

Student Retention in Higher Education Courses

International
Comparison

Christian van Stolk, Jan Tiessen,
Jack Clift, Ruth Levitt

TECHNICAL
R E P O R T



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Prepared for the National Audit Office

The research described in this report was prepared for the National Audit Office.

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Preface

As part of a wider value-for-money study on retention in higher education courses, the National Audit Office commissioned RAND Europe to undertake comparative research on student retention from an international perspective. This report presents the findings of the research conducted on four selected countries: Australia, Ireland, the Netherlands and the United States.

This report consists of the following sections (for an overview of the template used in this research, see Appendix B):

- an overview of the selected countries' systems of higher education analyses of the rates of student-non-continuation on higher education courses over the past ten years
- a review of approaches used by higher education institutions in the selected countries to maximise the likelihood of student retention
- reasoned conclusions on the effectiveness of the approaches to student retention in the four countries
- the identification of what lessons might be transferable to the UK to inform approaches in this area.

The findings are based on a review of the relevant literature and contacts with experts in the respective countries.

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Summary

1. During the last decade, the UK government has sought to both increase¹ and widen participation to include more students from groups that have been less well represented in higher education, while maintaining or improving student retention.² Against this background, the National Audit Office (NAO) has conducted a value-for-money study on the English higher education sector's performance on student retention.
2. As part of this value-for-money study, the NAO commissioned RAND Europe to undertake an international comparison of how higher education institutions in four other countries manage HE student retention. The four countries selected were Australia, Ireland, the Netherlands, and the United States. For an overview of the selection criteria used, see Appendix A.
3. The objectives of this international comparison are to:³
 - give an overview of the selected countries' systems of higher education
 - provide the definitions of non-continuation; and analyse the rates of student-non-continuation on higher education courses over the past ten years
 - review the approaches used by governments and higher education institutions in the selected countries to maximise the likelihood of student retention
 - provide reasoned conclusions on the effectiveness of the approaches to student retention in the four countries and to establish what lessons might be transferable to the UK to inform approaches in this area.

The main findings of the study were as follows.

The countries studied have measured completion rates in HE to some extent, but only Australia and the Netherlands systematically capture retention rates.

4. In Ireland and the United States (US), there are no agreed definitions of retention. Where retention is measured, the data measurement is mostly course-specific. There are some

¹ The target is to move towards 50 per cent participation among 18-30 year olds by 2010.

² See e.g. HEFCE, *Strategic Plan 2006-2011* (2006); and Department for Education and Skills, *The Future of Higher Education* (White paper, Presented to Parliament by the Secretary of State for Education and Skills by Command of Her Majesty, January 2003).

³ A full template with the criteria for comparison is given in Appendix B.

common definitions of completion in these countries. Completion rates are compiled for students on financial assistance in the US. Completion refers to the number of students who graduate within 150 percent of the normal course time (six years). Ireland differentiates between students who graduate on time and students who graduate late. In Australia and the Netherlands, there are more systematic definitions that inform data collection. In the Netherlands, graduation is defined as ‘yield’ and refers to the number of students who graduate on time. The Netherlands captures retention as students who stay in HE after the first two years of study. The Netherlands also uses a definition for progress or continuation, that is, the number of students who stay in their courses and progress on time. This last definition is not captured for most courses. Australia defines attrition as drop-outs after the first year of HE and defines the completion rate as the graduation rate after seven years of HE.

The UK is one of the better performers compared to the other countries studied in terms of completion and survival rates of students, where comparable data is available.

5. It is challenging to make comparisons between retention rates of countries given the differences in how retention and completion rates are defined and calculated.⁴ Also, some of the data can be contradictory as it measures different types of completion or graduation rates. To build some comparisons we used Organisation of Economic Development (OECD) data and available national data.⁵ The OECD has several data sets that compare degree completion, graduation, and survival rates of students between countries.⁶ Table 0.1 sets out these rates for the countries studied alongside those for the United Kingdom. The data does not appear to show a positive relationship between participation and completion of degrees in HE. For instance, the United States has the highest participation rate of the countries studied and a relatively low completion rate in 2003 and first-time graduation rate in 2004. The same can be said, to a lesser extent, of Ireland. However, Ireland has one of the highest survival rates of students, which to some extent contradicts relatively low completion and graduation rates.⁷ The Netherlands has both a low participation rate and completion rate, but high graduation and survival rates. Australia seems to be a high performer, both in participation and completion/graduation rates. The United Kingdom has the highest completion rate of the countries listed and relatively high graduation and

⁴ It is important to note that some of these measurements are for different years and might measure slightly different performance indicators. In addition, the way measurements are made, in terms of length of study after which completion and retention are measured, can bias the outcomes of comparisons given differences between countries in the provision of HE, the organisation of studies, financing of the HE system and the student population.

⁵ OECD does not disaggregate data for the different constituent parts of the United Kingdom.

⁶ The OECD defines completion rates as the number of degrees awarded per 100 students enrolled in a given year. Graduation rates refer to the ratio of tertiary graduates to the population at the typical age of graduation, multiplied by 100. Survival rate indicates the number of graduates divided by the number of new entrants in the typical year of entrance (tracking of a cohort). ‘Type A’ HE refers typically to theory-based university education. We have mostly used data for Type A institutions as data for ‘Type B’ institutions, more practice-based professional institutes and vocational colleges, was not readily available in all countries.

⁷ These contradictions may relate to the fact that different ways of measurement involve different reference years.

survival rates. In terms of survival rates, the United Kingdom and Ireland have similar rates in 2000, which are higher than for the other countries. Survival rates seem to decline between 2000 and 2004, with the exception of the Netherlands.⁸

6. It is more difficult to explain the factors behind the variance of completion and survival rates between countries. The case study chapters refer to a variety of institutional, course-specific, financial and social factors that explain the variance. Some of the factors are for instance the cost of education, socio-economic background, and the length of courses. The length of HE courses, which is shorter in the United Kingdom and Ireland than in other countries, could be a factor in explaining why these countries have higher survival rates. The removal of tuition fees in Ireland has been cited as a factor that could lead to improved survival rates. However, the causal relationship between survival rates and reduced tuition fees in Ireland is not visible in the data (2000-04). Generally, there is too little evaluation of factors affecting completion and survival to come to firm conclusions.

Table 0.1 OECD data on participation, degree completion and survival rates compared between countries

Country	College participation (young adults 18-24 enrolled in HE in % 2003)	Completion rate (number of degrees awarded per 100 students enrolled 2003)	First-time graduation Type A courses 2004 (%)	Survival rate for all Type A HE courses 2000 (%)	Survival rates Type A HE courses 2004 (%)
Australia	31	23	46.4	69	67
Ireland	35	21	37.4	85	83
The Netherlands	27	16	40.2	69	76
United Kingdom	n/a	24	39.3	83	78
United States	35	17	33.6	66	54

SOURCE: OECD 2003 taken from the National Center for Public Policy and Higher Education and OECD 2006a, *Education at a Glance*

Note 1 There was no comparative participation data available for the United Kingdom in 2003.

All countries studied have policies aimed at disadvantaged groups, but those concerning the participation and retention of disadvantaged groups differ between countries.

7. All countries share a policy concern around the participation and participation of disadvantaged groups. However, several factors need to be taken into account when breaking down retention and completion rates for specific disadvantaged groups or priority groups. Firstly, different countries monitor different subgroups. Secondly, as stated before, countries differ in the way they measure participation, retention, and completion. Thirdly, countries have different policy issues for subgroups. Research in the Netherlands has shown that ethnic minorities (a specific priority group) are not under-represented and do not show any significant differences in terms of retention (first two years) from the native Dutch reference group. Moreover, in recent cohort retention rates for first generation

⁸ In the Netherlands, reforms of HE after 2002 to comply with Bologna have shortened the time period until completion of the first course of study. This might have had an effect on survival rates..

ethnic minorities seem to be better than second generation and native Dutch students. The policy concern in the Netherlands is the significantly lower completion rate for ethnic minorities compared with the native Dutch reference group.⁹ In other words, there seem to be problems after the first two years of HE, which affects students from an ethnic minority background disproportionately. In Australia, there is evidence that retention rates for priority groups are lower than for the reference group. However, there is no significant gap between retention rates for these priority groups and the reference group. The main policy concern in Australia is the significant under-representation of certain priority groups in HE as indicated in participation rates. The most under-represented group are students with a low socio-economic status and students from isolated areas, In the US, there is evidence that minority groups are under-represented in HE and also anecdotal evidence that these groups have lower retention and completion rates.¹⁰ Within the subgroups, performance varies. The Asian subgroup seems to outperform in terms of participation and completion compared to the non-Hispanic ethnic white group and other subgroups. The performance (participation and completion) of other subgroups such as Hispanic and non-Hispanic Black is similar and below the levels of the non-Hispanic white and Asian groups.

8. Some further policy issues are shared. Retention of mature students is deemed problematic in the Netherlands, the United States, and Australia. This suggests that retention of mature students seems to be a shared and common policy concern. However, evidence on the participation and retention rates of disabled students in the Netherlands and Australia suggests that participation and retention of disabled students are not major policy concerns in these countries.

