	**1232**	**100.0%**	**1073**	**100.0%**	**4017**	**100.0%**

3. Low-participation neighbourhoods		Full-time				Part-time				Grand Total	
		Students who returned for 2006/07		Students who did not return for 2006/07		Students who returned for 2006/07		Students who did not return for 2006/07			
		#	%	#	%	#	%	#	%	#	%
	Students from low-participation neighbourhoods	304	21.0%	52	19.7%	192	15.6%	163	15.2%	711	17.7%
	Students not from low-participation neighbourhoods	1144	79.0%	212	80.3%	1040	84.4%	910	84.8%	3306	82.3%
	Total	**1448**	**100.0%**	**264**	**100.0%**	**1232**	**100.0%**	**1073**	**100.0%**	**4017**	**100.0%**

4. In receipt of Disabled Student's Allowance		Full-time				Part-time				Grand Total	
		Students who returned for 2006/07		Students who did not return for 2006/07		Students who returned for 2006/07		Students who did not return for 2006/07			
		#	%	#	%	#	%	#	%	#	%
	In receipt of DSA	173	11.9%	19	7.2%	49	4.0%	13	1.2%	254	6.3%
	Not in receipt of DSA	1275	88.1%	245	92.8%	1183	96.0%	1060	98.8%	3763	93.7%
	Total	**1448**	**100.0%**	**264**	**100.0%**	**1232**	**100.0%**	**1073**	**100.0%**	**4017**	**100.0%**

How many of the above 4 Widening Participation Indicators are met by each individual student?		Full-time				Part-time				Grand Total	
		Students who returned for 2006/07		Students who did not return for 2006/07		Students who returned for 2006/07		Students who did not return for 2006/07			
		#	%	#	%	#	%	#	%	#	%
	0	368	25.4%	65	24.6%	120	9.7%	190	17.7%	743	18.5%
	1	560	38.7%	121	45.8%	716	58.1%	611	56.9%	2008	50.0%
	2	377	26.0%	61	23.1%	326	26.5%	223	20.8%	987	24.6%
	3	130	9.0%	14	5.3%	69	5.6%	46	4.3%	259	6.4%
	4	13	0.9%	3	1.1%	1	0.1%	3	0.3%	20	0.5%
	Total	**1448**	**100.0%**	**264**	**100.0%**	**1232**	**100.0%**	**1073**	**100.0%**	**4017**	**100.0%**

Notes:

1. Students who were in the final year of their course have not been included in the overall population above. Students who were eligible to return have been identified as those with the "Reason for Termination" code left blank in the student data return to HESA.

2. It is possible that students transfer from one course in one year to a different course the following year. These students have been included as returning, unless they only returned to do a "Welsh for Adults" (Further Education) course.

3. Enrolment figures are only provisional until the academic year in question has been completed.

4. Mature students (for 2005/06) are defined by HESA as having a date of birth of 30th September 1984 or earlier.

5. Non-traditional qualifications are defined by HESA as being: HE Foundation course; Access course; GCSE/'O' levels/SCE 'O' grades; NVQ/SVQ level 2; Accreditation of Prior Learning; other non-advanced qualification; mature student admitted because of previous experience; no formal qualification.

6. Low-participation neighbourhoods are defined based a low level of affluence, within the UK. Students from outside the UK have all been counted as "not from low-participation neighbourhoods".

7. The category "not in receipt of DSA" includes students who are disabled but are not claiming DSA, and students who are not disabled.

Students who were eligible to return from 2006/07 to 2007/08 at the 'Case Institution'

All eligible students

	Full-time				Part-time				Grand Total	
	Students who returned for 2007/08		Students who did not return for 2007/08		Students who returned for 2007/08		Students who did not return for 2007/08			
	#	%	#	%	#	%	#	%	#	%
(PhDs)	22	1.5%	1	0.4%	16	1.4%	4	0.7%	43	1.3%
Art & Design	232	15.8%	20	8.3%	85	7.6%	18	3.2%	355	10.4%
Business	115	7.8%	17	7.1%	173	15.4%	93	16.4%	398	11.7%
Computing	134	9.1%	45	18.7%	97	8.6%	41	7.2%	317	9.3%
Education	251	17.0%	37	15.4%	221	19.7%	232	40.9%	741	21.8%
Health	409	27.8%	51	21.2%	172	15.3%	119	21.0%	751	22.1%
Humanities	108	7.3%	16	6.6%	43	3.8%	6	1.1%	173	5.1%
Sci & Tech	202	13.7%	54	22.4%	317	28.2%	54	9.5%	627	18.4%
Total	**1473**	**100.0%**	**241**	**100.0%**	**1124**	**100.0%**	**567**	**100.0%**	**3405**	**100.0%**
	85.9%		*14.1%*		*66.5%*		*33.5%*			

WIDENING PARTICIPATION INDICATORS:

1. Mature students

	Full-time				Part-time				Grand Total	
	Students who returned for 2007/08		Students who did not return for 2007/08		Students who returned for 2007/08		Students who did not return for 2007/08			
	#	%	#	%	#	%	#	%	#	%
Mature	873	59.3%	173	71.8%	971	86.4%	476	84.0%	2493	73.2%
Not mature	600	40.7%	68	28.2%	153	13.6%	91	16.0%	912	26.8%
Total	**1473**	**100.0%**	**241**	**100.0%**	**1124**	**100.0%**	**567**	**100.0%**	**3405**	**100.0%**

2. Non-traditional qualifications

	Full-time				Part-time				Grand Total	
	Students who returned for 2007/08		Students who did not return for 2007/08		Students who returned for 2007/08		Students who did not return for 2007/08			
	#	%	#	%	#	%	#	%	#	%
Students with non-traditional qualifications	435	29.5%	61	25.3%	265	23.6%	170	30.0%	931	27.3%
Students with traditional qualifications	1038	70.5%	180	74.7%	859	76.4%	397	70.0%	2474	72.7%
Total	**1473**	**100.0%**	**241**	**100.0%**	**1124**	**100.0%**	**567**	**100.0%**	**3405**	**100.0%**

3. Low-participation neighbourhoods

	Full-time				Part-time				Grand Total	
	Students who returned for 2007/08		Students who did not return for 2007/08		Students who returned for 2007/08		Students who did not return for 2007/08			
	#	%	#	%	#	%	#	%	#	%
Students from low-participation neighbourhoods	274	18.6%	46	19.1%	185	16.5%	99	17.5%	604	17.7%
Students not from low-participation neighbourhoods	1199	81.4%	195	80.9%	939	83.5%	468	82.5%	2801	82.3%
Total	**1473**	**100.0%**	**241**	**100.0%**	**1124**	**100.0%**	**567**	**100.0%**	**3405**	**100.0%**

4. In receipt of Disabled Student's Allowance

	Full-time				Part-time				Grand Total	
	Students who returned for 2007/08		Students who did not return for 2007/08		Students who returned for 2007/08		Students who did not return for 2007/08			
	#	%	#	%	#	%	#	%	#	%
In receipt of DSA	184	12.5%	28	11.6%	41	3.6%	9	1.6%	262	7.7%
Not in receipt of DSA	1289	87.5%	213	88.4%	1083	96.4%	558	98.4%	3143	92.3%
Total	**1473**	**100.0%**	**241**	**100.0%**	**1124**	**100.0%**	**567**	**100.0%**	**3405**	**100.0%**

How many of the above 4 Widening Participation Indicators are met by each individual student?

	Full-time				Part-time				Grand Total	
	Students who returned for 2007/08		Students who did not return for 2007/08		Students who returned for 2007/08		Students who did not return for 2007/08			
	#	%	#	%	#	%	#	%	#	%
0	414	28.1%	40	16.6%	92	8.2%	31	5.5%	577	16.9%
1	535	36.3%	121	50.2%	659	58.6%	357	63.0%	1672	49.1%
2	363	24.6%	55	22.8%	319	28.4%	140	24.7%	877	25.8%
3	139	9.4%	23	9.5%	51	4.5%	39	6.9%	252	7.4%
4	22	1.5%	2	0.8%	3	0.3%	0	0.0%	27	0.8%
Total	**1473**	**100.0%**	**241**	**100.0%**	**1124**	**100.0%**	**567**	**100.0%**	**3405**	**100.0%**

Notes:

1. Students who were in the final year of their course have not been included in the overall population above. Students who were eligible to return have been identified as those with the "Reason for Termination" code left blank in the student data return to HESA.