Trends in the participation and retention rates of students across countries seem mostly stable, where data is available.

9. The data available in the countries studied allows us to make some conclusions on the retention of students in HE. The Netherlands shows an improvement in retention and participation of ethnic minority groups over the last decade. Overall, retention rates seem to be stable in the Netherlands. Australia shows stable retention and attrition rates over the last decade. The US shows some improvement of outcomes for the ethnic majority groups but declining prospects for some of the minority groups (e.g. non-white Hispanic groups). However, this data is only anecdotal. Ireland has only institution-specific data, which shows that some institutions have outperformed others (see Section 3.4 in Chapter 3).

Causes given by and for students leaving HE, in the countries studied, are age at commencement of studies, the wrong choice of study course, transition from secondary school to HE, and financial burden.

10. Evidence from the case studies shows that a variety of causes underlie students' decisions to interrupt courses or withdraw from HE. In Australia, research into the main causes for students dropping out of HE shows that older students, students who gave no clear

⁹ See case study report for more information.

¹⁰ This data is derived from sources used for the case studies. For specific studies and sources, see the case study chapters.

motivation for attending HE, students whose personal circumstances changed and part-time students were substantially more likely to drop out of HE.¹¹ In Ireland, the initial choice of the course and personal problems were the two most important reasons given by students for leaving a course. In the Netherlands, there were three main causes: age at the time of HE commencement (older students have worse outcomes); pre-HE preparation/schooling; and choice of course. Some studies in the US show that there is an influence of the financial burden of tuition fees. Where financial aid goes down and tuition fees go up, there seems to be a negative impact on retention and completion. The Netherlands lists a large effect of higher tuition fees on the participation and retention of ethnic minority students. Factors such ‘academic integration’ and ‘social integration’ are also cited in literature reviews in the US but not systematically evaluated.¹²

There are important commonalities in the policies proposed and adopted to improve the retention of students in the countries studied.

11. Evidence from the four countries studied suggests that there are common approaches to policies for improving the retention of students in HE. Many of the initiatives reflect on the work undertaken by Tinto¹³ on the importance of ‘academic and social integration’ of students in HE. Table 0.2 shows the overlaps between the countries studied. The main categories of Table 0.2 are ‘macro-level’ initiatives referring to initiatives taken at government level and ‘micro-level’ initiatives referring to initiatives taken at institute or university level. For more details and references, please refer to the country reports.
12. Commonalities on the macro-level exist around the monitoring of retention issues (Australia, Ireland and the Netherlands), the exchange of best practice (Ireland and the Netherlands) and use of specific funding streams into retention issues (Australia, Ireland and the US). On the micro-level, commonalities exist around information provided to incoming students (Australia, Ireland and the Netherlands); peer mentoring (Ireland, the Netherlands, the US); transition courses and skills training (Australia, Ireland, the Netherlands, the US); professionalisation of support staff and retention officers (Ireland and the Netherlands); and the creation of smaller learning communities (the Netherlands and the US).
13. This study has found it difficult to assess the effectiveness of these policy levers, as few evaluations have established the direct impact of these levers on participation and retention. Most evaluation evidence concerns an overall effect of a number of policy levers rather than a specific effect associated with a specific policy lever.

¹¹ For more information on the causes in Australia and references, see section 2.5 of Chapter 2.

¹² For more information on the causes given, see section 2.5 of Chapter 2; section 3.5 of Chapter 3; section 4.5 of Chapter 4; and section 5.5 of Chapter 5.

¹³ See for instance Tinto (1987).

Important differences in the organisation and institutional set-up of HE need to be taken into account when comparing retention rates and in examining the transferability of instruments/policies aimed at improving retention in HE systems.

14. There are important differences in the organisation and institutional arrangements of the countries studied. These differences relate to four key areas: 1. institutional differences in the provision of HE; 2. the organisation of studies; 3. the financing of the HE system; and 4. the student population.
15. Firstly, some of the countries have distinct institutional arrangements in the formulation and implementation of HE policy and the provision of HE services. For instance, Australia and the United States are both federal states and part of the responsibility for the formulation and implementation of education policy is devolved to the states and territories. Moreover, the countries studied show differences in how HE is provided. In Ireland, HE is divided between institutes of technology and universities. The Netherlands has a similar division between institutes of professional education (HBO) and universities (WO). HE in the United States operates as a market with a large mix of private providers and public institutions, mostly at the state level. These providers can have different price structures for HE courses and offer different types of HE in terms of the course length, quality of education, and type of courses.
16. Secondly, the organisation of courses of study varies between countries. The United States and the Netherlands offer modular systems based on credits. HE in Ireland mostly offers fixed curricula to students. The autonomy of self-accrediting universities and institutes in Australia gives these bodies flexibility in the types of courses they offer and the organisation of the courses (there is no nationwide system of course credits or accepted modular system). Evaluation studies in the Netherlands show that the organisation of courses can have an impact on the retention of students.¹⁴ Flexibility and a modular system seem to have a positive impact.
17. Thirdly, financing arrangements vary for HE in the countries studied. While Australia, the Netherlands, and the US use tuition fees, Ireland does not and funds HE mostly through government spending. In the Netherlands, the tuition fee is fixed across the range of public providers but variable across private providers. In Australia and the United States, these tuition fees can vary by provider and course studied. There is some evidence from the Netherlands that a higher financial burden might have a negative impact on student retention, especially when it affects students from ethnic minority groups.¹⁵
18. Fourthly, the student population varies across countries. Ireland has a relatively homogeneous population of students. Australia, the Netherlands, and the United States have sizeable minority groups of students. This is important when considering and comparing retention rates for disadvantaged groups.

¹⁴ See for instance meta-analysis in J. Lansbergen, *Literatuurrapport studiestakers en –switchers* (Fontys, 2003).

¹⁵ See meta-analysis in P.G.P. Herfs, 'Retention policy for ethnic minority students,' *Higher Education in Europe* XXVIII (3) October (2003).

Table 0.2: Policy initiatives taken in the countries studied

Category	Australia	Ireland	The Netherlands	United States
Macro-level initiatives	<ul style="list-style-type: none"> - Monitoring of retention, access and participation rates against national targets for institutions and student sub-groups - Funding for specific equity-group-related projects at the institutional level - Scholarships for students from disadvantaged groups - Research on retention and attrition rates 	<ul style="list-style-type: none"> - Monitoring of detailed student records through Student Record System - Exchange of best practice through Inter-University Retention Network - Funding for projects aimed at specific retention issues in IT/math/engineering - Abolition of tuition fees - Exit interviews to understand why students leave HE 	<ul style="list-style-type: none"> - National monitoring of retention issues for ethnic minority groups - Exchange of best practice and national coordination through ECHO - Importance of financial aid in supporting retention - More curriculum flexibility - Binding study advice after the first year of study 	<ul style="list-style-type: none"> - Funding for specific micro-projects in TRIO Student Support Services
Micro-level initiatives	<ul style="list-style-type: none"> - Improved information for incoming students - Specific university monitoring into causes of non-completion (surveys) - Specific transition courses/skills training - Lowering of entry requirements for disadvantaged groups - Financial support to disadvantaged students - Raising staff awareness and providing guidance on retention issues 	<ul style="list-style-type: none"> - Improved information for incoming students - Specific university monitoring into causes of non-completion (surveys) - Peer mentoring - Specific transition courses/skills training - Retention officers 	<ul style="list-style-type: none"> - Improved introduction for incoming students - Association for and by students - Transition courses/skills training - Professionalising and improving student support - Accessible and engaging teachers - Creating smaller learning communities 	<ul style="list-style-type: none"> - Peer mentoring - Tailoring courses to cultural contexts and needs of students - Creating smaller learning communities - Creating living/learning environment for commuters

During the last decade, the UK government has sought to both increase¹⁶ and widen participation to include more students from groups that have been less well represented in higher education, while maintaining or improving student retention.¹⁷ There is a tension between these priorities, because the students from many low participation groups tend to be less likely to complete their courses. For example, drop-out rates from HE after one year are considerably higher for mature students and students from neighbourhoods in which there is low participation.¹⁸ There is considerable variation in retention rates of HE institutions and the gap between the best and worst performing institutions remains similar to 2001-02.¹⁹ This finding points to differing strategies for tackling student non-completion and might indicate scope for further improvement.

Against this background, the National Audit Office (NAO) has undertaken a value-for-money study on student retention on higher education courses in England. As part of this value-for-money study, the NAO has commissioned RAND Europe to undertake an international comparison of student retention rates and policies across four countries. The four countries selected were Australia, Ireland, the Netherlands and United States. The objectives of this international comparison are to:

- give an overview of the selected countries' systems of higher education
- provide the definitions of non-continuation, and analyse the rates of student-non-continuation on higher education courses over the past ten years
- review the approaches used by governments and higher education institutions in the selected countries to maximise the likelihood of student retention

¹⁶ The target is to move towards 50 per cent participation among 18-30 year olds by 2010.

¹⁷ See e.g. HEFCE, *Strategic Plan 2006-2011* (2006); and Department for Education and Skills, *The Future of Higher Education* (White paper, Presented to Parliament by the Secretary of State for Education and Skills by Command of Her Majesty, January 2003).

¹⁸ Compare e.g. the average UK non-continuation rate for young full-time, first-degree entrants in 2003-04 of 7.7% with that of mature full-time, first-degree entrants (15.6%) and young full-time first-degree entrants from low-participation neighbourhoods (*HESA, Performance Indicators in Higher Education in the UK 2003/04* [2005]).

¹⁹ HESA, *Performance Indicators in Higher Education in the UK 2001/02* (2003), *2003/04* (2005).

- provide reasoned conclusions on the effectiveness of the approaches to student retention in the four countries and to establish what lessons might be transferable to the UK to inform approaches in this area.

This report presents the evidence collected from the four country studies. The following chapters each focus on one country, following a common template to increase comparability across countries. Chapter 1 covers Australia, followed by the chapters on Ireland (Chapter 2) the Netherlands (Chapter 3) and the United States (Chapter 4). Each country chapter starts with a brief overview of the higher education system, including key institutions, funding mechanisms, organisation of studies and an overview of the student body. This is followed by a section focussing on the national definitions and concepts of student retention used. The subsequent three sections then present empirical evidence on student retention, trends and underlying causes for these trends. Each country review closes with an overview of policy instruments used at national, as well as institutional, levels to improve retention rates. A comparison of the countries, distilling some core findings, is provided in the executive summary of this report. Appendix A gives a detailed account of the methods used for this report.²⁰ Appendix B contains the template used for the country studies.

²⁰ In terms of evidence gathering, we have tried to find comparable data on retention rates. We have also used other data such as graduation and participation rates to draw out comparisons. We have tried where possible to find multiple sources to derive findings by using meta-analyses to understand the dynamic, trends, and causes of students leaving HE and identify effective policy levers to address retention problems. In cases where only self-reporting studies were available, we have still included these in order to inform the study (e.g. in causes given by students in Ireland for leaving courses). Such studies might of course have a reporting bias.

2.1 **General overview of the higher education system**

2.1.1 **Institutions**

Australia's tertiary education system is divided into two sectors – the higher education sector and the vocational education and training sector. This country report will concentrate on the former, the higher education (HE) sector in Australia.

Responsibilities for higher education are divided between the Commonwealth (federal) level and the states and territories. The Australian government has primary responsibility for the public funding of higher education the states and territories are responsible for the administration of the legislation, oversight and accreditation of higher education institutions and programmes.²¹ At the national level, higher education is administered by the Department for Education, Science and Training (DEST); at the state level, the respective departments for education and training are responsible for higher education.

In 1987 the dual system of higher education institutes, offering both professional courses and universities concentrating on academic education, was abolished, leading to today's landscape of higher education institutions. The higher education sector in Australia currently comprises 37 public and two private universities; one approved branch of an overseas university; four other self-accrediting higher education providers; and over 150 non-self-accrediting higher education providers.²² All but three of the universities and other self-accrediting higher education providers are established or recognised under State or Territory legislation. The Australian National University, the Australian Maritime College, and the Australian Film Television and Radio School are established under Commonwealth legislation.²³ Although they are formally statutory bodies, the universities enjoy a great deal of institutional autonomy: by and large they are self-governing bodies.²⁴

²¹ Australian Education International (AEI), *Country Education Profiles: Australia*. (Canberra: Commonwealth of Australia, 2006), 75-76.

²² Self-accrediting bodies can design and approve their own courses leading to the different types of awards common in Australia, such as the bachelor's degree or master's degree, but also other degrees. In contrast, the courses of non-self accrediting bodies are accredited by the states and territories.

²³ Department for Education, Science and Training (DEST), *Higher Education Report 2005* (Canberra: Commonwealth of Australia, 2006a).

²⁴ AEI (2006), p.74.

2.1.2 Funding

The Australian government has primary responsibility for the public funding of higher education, this includes also the provision of (competitive) research grants. Moreover, tuition fees play a major role in financing higher education.²⁵

Commonwealth funding is provided through a variety of mechanisms, mostly under the Higher Education Support Act 2003.²⁶ The bulk of it is provided through the Commonwealth Grants Scheme (CGS), providing base funding for a specified number of Commonwealth-supported places each year. Additionally, the Commonwealth hands out contestable research grants on a competitive basis and a wide range of “other grants” for specific policy objectives such as quality improvement, promotion of equity groups, research and research training, and collaboration.²⁷

Commonwealth funding is also provided in terms of assistance to students through the Higher Education Loan Programme (HELP) and through a range of scholarships designed to help students from disadvantaged backgrounds. Under the Higher Education Contribution Scheme (HECS), however, students are required to contribute substantially to the costs of their education.

Table 2.1: Total revenues from continuing operations of Australian higher education institutions for 2005

	AUS (\$,000)	GBP (£,000)
Australian government financial assistance (without research)	6,322,983	2,529,193
Fees and charges	3,277,277	1,310,911
Research grants (DEST and Australian Research Council)	1,530,877	612,351
Consultancy and contracts	651,016	260,406
Investment income	582,214	232,886
State and local government financial assistance	514,275	205,710
Upfront student contributions	396,079	158,432
Other income	1,052,793	421,117
Total	14,327,515	5,731,006

SOURCE: DEST (2006a)

Table 2.1 provides an overview of the funding sources, or total revenues, of the HE providers supported by commonwealth grants.²⁸ Figure 2.1 illustrates the contribution of the single funding sources to overall funding. Australian Government Financial Assistance

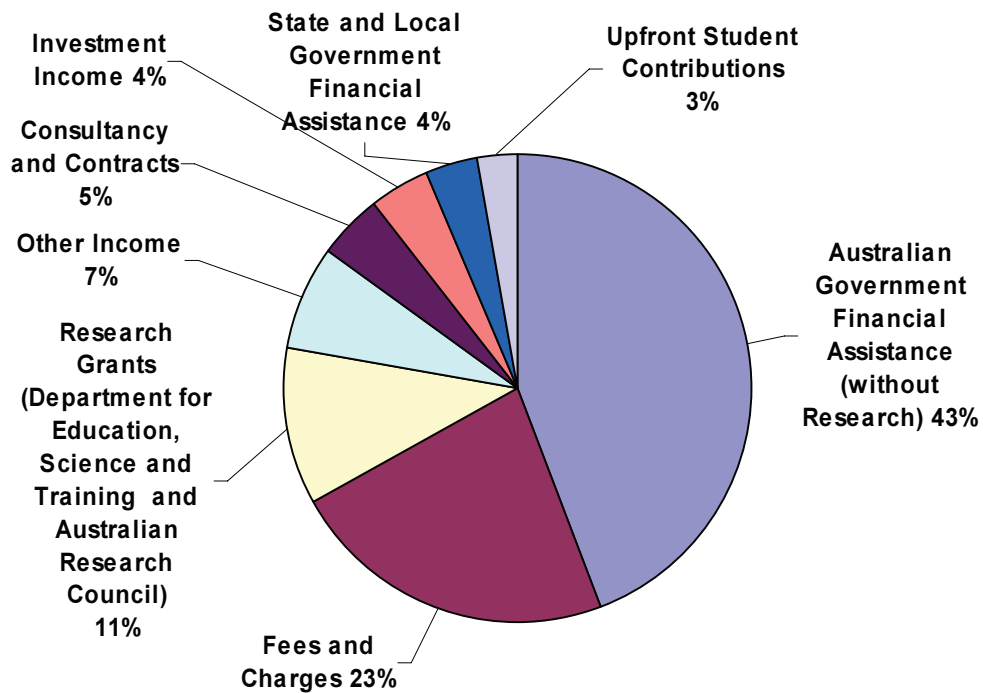
²⁵ Peer reviewed competitive research funding schemes are administered by a number of bodies, the two largest of which are the Australian Research Council within DEST's portfolio and the National Medical and Health Research Council (NHRMC) which is part of the Australian Government Health and Ageing portfolio.

²⁶ DEST (2006a), p. 25.

²⁷ For details see DEST (2006a), pp. 26-27.

²⁸ These figures include grants to the 39 Table A providers as specified in the Higher Education Support Act of 2003 and the University of Notre Dame Australia

is the single most important source of funding (43 percent), followed by students' own contribution to the funding of higher education (23 percent).



SOURCE: DEST (2007): *Higher Education Statistics Collections*

Figure 2.1: Sources of Higher Education Funding (2005)

2.1.3 Organisation of studies

There are many study programmes with a variety of different degrees. As all universities are self-accrediting institutions they enjoy a high degree of flexibility in organising their courses. Thus, there is no uniform modular or credit system across the different higher education providers. Common university degrees include bachelor's degrees, master's degree and finally doctoral degrees, but there is also a wide range of additional diplomas and certificates.