2. It is possible that students transfer from one course in one year to a different course the following year. These students have been included as returning unless they only returned to do a "Welsh for Adults" (Further Education) course.

3. Enrolment figures are only provisonal until the academic year in question has been completed.

4. Mature students (for 2006/07) are defined by HESA as having a date of birth of 30th September 1985 or earlier.

5. Non-tradtional qualifications are defined by HESA as being: HE Foundation course; Access course; GCSE/'O' levels/SCE 'O' grades; NVQ/SVQ level 2; Accreditation of Prior Learning; other non-advanced qualification; mature student admitted because of previous experience; no formal qualification.

6. Low-participation neighbourhoods are defined based a low level of affulence, within the UK. Students from outside the UK have all been counted as "not from low-participation neighbourhoods".

7. The category "not in receipt of DSA" includes students who are disabled but are not claiming DSA, and students who are not disabled.

Appendix H Welsh higher education sector data: progression of non-traditional students, 2002-2006

The following report was commissioned from StatsWales (Doc 81) in order to explore the concept of *Multiple Widening Participation Index (MWPi)* and *Specific Widening Participation Indicator (SWPi)* in a national context.

Non-continuation following year of entry 2002/03 at Welsh HEIs

Full-time First Degree Entrants

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
All	18,356	15,921	86.7	565	3.1	1,870	10.2

Young Full-time First Degree Entrants

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	13,922	12,379	88.9	435	3.1	1,108	8.0
Disabled and UK domciled	825	741	89.8	26	3.2	58	7.0
In receipt of DSA	427	395	92.5	11	2.6	21	4.9
NS-SEC Classes 4,5,6 and 7	3,132	2,776	88.6	91	2.9	265	8.5
NS-SEC Classes 4,5,6 and 7, disa	146	134	91.8	*	1.4	+	6.8
NS-SEC Classes 4,5,6 and 7 and	64	58	90.6	*	1.6	+	7.8
Low participation neighbourho	1,927	1,658	86.0	68	3.5	201	10.4
Low participation neighbourho	88	75	85.2	0	0.0	13	14.8
Low participation neighbourho	47	41	87.2	0	0.0	6	12.8
Low participation neighbourho	638	557	87.3	20	3.1	61	9.6

Mature Full-time First Degree Entrants

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total Mature	4,432	3,541	79.9	130	2.9	761	17.2

Mature Full-time First Degree Entrants with no previous HE

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	2,992	2,409	80.5	92	3.1	491	16.4
Disabled and UK domciled	336	271	80.7	10	3.0	55	16.4
In reciept of DSA	146	122	83.6	5	3.4	19	13.0
Low participation neighbourho	586	454	77.5	21	3.6	111	18.9
Low participation neighbourho	67	55	82.1	*	1.5	+	16.4
Low participation neighbourho	27	24	88.9	*	0.0	*	11.1

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Non-continuation following year of entry 2003/04 at Welsh HEIs

Full-time First Degree Entrants

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
All	19,029	16,499	86.7	491	2.6	2,039	10.7

Young Full-time First Degree Entrants

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	14,174	12,599	88.9	371	2.6	1,204	8.5
Disabled and UK domciled	842	756	89.8	23	2.7	63	7.5
In receipt of DSA	412	376	91.3	9	2.2	27	6.6
NS-SEC Classes 4,5,6 and 7	3,302	2,959	89.6	102	3.1	241	7.3
NS-SEC Classes 4,5,6 and 7, disabled and uk domciled	155	145	93.5	*	1.9	+	4.5
NS-SEC Classes 4,5,6 and 7 and in receipt of DSA	85	82	96.5	*	1.2	*	2.4
Low participation neighbourhood	2,002	1,713	85.6	59	2.9	230	11.5
Low participation neighbourhood, disabled and uk domciled	96	81	84.4	*	4.2	+	11.5
Low participation neighbourhood and in receipt of DSA	36	32	88.9	*	5.6	*	5.6
Low participation neighbourhood and NS-SEC Classes 4,5,6 and 7	661	579	87.6	23	3.5	59	8.9

Mature Full-time First Degree Entrants

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total Mature	4,854	3,900	80.3	120	2.5	834	17.2