Amidst this variety, the Australian Qualifications Framework (AQF) – set up by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA)²⁹ – aims to ensure mutual recognition of degrees and transferability of credits between tertiary education institutions. However, a survey conducted in 2004 among university leavers indicated that only 24.6 percent received full, 39.2 percent partial and 36.2 percent no credit for their performance.

²⁹ The Ministerial Council on Education, Employment, Training and Youth Affairs is the meeting of the respective ministers of the Australian states and territories and the Australian Government.

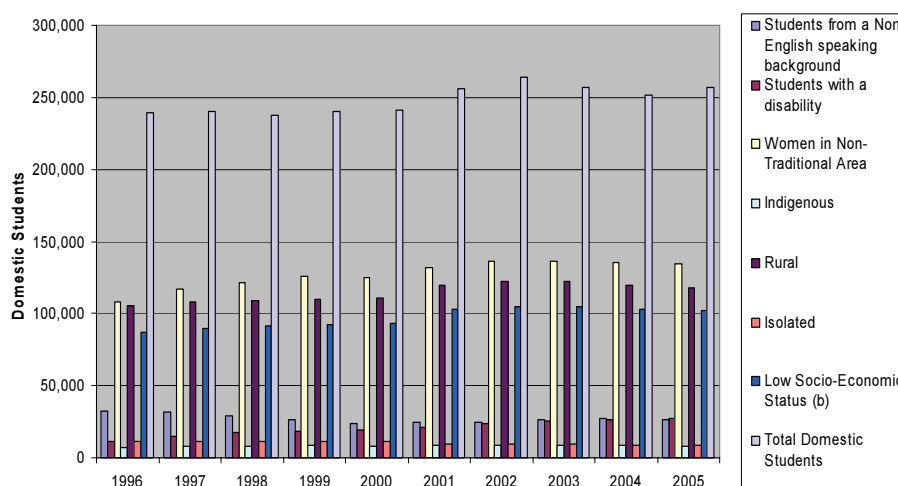
2.1.4 Students

In 2005 there was a total of 957,176 students enrolled in Australian universities, of which 717,681 were domestic and 239,495 from overseas. Table 2.2 gives an overview of the composition of the domestic student body in 2005. The table follows the equity groups identified by the Australian government (see section 2.2). Since 1996 this composition has been fairly stable, but with a slight decrease for all equity groups except students with disabilities.

Table 2.2: Composition of domestic student body in 2005 in Australia

Equity group	% of all domestic students
Women in non-traditional area	19.13
Rural	16.72
Low socio-economic status (b)	14.51
Students with a disability	3.92
Students from a non-English-speaking background	3.73
Isolated	1.21
Indigenous	1.18

SOURCE: DEST (2006a)



SOURCE: DEST (2006a)

Figure 2.2: Change in student body composition in Australia

As mentioned in the previous section, students in Australia are obliged to contribute substantially to the costs of their higher education. The costs per subject studied vary depending on the field of education, the individual higher education provider, and whether it is a Commonwealth supported place. The Commonwealth supports the majority of undergraduate places and a number of graduate places, which have reduced tuition fees and are allocated on a merit bases. Around 97% of all domestic undergraduate

students are in Commonwealth supported places at public universities ³⁰Table 2.3 provides an overview of the range of student contributions for Commonwealth-supported places in different courses. In practice, however, nearly all universities charge the contributions at or close to the maximum amount. Besides Commonwealth-supported places, universities can also offer a limited number of fee-paying undergraduate places,³¹ for which the students have to tuition fees. Postgraduate coursework studies are usually fee-paying, while postgraduate research studies are usually exempt from payment of student contribution amounts or tuition fees. There exists no regulation on the maximum fees that can be charged for fee paying places, be it undergraduate or postgraduate studies

Table 2.3: Student Contribution Bands and Ranges for 2007 AU\$³²

	Student contribution range (students commencing on or after 1 January 2005)	Student contribution range (pre-2005 HECS students who began their course on or after 1 January)	Student contribution range (pre-2005 HECS students who began their course before 1 January 1997)
National priorities			
Education, nursing	\$0-\$3,998	\$0-\$3,998	\$0-\$3,001
Band 1			
humanities, behavioural, science, social studies, foreign languages, visual and performing arts	\$0-\$4,996	\$0-\$3,998	\$0-\$3,001
Band 2			
accounting, administration, economics, commerce, mathematics, statistics, computing, built environment, health, engineering, science, surveying, agriculture	\$0-\$7,118	\$0-\$5,694	\$0-\$3,001
Band 3			
law, dentistry, medicine, veterinary science	\$0-\$8,333	\$0-\$6,665	\$0-\$3,001

SOURCE: DEST (2006b)

The burden of student contributions is, however, eased by a number of government student-support schemes. Under the two schemes HECS-HELP (for Commonwealth-supported places) and FEE-Help³³ (for fee-paying places), students can defer the payment

³⁰ Personal communication with DEST.

³¹ Since 1998, universities have been able to offer undergraduate domestic fee-paying places, in addition to Commonwealth-supported places. However since 2005, they must fill their Commonwealth-supported places before offering fee-paying places to students; and Commonwealth-supported places must comprise at least 65% of all places for domestic students in a course of study (ACE 2006a).

³² We used a current exchange rate of 1GBP to 2.4AU\$.

³³ From 1 January 2007, the FEE-HELP limit will be \$80,000 for all courses except medicine, veterinary science and dentistry, for which the FEE-HELP limit is \$100,000

of their fees by taking out an interest-free loan,³⁴ which is paid back through the tax system, if the former students earn beyond a certain threshold income.³⁵ However, as there are discounts for the upfront payment of student contributions of 20 percent, this option is more expensive. In 2005 the majority of students 77% chose to defer parts or all their student contributions through HECS-HELP.³⁶

2.2 Definitions of student retention

Official sources in Australia use completion, attrition or retention rates as the measure of student non-continuation.³⁷

Completion rates are an estimate of the proportion of commencing students who will complete their course over a seven-year period. The estimated completion rate takes into account an approximation of the proportion of students who change university before completing their study. Data on completion rates is created through cohort studies. The most recent data available is from 1992-1993, tracing completion until 1998-1999 respectively.

Attrition rates are an estimate of the proportion of students who left university over a one-year time period, excluding the students graduating within this period. DEST and individual institutions publish data on attrition over a one-year time period. However, attrition is only measured at the institutional or university level, which means students who change university or defer are included as attrition. This leads to a systematic overestimation of the actual attrition rates. Data on sector-wide student attrition rates, which would partly avoid this shortcoming, are currently not available as students cannot be tracked between universities. The introduction of a unified ID for Commonwealth-supported students will in future allow for the generation of sector wide data at least for the Commonwealth-supported students.

Retention rates are the complement to attrition rates. They are defined as the percentage of students who re-enrol at an institution in a given year, as a proportion of the students who were enrolled in the previous year less those who completed their course. Following this definition, the attrition rate plus the completion rate plus the retention rate will equal 100 percent.³⁸

Attrition and retention respectively, are part of performance measurement within the university sector and by the DEST. In policy terms they are, however, mostly discussed

³⁴ The loan is interest free in real terms – it is indexed to the consumer price index.

³⁵ For 2005-2006, this threshold was \$36,185 (DEST 2006a, p.78).

³⁶ In 2005, of students required to pay student contributions, approximately 77% (in EFTSL terms) deferred all or part of their student contribution through HECS-HELP. 21% paid their student contribution (with HECS-HELP discount) in full and up-front. The remaining 2% paid their student contribution upfront with no HECS-HELP assistance. (DEST 2006a)

³⁷ See DEST (2006a).

³⁸ Department of Education, Science and Training (DEST), *Higher Education Attrition Rates 1994-2002: A brief overview* (Strategic Analysis and Evaluation Group Research Note No. 1, Canberra, 2004).

within a wider equity agenda in which retention performance is measured with respect to certain specific disadvantaged target groups. These groups are identified on the basis of their under representation in the student body and are the prime target of the higher education equity policies. Since the 2002 *Crossroads Review* and the implementation of the “*Our universities: backing Australia’s Future*” reforms, five target groups are at the focus of the Commonwealth equity policy³⁹Since. These groups are:⁴⁰

- students from low socio-economic/low income backgrounds;
- students from rural areas;
- students from isolated areas;
- students with a disability; and
- students from non-English speaking backgrounds.

2.3 **Presentation of (statistical) evidence on student retention**

Time series data on student retention or attrition is publicly available for the time period 1994-2002 for all students, and up to 2004 for the equity groups.

In 2002, the crude student attrition rate for all domestic students was 18.5 percent. There is, however, a considerable variation in attrition rates between different student groups and institutions: international students and school leavers commencing undergraduate studies have a below average attrition rate, while postgraduate students have an above average attrition rate. Additionally, first year attrition rates are around double those of the second year.⁴¹ Table 2.3 shows some of the evidence on attrition rates for the years 1994-2002. If one tries to control for students who continue their studies at another university, but who are counted as drop-outs, actual attrition rates might be considerably lower. A study commissioned by DEST⁴² found that about a third of the students leaving university re-enrolled at a different university. This would result in a corrected, first year attrition rate for domestic students of only 13.7 percent for the surveyed students in 2004.

³⁹ The original target groups identified 1990 in “*A Fair Chance for All*,” a Commonwealth Government policy drafted by the labour government, included “women in non traditional courses” and indigenous people. Indigenous people are now targeted through a specific Indigenous Support Programme.

⁴⁰ Institute for Access Studies (IAS) (2003a), International comparative research: Under-represented groups in tertiary education (Australia national report), University of Staffordshire.

⁴¹ DEST (2004).

⁴² M. Long, F. Ferrier, and M. Heagney, *Stay, play or give it away? Students continuing, changing or leaving university study in first year* (Monash University, ACER [Centre For the Economics of Education and Training], 2006).

Table 2.3: Crude student attrition rates 1994-2002 in Australia

Crude student attrition rates	1994	1995	1996	1997	1998	1999	2000	2001	2002
- for all domestic students (%)	18.4	19.3	19.0	18.9	19.3	19.3	19.6	18.6	18.5
- for domestic commencing undergraduate students (%)	22.2	22.8	23.1	22.3	22.9	23.0	22.1	n.a. ¹	21.2
- in second year after commencement, for domestic commencing undergraduate students (%)	10.7	10.4	11.7	11.0	11.2	11.2	n.a. ¹	10.2	n.a. ¹
- for domestic postgraduate students (%)	24.5	25.8	24.6	24.9	24.8	25.9	27.1	26.1	25.8
- for all international students (%)	19.2	19.3	19.3	19.1	19.0	18.7	19.4	18.5	17.7

¹ Due to changes in the definition of "commencing students" data is not available and comparability limited.

SOURCE: DEST (2004)

To compare the performance of the equity groups with that of the average student, DEST designed a number of reference values. For the participation rate the reference values are based on the percentage of the equity group in the population; the idea is that the composition of the population as a whole should be mirrored by the composition of the student body. If for example 24,3 percent of the population aged 15-64 year old lives in rural areas, the student population should also comprise 24,3 percent of students from rural areas. For the retention rate, the performance of all other groups is used as the reference value for a specific reference group. In a second step DEST calculates a ratio between the reference value and the actual value. If this ratio is above 1.00 it indicates above average performance, and vice versa. The ratios are displayed in Table 2.4 and are compared over time in Figure 2.3 and

Figure 2.4.

Retention rates for the five equity groups identified by the Australian government show some differences from the average retention rates. For 2004 they were in the range between 68.85 percent for people from isolated areas and 84.89 percent for young people from areas with low socio-economic status (low SES). The variation from the average retention rate is however relatively modest, being between 85 percent of the average retention rate for people from rural areas and 103 percent for people from non English speaking background.

In contrast, the participation rates of the disadvantaged groups are well below those of the average. Compared to their share of the population, all equity groups are considerably under-represented, with students from isolated areas most, and students from rural areas least, affected. Table 2.4 gives an overview of the performance of the equity groups. This finding suggests that "there is considerable room to advance equitable access without placing students at risk of failure or non-completion."⁴³

⁴³ DEST (2004), p. 11.

Table 2.4: Performance of equity groups 2004 in Australia

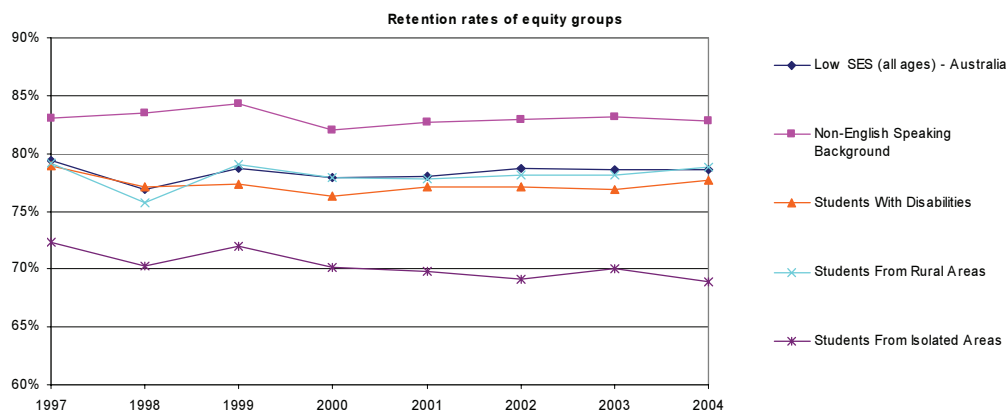
2004	Retention		Participation	
	Rate(%)	Ratio	Rate (%)	Ratio
Low SES (all ages) – Australia	78.55	0.975	14.44	0.37
Low SES (under 25)	84.89	0.972	-	0.39
Low SES (25 & over)	70.49	0.967	-	0.34
Non-English-speaking background	82.76	1.032	3.60	0.75
Students with disabilities	77.73	0.967	3.67	0.89 ¹
Students from rural areas	78.81	0.978	17.09	0.70
Students from isolated areas	68.85	0.856	1.25	0.28

¹ 2003 data, due to inconsistencies in the 2004 data.

SOURCE: DEST (2007)⁴⁴

2.4 Trends of student retention over last ten years

The last decade witnessed no strong changes in retention and attrition patterns. Between 1994 and 2002 the crude attrition rate for all domestic students remained rather stable with slight upward variation from 1998 to 2000. In 2002, the attrition rate for all domestic students came back close to the 1994 level again. For international students, attrition improved and rates declined since 1994 from 19.2 to 17.7 percent. Table 2.3 (above) gives an impression of these trends from 1994 to 2002.



SOURCE: DEST (2007)

Figure 2.2: Retention and participation of selected equity groups in Australia

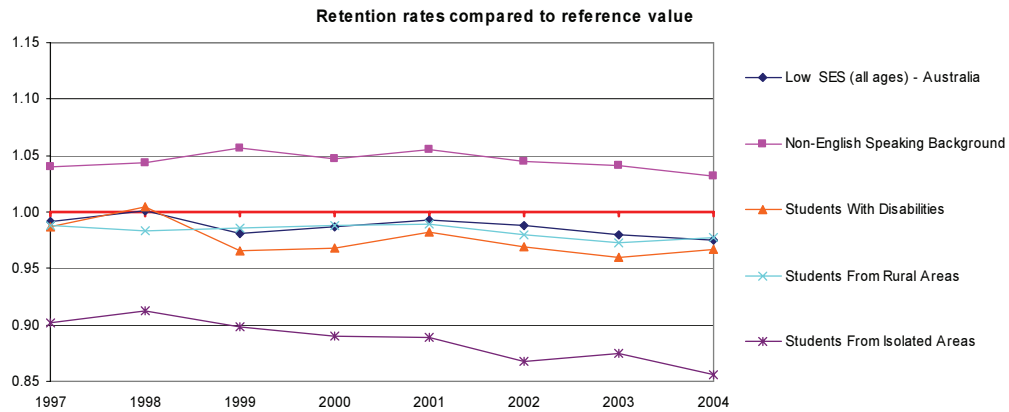
⁴⁴ Department for Education, Science and Training (DEST), *Higher Education Statistics Collection*, (2007) http://www.dest.gov.au/sectors/higher_education/publications_resources/statistics/default.htm, accessed February 8th 2007.

The retention rates for the equity groups stayed relatively stable over the time covered by the available statistics, however slight decreases can be observed for students from isolated areas. Figure 2.2 provides an overview of these trends.⁴⁵

The retention rates for all these groups do not differ considerably from the average retention rate for all other groups, as is evident if you compare the retention rate of each equity group with the respective rate of all other students. In general, all the equity groups have ratios not far from 1.00, indicating no substantial difference from the average retention rate (see Figure 2.3).⁴⁶ Some equity groups such as students with non English speaking background (NESB) even have a better than average retention rates, students from isolated areas are below the average of all students.

⁴⁵ Please note the adjusted y-axis, which exaggerates the differences and changes in retention rates.

⁴⁶ Please note the adjusted y-axis, which exaggerates the differences and changes in retention rates.



SOURCE: DEST

Figure 2.3: Retention rates compared to reference group in Australia

However, if one compares the participation rates of the equity groups with their reference value the picture looks quite different.