Mature Full-time First Degree Entrants with no previous HE

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	2,920	2,353	80.6	72	2.5	495	17.0
Disabled and UK domciled	295	235	79.7	11	3.7	49	16.6
In reciept of DSA	150	124	82.7	7	4.7	19	12.7
Low participation neighbourhood	561	436	77.7	13	2.3	112	20.0
Low participation neighbourhood, disabled and uk domciled	49	38	77.6	*	6.1	+	16.3
Low participation neighbourhood and in receipt of DSA	31	26	83.9	*	6.5	*	9.7

Cell values less than 5 have been expressed as *

Values expressed as + have a value of 5 or greater but have been removed in order to prevent recalculation of cells expressed as *

Low participation neighbourhoods calculated using a new method (POLAR method 2) for 2006/07 PIs which implies that data for non-continuation following year of entry 2005/06 is not directly comparable with previous years.

Non-continuation following year of entry 2004/05 at Welsh HEIs

Full-time First Degree Entrants

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
All	19,091	16,568	86.8	554	2.9	1,969	10.3

Young Full-time First Degree Entrants

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	14,316	12,714	88.8	430	3.0	1,172	8.2
Disabled and UK domciled	1,008	912	90.5	27	2.7	69	6.8
In receipt of DSA	489	446	91.2	14	2.9	29	5.9
NS-SEC Classes 4,5,6 and 7	3,178	2,839	89.3	84	2.6	255	8.0
NS-SEC Classes 4,5,6 and 7, disabled and uk domciled	178	157	88.2	5	2.8	16	9.0
NS-SEC Classes 4,5,6 and 7 and in reciept of DSA	84	77	91.7	*	2.4	+	6.0
Low participation neighbourhood	2,034	1,727	84.9	66	3.2	241	11.8
Low participation neighbourhood, disabled and uk domciled	113	102	90.3	*	2.7	+	7.1
Low participation neighbourhood and in receipt of DSA	46	40	87.0	*	6.5	*	6.5
Low participation neighbourhood and NS-SEC Classes 4,5,6 and 7	628	542	86.3	19	3.0	67	10.7

Mature Full-time First Degree Entrants

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total Mature	4,771	3,851	80.7	124	2.6	796	16.7

Mature Full-time First Degree Entrants with no previous HE

	Total full-time first degree	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	3,130	2,549	81.4	87	2.8	494	15.8
Disabled and UK domciled	344	284	82.6	14	4.1	46	13.4
In reciept of DSA	180	160	88.9	*	0.6	+	10.6
Low participation neighbourhood	654	538	82.3	13	2.0	103	15.7
Low participation neighbourhood, disabled and uk domciled	62	55	88.7	*	3.2	+	8.1
Low participation neighbourhood and in receipt of DSA	31	29	93.5	*	0.0	*	6.5

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Values expressed as + have a value of 5 or greater but have been removed in order to prevent recalculation of cells expressed as *

Low participation neighbourhoods calculated using a new method (POLAR method 2) for 2006/07 PIs which implies that data for non-continuation following year of entry 2005/06 is not directly comparable with previous years.

Non-continuation following year of entry 2005/06 at Welsh HEIs

Full-time First Degree Entrants

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
All	19,426	17,052	87.8	523	2.7	1,851	9.5

Young Full-time First Degree Entrants

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	14,174	12,599	88.9	371	2.6	1,204	8.5
Disabled and UK domciled	842	756	89.8	23	2.7	63	7.5
In receipt of DSA	412	376	91.3	9	2.2	27	6.6
NS-SEC Classes 4,5,6 and 7	3,302	2,959	89.6	102	3.1	241	7.3
NS-SEC Classes 4,5,6 and 7, disabled and uk domciled	155	145	93.5	*	1.9	+	4.5
NS-SEC Classes 4,5,6 and 7 and in reciept of DSA	85	82	96.5	*	1.2	*	2.4
Low participation neighbourhood	2,002	1,713	85.6	59	2.9	230	11.5
Low participation neighbourhood, disabled and uk domciled	96	81	84.4	*	4.2	+	11.5
Low participation neighbourhood and in receipt of DSA	36	32	88.9	*	5.6	*	5.6
Low participation neighbourhood and NS-SEC Classes 4,5,6 and 7	661	579	87.6	23	3.5	59	8.9