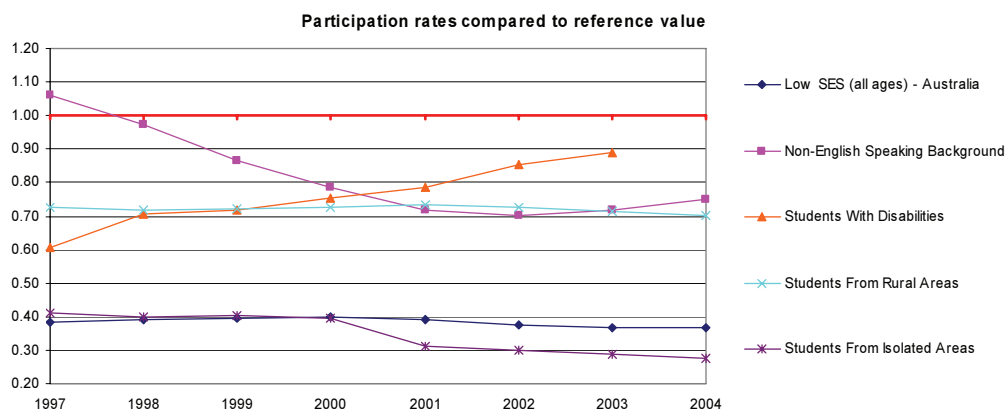
All equity groups, with the exception of students from non-English speaking backgrounds in 1997, have been under-represented between 1997 and 2004. For most of the groups, the ratios declined slightly within the years under study, however the NESB students witnessed a sharp decline from slightly over-represented in 1997 to well under-represented in 2004. The underlying causes of this drop are not well understood thus far, however a shift in the immigration policy might have caused a shift in the composition of immigrants towards highly skilled immigrants who already have higher education degrees and whose children are still too young to move on to higher education.⁴⁷ The group with most improved participation are students with disabilities, increasing from a ratio of 0.61 in 1997 to 0.89 in 2003.⁴⁸

Figure 2.4⁴⁹ provides an overview of the different equity groups’ participation performance.

⁴⁷ DEST (2004).

⁴⁸ Data for 2004 were left out, as there seems to be inconsistencies.

⁴⁹ Please note the adjusted y-axis, which exaggerates the differences and changes in participation rates.



SOURCE:DEST

Figure 2.4: Participation rates compared to reference group in Australia

2.5 Causes underlying these trends

As student attrition and retention have been rather stable over the last decade, it is difficult to identify particular causes explaining this development. Research has been conducted, however, into the causes of student retention and the underlying reasons for student drop-outs, especially for undergraduate and first-year students.

A recent report on students changing or leaving universities after their first year provides the most recent and comprehensive account of causes for student drop-outs, course changes and postponement of university study.⁵⁰ This study is based on a survey of 4,354 students from 14 universities, of which 1,917 did not re-enrol at a university in the following year. Table 2.5 compares the status of the surveyed student sample in first semester 2004 with the situation in the first semester 2005. After the first year, 13.7 percent of students had left university education, while 79.5 percent continued at their original institution and 6.9 percent had changed university.

⁵⁰ M. Long, F. Ferrier, and M. Heagney, *Stay, play or give it away? Students continuing, changing or leaving university study in first year* (Monash University, ACER [Centre for the Economics of Education and Training], 2006).

Table 2.5: Comparison of student sample between 1st semester 2004 and 1st semester 2005 in Australia

79.5% of students were still enrolled at the same university	
71.3%	were enrolled in the same course.
8.2%	were enrolled in a different course.
6.9% of students were enrolled at a different university	
3.1%	were enrolled in the same course.
3.8%	were enrolled in a different course.
13.7% of students were not enrolled at university	
1.1%	re-enrolled in their university and course by second semester 2005
5.2%	intended to re-enrol later
7.5%	did not indicate they intended to re-enrol

SOURCE: Long et al. (2006)

A number of student characteristics have been found in this study to correlate with the likelihood of leaving universities. Students who discontinue university education are more likely to be older, studying part time and were unlikely to nominate a clear reason for enrolling at university. Table 2.6 gives an overview of the factors correlating with withdrawal from university study.

Table 2.6: Factors correlating with withdrawal from university study in Australia

Students more likely to have left university study by first semester 2005:
<ul style="list-style-type: none"> • were older • came from lower socio-economic status backgrounds • were from an English-speaking background • already had a post-school qualification • were in full-time work or the main care-giver for children or someone else while they were studying • had not been living with their parents or at a university college while studying • had needed more than 90 minutes to travel to university • were enrolled part-time and/or lived off-campus • were enrolled at a rural, technology network or innovative research university • were enrolled in an engineering, information technology or creative arts course and not in health (excluding nursing) course • had wanted to enrol in some other course than that for which they had enrolled in 2004 • had reservations or had not wanted to enrol at the university in which they enrolled in 2004

Characteristics shown in **bold** were those that had an independent effect in one of the multivariate analyses.

SOURCE: Long et al. (2006)

In identifying causes of student retention or non-retention, these students’ characteristics must be supplemented by the reasons individual students consider most important in their decision to leave university. While there were a variety of reasons given, they cluster

around certain common themes. Long et al. identified eight groups of main reasons for withdrawal from university:⁵¹

1. a change of direction, mainly in regards to careers
2. difficulty passing subjects
3. conflict between paid work and study
4. dissatisfaction with the teaching or other aspects of the course
5. financial difficulties
6. conflict between family and study
7. personal illness
8. social isolation or loneliness.

Table 2.7 provides an overview of the reasons that were given by the students as having a large influence on their decision to withdraw from university education.

Table 2.7: Reasons in students' decision to withdraw from higher education

Reasons mentioned as having a large influence on the decision to discontinue:	
I needed a break from study ¹	24.3%
I found it difficult to balance my study and work commitments	23.7%
I changed my career goals	21.6%
I felt stressed and anxious about my study	14.0%
I didn't like the way the course was taught	12.9%
I didn't feel adequately prepared	10.8%
I couldn't get government income support	10.6%
My study clashed with my family commitments	10.6%
Illness – my own	7.4%
I felt lonely, isolated or unwelcome	6.2%

¹ Note that the category 'I needed a break from study' encompassed a number of different reasons, which included wanting to return to work, holidaying or getting a more demanding job/promotion.

SOURCE: Long et al. (2006)

Beyond this single study, a number of additional causes have been identified in wider Australian research on student retention and performance of the equity groups.

Financial difficulties are widely discussed as a reason for the reduced participation of different equity groups and as a potential cause for non-retention. A study of the first year experience of students found that around a quarter of all students report financial difficulties in paying fees and living expenses.⁵² These difficulties are more common for students from a low SES background and other equity groups. In addition, financial circumstances also have an influence on the choice of course, the choice of studies and the

⁵¹ Long et al (2006).

⁵² Hillmann, Kylie, *The First Year Experience: The transition from secondary school to work and further education and training* (Longitudinal Study of Australian Youth Research Report, 2005) 40.

choice of the institution.⁵³ Both the high percentage of more than 70 percent of all full-time students working more than 14 hours a week and the high percentage of part-time students indicate the high pressure put on students' finances by high tuition fees and the absence of income support for students to meet living expenses.⁵⁴ However, the effect of the rise of tuition fees in 1997 is unclear so far. While a recent study found no indication that the higher tuition fees reduced participation in higher education, it acknowledged an effect on male students from low SES backgrounds, who switched towards cheaper courses and programmes.⁵⁵

Double disadvantage, that is belonging to more than one disadvantaged group, is considered to aggravate the difficulties of students participating in higher education. Coming from a low SES background remains the most important single disadvantage for students influencing the participation outcome.⁵⁶

Finally, students' attitudes and the value attached to education in different socio-economic groups might also influence the participation rates. Students from low SES backgrounds tend to attribute less value to higher education and the potential gains from a university degree.⁵⁷

2.6 Policies and approaches to increase retention and widen participation

2.6.1 Macro policies

The issue of student retention sits in Australia within a wider equity agenda, geared at support for disadvantaged groups. Chapter 1 of the Other Grants Guidelines 2006 identifies the equity groups that are currently the target of Australian Government programmes to promote equality of opportunity in higher education. (see chapter 2.2)

This policy consists of supporting programmes for specific groups, national monitoring of the equity targets and financing related research.

Grants to promote the equality of opportunity in higher education are paid through three programmes to Higher Education providers, which in turn can run tailored programmes for their students.⁵⁸

1. The **Indigenous Support Programme** provides additional funding for higher education institutions to assist them in meeting the special needs of Indigenous Australian students, and to advance the goals of the Aboriginal Education Policy.

⁵³ Long, Michael and Martin Hayden, *Paying their way: A survey of undergraduate student finances* (Canberra: AVCC, 2001).

⁵⁴ Institute for Access Studies (2003a).

⁵⁵ Chapman, Bruce and Chris Ryan, *Higher Education Financing and Student Access: A review of the literature*, (Canberra: AVCC, 2003).

⁵⁶ IAS (2003a).

⁵⁷ IAS (2003a).

⁵⁸ This section follows DEST (2006a).

Projected spending for 2007 is AU\$ 31.645 million. Each higher education provider that receives the grant has to deliver an annual Indigenous Education Statement and illustrate how the funds contributed to improving the situation for indigenous students. In addition, the **Indigenous Staff Scholarships Programme** provides funding to five Indigenous people employed by higher education providers to enable them to undertake twelve months full time study. Each scholarship provides a stipend (living allowance) and a contribution towards the education costs.