Mature Full-time First Degree Entrants

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total Mature	4,854	3,900	80.3	120	2.5	834	17.2

Mature Full-time First Degree Entrants with no previous HE

	Total full-time first degree entrants	Continue or qualify at same HEI		Transferred to another UK HEI		No longer in HE	
		No.	%	No.	%	No.	%
Total	2,920	2,353	80.6	72	2.5	495	17.0
Disabled and UK domciled	295	235	79.7	11	3.7	49	16.6
In reciept of DSA	150	124	82.7	7	4.7	19	12.7
Low participation neighbourhood	561	436	77.7	13	2.3	112	20.0
Low participation neighbourhood, disabled and uk domciled	49	38	77.6	*	6.1	+	16.3
Low participation neighbourhood and in receipt of DSA	31	26	83.9	*	6.5	*	9.7

Notes

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Low participation neighbourhoods calculated using a new method for 2006/07 PIs which implies that data for non-continuation following year of entry 2005/06 is not directly comparable with earlier years data

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Low participation neighbourhoods calculated using a new method (POLAR method 2) for 2006/07 PIs which implies that data for non-continuation following year of entry 2005/06 is not directly comparable with previous years.

CASE DOCUMENTS

DOC 1 STRATEGIC PLAN2001/2002-2005/2006.BOG.PAPER 9/7/01

DOC 2 WITHDRAWAL REPORT FEBRUARY 2009

DOC 3 WITHDRAWAL REPORT JANUARY 2009

DOC 4 WITHDRAWAL REPORT DECEMBER 2009

DOC 5 WITHDRAWAL REPORT NOVEMBER 2008

DOC 6 WITHDRAWAL REPORT OCTOBER 2008

DOC 7 WITHDRAWAL REPORT APRIL 2008

DOC 8 WITHDRAWAL REPORT MARCH 2008

DOC 9 WITHDRAWAL REPORT FEBRUARY 2008

DOC 10 WITHDRAWAL REPORT JANUARY 2008

DOC 11 WITHDRAWAL REPORT DECEMBER 2007

DOC 12 WITHDRAWAL REPORT NOVEMBER 2007

DOC 13 WITHDRAWAL REPORT OCTOBER 2007

DOC 14 WITHDRAWAL REPORT APRIL 2007

DOC 15 WITHDRAWAL REPORT MARCH 2007

DOC 16 WITHDRAWAL REPORT FEBRUARY 2007

DOC 17 WITHDRAWAL REPORT JANUARY 2007

DOC 18 WITHDRAWAL REPORT DECEMBER 2006

DOC 19 WITHDRAWAL REPORT NOVEMBER 2006

DOC 20 WITHDRAWAL REPORT OCTOBER 2006

DOC 21 WITHDRAWAL REPORT APRIL 2006

DOC 22 WITHDRAWAL REPORT MARCH 2006

DOC 23 WITHDRAWAL REPORT FEBRUARY 2006

DOC 24 WITHDRAWAL REPORT JUNE 2006

DOC 25 WITHDRAWAL REPORT AUGUST 2006

DOC 26 WITHDRAWAL REPORT SEPTEMBER 2006

DOC 27 WITHDRAWALS AND SUSPENSIONS.08-09.MAY09.PDF

DOC 28 WITHDRAWALS 07-08 MAY15.08.PDF

DOC 29 WITHDRAWALS 06-07 21 MAY07.RTF

DOC 30 WITHDRAWALS 05-06 24 MAY 06.PDF

DOC 31 WITHDRAWALS 04-05, 05-06, 06-07, 07-08 BY MONTH.XLS

DOC 32 WITHDRAWALS 08-09 BY MONTH.XLS

DOC 33 WITHDRAWALS.04.05.EOY.AMG.FEB06.DOC