2. The **Higher Education Disability Support Programme** provides funding to eligible higher education providers to undertake activities that assist in removing barriers to access for students with disabilities. In 2007, AU\$6.735m has been made available through this programme. The programme consists of three funding streams.
 - *Additional Support for Students with Disabilities (ASSD)* is the first stream, or component. This programme makes additional funding available to higher education providers to meet the costs of providing support services and to support the purchase of special material and equipment for students with high-cost needs. This includes funding for alternative format materials, such as Braille and audio tapes, for students with vision impairments; sign interpreting services for hearing-impaired students; and the purchase of equipment, such as voice recognition software and electric scooters for students with mobility difficulties. In 2005, approximately AU\$3.4m was allocated to higher education providers under the ASSD component.
 - The second component, the *Regional Disability Liaison Officer (RDLO)* initiative, aims to improve access to post-secondary education for students with disabilities by facilitating their transition from school to study. RDLOs are hosted by higher education providers in ten regions of Australia. These officers provide information, coordination and referral services for people with disabilities interested in post-school education and training within a designated region. In 2005, funding of approximately AU\$0.9m was allocated to this initiative.
 - The third component, *performance-based disability support funding*, aims to further encourage higher education providers to implement strategies to attract and support students with disabilities. This component comprises the amount of funding remaining after allocations to ASSD and RDLO. Funding allocations are based on the number of students with disabilities enrolled at each higher education provider, as well as the retention and success of those students. In 2005, approximately AU\$2.2m was paid to higher education providers under this performance-based disability support component.
3. The **Higher Education Equity Support Programme**, which has a projected budget of AU\$11.249m in 2007, is available to individual higher education providers to support the tailored programmes they have targeted at the five equity groups.⁵⁹ In

⁵⁹ Students from low socio-economic/low income backgrounds; students from rural areas; students from isolated areas; students with a disability; and students from non-English speaking backgrounds.

addition, providers may implement measures that assist in overcoming educational disadvantage associated with gender. To be eligible, providers, must do all of the following:

- run outreach programmes to attract disadvantaged students to higher education
- offer specialised support for disadvantaged students to assist their progression through higher education
- administer application and selection processes for the Commonwealth Learning Scholarships (CLS)
- provide institutional equity scholarships to complement the CLS.

Allocations under the Higher Education Equity Support Programme are based on enrolments, retention and success of students from low socio-economic status (SES) backgrounds, with a weighting to low SES students from rural and isolated backgrounds.

In addition to the grants paid to the higher education providers, a scholarship programme targeted at the individual student is available through Commonwealth funding. The **Commonwealth Learning Scholarship** is available to students from low SES backgrounds, particularly from rural and remote areas, and indigenous students. It consists of a contribution to the costs of education (CECS); and a component to cover costs of accommodation (CAS), in cases where students had to move away from home to be able to attend higher education. In 2005, the total value of the CECS was AU\$2,042 and CAS was AU\$4,084 per year and student. Students can receive the support for up to four years.

Progress in achieving the government's equity targets is monitored through a set of indicators measuring access, participation, success and retention. The performance of the target groups is compared to the performance of the rest of the student population, providing a relative level of success. The data is collected on an institutional level and then aggregated by the government, and partly used for the allocation of funding for commonwealth grant schemes (see above). Individual institutions use the indicators to monitor their progress towards the equity targets that they set themselves and to compare their performance with that of other institutions.⁶⁰

2.6.2 Micro policies

After the closure of the Commonwealth **Merit and Equity Scholarship Program** in 1997, a number of institutions stepped in and offered institutional scholarships for people from disadvantaged backgrounds. Funds are either distributed on a needs basis or combine this criterion with academic excellence. Monash University, for example, distributes funds via the Monash University Scholarships for Excellence and Equity (AU\$6,000 per full-time study year) to students from disadvantaged backgrounds with outstanding school-leaving degrees; and via the Monash University Support Bursaries (worth up to AU\$2,120 per year of full-time study) to students from disadvantaged backgrounds on a needs basis. Griffith University distributes funds to students from low SES backgrounds via the Chancellor's Education Costs Scholarships (CHES) (up to AU\$8,484 for a maximum of four years);

⁶⁰ IAS (2003).

and the Chancellor's Accommodation Scholarships (CHAS) (up to AU\$16,924 for a maximum of four years) to assist with accommodation costs.⁶¹

Besides these financial support programmes, universities offer a variety of specific programmes to increase participation in higher education and improve retention rates particularly for disadvantaged students. Generally these programmes offer a bundle of measures: making access easier by lowering entry scores, providing help in the transition to higher education and continuous support for vulnerable groups throughout the course of their studies. In addition, raising awareness of the needs of vulnerable groups and training teaching staff are common features.

- **Queensland University of Technology (QUT) Q Step Program.** Q Step, an access programme developed by Queensland University of Technology, is aimed at students from low-income backgrounds who believe they have the ability to complete a university course. It is currently offered to Year 12 school leavers and mature students who are in receipt of social security payments. Other students who can demonstrate that their financial circumstances have disadvantaged them educationally are also eligible. Q Step reduces the access requirements to university study and allows students to enter university with a lower entry score than otherwise required. The students attend an Orientation programme to get them started at university and then join the Q Step student association to make social contacts and get help with studies through a peer network. Q Step applies to full-time and part-time courses.⁶²
- The **Monash Transition Program** supports all students (undergraduate and postgraduate) to adjust successfully to university life and study, i.e., the "transition" through university. It aims to provide an improved transition experience for all students through:
 - beginning the process of enculturation into the teaching and learning styles, life, procedures, practices and culture of the university
 - encouraging students to engage with the university, a particular course, and people at a specific campus
 - emphasizing the need for students to take responsibility for their own learning and have realistic expectations
 - acknowledging the importance of the support provided by peers, staff and students' families.⁶³
- **University of Technology Sydney (UTS) inpUTS Educational Access Scheme:** this scheme allows approved applicants to enter a UTS course with a lower entry score than is normally required, in recognition of applicants' long-term educational disadvantage and limited opportunities to properly prepare for

⁶¹ <http://www.griffith.edu.au/ua/aa/sta/admission/scholarships/current/>

⁶² <http://www.studentservices.qut.edu.au/apply/special/qstep/>

⁶³ <http://www.monash.edu.au/transition/>

university entrance. The scheme is open to both school leaver and non-school leaver applicants. Criteria for inpUTS include interrupted schooling, severe family disruption, excessive family responsibilities, English-language difficulty, attending a disadvantaged or isolated school, financial hardship, adverse study conditions, and personal illness or disability. The university reserves five percent of undergraduate places for eligible inpUTS applicants. In 2005, approximately 400 inpUTS-eligible applicants were offered places at UTS. Support offered by the institution includes financial assistance (interest-free loans and small cash grants for those who can demonstrate severe financial hardship); disability support; and study skills assistance, such as with language and computing.⁶⁴

- **The Edith Cowan University’s Learning and Development Services Centre** addresses student retention/attrition issues through a dedicated website for the university’s teaching staff. This website provides:⁶⁵
 - an analysis of the causes for retention and attrition for ECU
 - a collection of best practice examples from within the university
 - specific advice on how to tackle the main reasons for dropping out
 - a collection of further reading on retention issues.
- **James Cook University (JCU)**, a university with around 50 percent of students from rural and remote areas, around three percent of Aboriginal or Torres Strait Islander descent, and over 20 percent from low-SES backgrounds, recently conducted the “Arrive, Stay and Succeed at JCU project”. It analysed the causes for attrition at JCU through a survey and then led to the joint development of strategies with the teaching staff to improve retention.

While this brief selected collection of activities at the institutional level indicates at least a high level of awareness of retention and participation issues, it is so far difficult to evaluate the particular impact of these policies on retention rates, as there is a shortage of programme evaluations.

⁶⁴ http://www.equity.uts.edu.au/education/getting/inp_uts/index.html

⁶⁵ <http://www.ecu.edu.au/LDS/retention/index.htm>

CHAPTER 3 **Ireland**

3.1 **General overview of the higher education system**

3.1.1 **Institutions**

The Higher Education System is divided into publicly funded Universities (7), Institutes of Technology (14) and Colleges of Education (8), and a number of small private independent Colleges (which enrol fewer than ten percent of HE students).

Universities confer bachelor degrees after three or four years of instruction. Institutes of Technology offer technical and vocational training, with two-, three- and four-year programmes available (conferring Certificates, Diplomas and Degrees, respectively). Colleges of Education provide three years of teacher training and confer Bachelor of Education degrees. Under the National Framework of Qualifications (NFQ), a certificate is referred to as a level 6; an ordinary bachelor degree as level 7; and an honours bachelor degree as level 8. Both the universities and the institutes of technology confer Level 8 degrees, that is, undergraduate honours degrees.⁶⁶

The Higher Education Authority (HEA) is the statutory planning and development body for higher education and research in Ireland.⁶⁷ The HEA is responsible for the allocation of exchequer funding to the higher-education institutions. HEA includes the National Office for Equity of Access to Higher Education, and has responsibility for promoting access for groups currently under-represented in higher education.