DOC 34 WPARC.06-07.WITHDRAWALS 05.06.NON-TRADITIONAL.EOY.22NOV06XLS

DOC 35 WITHDRAWALS.06-07.EOY.IMG.30OCT07.RTF

DOC 36 WITHDRAWALS 07-08.EOY.NOV.2008.PDF

DOC 37 WITHDRAWN AT BOARD.HTM

DOC 38 SPO NOV 2007

DOC 39 NON-RETURNING STUDENTS 2005/06 TO 2006/07.SCHOOLS.XLS

DOC 40 0405 TO 0708 NON-RETURNERS AFTER PASS PROGRESS DECISIONS.XLS

DOC 41 0405 TO 0708 NON-RETURNERS AFTER SUSPENSION DECISIONS.XLS

DOC 42 0405 TO 0708 NON-RETURNERS AFTER RPT YR DECISIONS.XLS

DOC 43 WITHDRAWAL 07-08RPT.REASONS SEPT-DEC. ACADEMIC MANAGERS

DOC 44 WITHDRAWAL REASONS 2005 TO 2008

DOC 45 REFERRALS IN MODULES.1.7.2008 IN 2008 SUMMER PROJECT

DOC 46 ASSESSMENT REGULATIONS, 2004/05

DOC 47 QUALITY HANDBOOK, 2006/07

DOC 48 ACADEMIC BOARD MINUTES OF 18TH JANUARY 2005

DOC 49 ACADEMIC BOARD MINUTES OF 5TH APRIL 2005.REVISIONS TO ASSESSMENT REGULATIONS (MINUTE 04.39 REFERS)

DOC 50 REPORT TO ACADEMIC BOARD ON THE "60 CREDIT RULE" ACADEMIC BOARD,22ND FEBRUARY 2006

DOC 51 ACADEMIC BOARD MINUTES OF 22ND FEBRUARY 2006

DOC 52 ACADEMIC BOARD MINUTES OF 9TH MAY 2006

DOC 53 ACADEMIC QUALITY HANDBOOK, 2008/09

DOC 54 SUMMER 2008 PROJECT EVALUATION

DOC 55 NON-RETURNING STUDENTS 07.08 TO 08.09 (FULL-TIME).XLS

DOC 56 NON-RETURNING STUDENTS 07.08 TO 08.09 (PART-TIME).XLS

DOC 57 DATA.04.05.ENTRY 1ST DEGREE.COHORT PROGRESS ANALYSIS.EXCL ADVANCED STANDING.XLS

DOC 58 DATA.04_05 COHORT PROGRESSION ANALYSIS_ADVANCED STANDING.XLS

DOC 59 REPORT.FT.FOUNDATION DEGREE.05-06 COHORT PROGRESSION.DOC

DOC 60 DATA.FD 05-06 COHORT PROGRESSION.ANALYSIS.XLS

DOC 61 PROGRAMME EXPERIENCE QUESTIONNAIRE 2007

DOC 62 SQC.07-08.PAPER.PROGEXPERIENCESURVEY07.26FEB2008.DOC

DOC 63 AB.08-09.PAPER.NSS.2DEC08

DOC 64 SUMMARY-LEAVERS-0405-0506

DOC 65 OMG 07-08.STUDENT BAROMETER SURVEY.16JUN08.DOC

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DOC 67 ARC.ADMISSIONS.REPORT.JUNE05.DOC

DOC 68 PGM MGT REPORT.AUDIT.JUNE 08.DOC

DOC 69 IND WG.PAPER.REPORT ON PLANS FOR INDUCTION.AUG 2006.DOC

DOC 70 WPARC.07-08.PAPER.INDUCTION.6MAY08.DOC

DOC 71 GETTING STARTED 2006

DOC 72 WPARC 07-08 STUDENT RETENTION PAPER

DOC 73 SUMMARY REPORT 2006/07 COLLATED FOR ENGAGEMENT COMMITTEE. 25 OCTOBER 2007.DOC

DOC 74 SRSTFG 07-08.RPT.KEYSKILLS.MARCH08.DOC

DOC 75 SRSTFG 07-08.ELLI UPDATE.11APRIL 2008.DOC

DOC 76 SRSTFG 07-08.SMS,MOODLE PROJECT.APRIL08.PDF

DOC 77 SRSTFG 07-08.STRESS AWARENESS WEEK UPDATE.2008.DOC

DOC 78 SRSTFG 07-08.WHAT ABOUT ME EVAL.MAR08.DOC

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DOC 82 406 REPORT-RETENTION & WIDENING PARTICIPATION.XLS

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