Funding for the Institutes of Technology has previously been handled directly by the Department of Education and Science (HEA's parent body), but legislation passed in 2006 delegates this responsibility to HEA. The Higher Education and Training Awards Council (HETAC: <http://www.hetac.ie/>) is the qualifications awarding body for third-level educational and training institutions outside the university sector. It undertakes the validation of programmes, and sets and monitors standards. HETAC may delegate authority to recognised institutions to make awards under the Education and Training Act, 1999. Recognised institutions currently comprise the institutes of technology.

⁶⁶ Taken from http://www.nfq.ie/nfq/en/documents/FanDiagramKeyandAwardDescriptionsEnglishPDF_000.pdf

⁶⁷ Taken from HEA website, www.heai.ie, accessed 2/11/07.

3.1.2 Finance

The Irish HE system is almost entirely funded by the state. The state has always played a majority role in funding HE, and (since 1995) full-time undergraduate students have been exempt from tuition fees, with the state making up the difference. Institutions currently receive 80-90 percent of their income from the state.⁶⁸ Other income sources include earnings for services, and fees from postgraduate and non-EU students.

3.1.3 Organisation of studies

Traditionally, university studies in Ireland have followed closely defined curricula, choosing one or two fields of study and taking courses from defined lists. More recently, the promotion of modularisation has become a national objective of the Minister of Education and Science and the government. With encouragement from the HEA, some Irish universities have moved towards more modular systems, with students accumulating credits towards their final degree by taking courses offered both by their primary department and by other departments in the university.⁶⁹ The extent of modularisation has varied across (and within) universities.

The institutes of technology offer a credit-based system for part-time students: the Accumulation of Credits and Certification of Subject (ACCS). ACCS credits given by any HETAC institution are recognised at all other HETAC institutions. However, the ACCS system is not available to full-time students.

3.1.4 Students

The majority of third-level students attend universities or institutes of technology, with 90 percent of students split fairly evenly between these two types of institution.

Table 3.1: Student number per type of HE in Ireland

College type	Number	% distribution
Universities	16,653	45.90
Institutes of Technology	15,982	43.90
Colleges of Education	1,349	3.70
Other Colleges	2,362	6.50
Total	36,346	100

SOURCE: based on HEA's (2005): *A review of higher education participation in 2003*, Table 1

Historically, data has not been collected on ethnic or religious sub-groups, but some data has been collected on socio-economic status. Professor Patrick Clancy conducted large scale data collection concerning the socio-economic status of students' parents, and, though providing this information was not compulsory for students, the data is reasonably

⁶⁸ HEA, *Funding Systems and Their Effects on Higher Education Systems: Country Report – Ireland* (2006) http://www.heai.ie/uploads/pdf/Report_Ireland.pdf, accessed 2/12/07.

⁶⁹ <http://www.heai.ie/index.cfm/page/sub/id/503>, accessed 2/12/07.

comprehensive.⁷⁰ Table 3.2 details the participation rates for different socio-economic groups, based on estimates of the number of students from each group enrolling in higher education in various years, and on estimates of the number of college-age people in each socio-economic group in those years (derived from census data). Some socio-economic groups (e.g. farmers, skilled and unskilled manual labourers) have seen a steady increase in participation over time.⁷¹ Other groups (e.g. lower professionals) have not seen any increase since the mid-1980s.

Table 3.2: Participation on the basis of father's socio-economic group in Ireland

Father's socio-economic group	2003	1998	1992	1986	1980
Farmer	0.88	0.72	0.53	0.42	0.3
Higher professional	0.87	0.96	0.85	0.71	0.59
Lower professional	0.42	0.46	0.42	0.47	0.33
Employers & managers	0.64	0.8	0.67	0.45	0.42
Salaried & inter non-manual employees	0.3	0.35	0.31	0.33	0.29
Other non-manual	0.52	0.3	0.26	0.11	0.09
Skilled manual	0.6	0.32	0.28	0.12	0.09
Semi-skilled & unskilled manual	0.47	0.23	0.16	0.08	0.05
Total reference	0.54	0.44	0.36	0.25	0.2

Based on HEA's (2005) *A review of higher education participation in 2003*, Table 9

Students do not pay fees for full-time undergraduate work, but do pay fees for part-time studies. Grants are available on a means-tested basis: the most disadvantaged students could receive up to €5,970 in 2006-7.⁷²

3.2 Definitions of student retention

The major recent studies of retention in Ireland focus on completion (or non-completion) rates across courses and institutions.⁷³ Some of the studies cited in this report further differentiate between students who graduate on time and students who graduate at some

⁷⁰ ESRI, *A Review of Higher Education Participation in 2003* (2004)⁷⁰ and *Who Went to College in 2004? A National Survey of New Entrants to Higher Education* (2006).

⁷¹ It is important to note that there were substantial shifts in the distribution of the population by socio-economic group between 1996 and 2002, for example the total number in the farmers' group fell by 26% (ESRI 2006, pp.44-45). The participation rates of the children of farmers are over-represented among new entrants, relative to the population share (ESRI 2006, p.47).

⁷² According to Department of Education and Science website http://www.education.ie/servlet/blobServlet/support_higher_2006.doc?language=EN, accessed 2/12/07

⁷³ Morgan, Flanagan and Kellaghan, *A study of Non-Completion in Undergraduate University Courses* (2001), <http://www.heai.ie/uploads/pdf/HEA%20undergraduate%20study.pdf>, accessed 2/12/07.

Kinsella and Roe, *Completion Rates for Students Taking Full-Time Programmes of Study in Institutes of Technology* (2006).

http://www.councilofdirectors.ie/documents/301_Completion%20Report%20Final.pdf?PHPSESSID=ff5c84d25aaa1e8f510c50b403831ff7, accessed 2/12/07.

later date. Due to data difficulties, there is little research on completion rates of different categories of students, the literature on under-represented groups focuses on access issues rather than retention rates.

3.3 Presentation of (statistical) evidence on student retention

A few studies have managed to collect data relating to retention in the Irish higher education system by contacting individual institutions in a specific year and reconstructing data sets, but this data has not routinely been collected by the HEA or any other body. Historically, collection of data has been unsystematic, with not all institutions keeping the records necessary to calculate retention rates, and many institutions relying on paper record systems until recently. Table 3.3 breaks down the outcomes of the cohort entering the seven Irish universities for the first time in the academic year 1992-1993, with numbers and percentages of students graduating on time, graduating late⁷⁴ or not completing the course. The overall rate of timely graduation is around 68%, with slight variance across gender (66.5 percent for males, 69 percent for females) and wide variance across universities (50.2 percent for NUI Maynooth, 76.1 percent for NUI Galway). Variance in non-completion is less extreme, with rates ranging from 12.9 percent at NUI Galway to 27.9 percent at NUI Maynooth, and an average non-completion rate around 17 percent.

Data for the institutes of technology are less complete, but at least one recent study has estimated completion rates for different institutions and course types.⁷⁵ However, in assessing the institutes of technology, there are further methodological complications, not least the fact that students who begin as certificate or diploma students can graduate with degree status by completing one or two 'add-on' years (thus, the completion rates for four-year degrees include both students who started on four-year degrees and those who decided to proceed to degree level only after successfully completing two or three years in the institution). If student-level data were available, it would be possible to correct for this, but data available is institution-level. Due to the problematic nature of this data (in which some institutions appear to have graduation rates for some courses that are greater than 100 percent), it is not presented in detail here. For reference, the best guesstimate of aggregate completion rates across certificate, diploma and degree courses for those graduating in 2004 was around 75 percent.

Finally, as student-tracked data was not available for any of the published studies, disaggregation of retention rates for other sub-groups of interest is impossible. Centralised Applications Office data makes it possible to estimate the initial participation rates of various sub-groups, but the progress of sub-groups has not been tracked.

⁷⁴ Although over 80% of those graduating late graduated just one year late, some students in the 'graduating late' category were late by three years or more.

⁷⁵ Kinsella and Roe (2006), *op. cit.*

3.4 Trends of student retention over last ten years

Unsurprisingly, given the data difficulties reported above, there are no definitive examinations of any trends of student retention over the last ten years in Ireland. The best attempt at comparing retention across different time periods compares university data for the 1985/86 cohort with the 1992/1993 cohort data presented above. Unfortunately, no data were collected for NUI Galway in the original study of the 1985/86 cohort. The limited findings are shown in Table 3.4.

Table 3.3: Retention and completion rates for selected Irish universities, cohort academic year 1992-1993

University	Graduating on time			Graduating late			Not completing course		
	Male N	Female N	Total N	Male N	Female N	Total N	Male N	Female N	Total N
DCU	266	312	578	62	68	130	99	94	193
	62.3	65.8	64.2	14.5	14.3	14.4	23.2	23.2	21.4
UCC	678	880	1558	111	167	278	153	162	315
	72.0	72.8	72.4	11.8	13.8	12.9	16.2	16.2	14.6
NUI Galway	439	562	1001	66	78	144	89	81	170
	73.9	77.9	76.1	11.1	10.8	11.0	15.0	15.0	12.9
NUI Maynooth	202	258	460	92	109	201	106	150	256
	50.5	49.9	50.2	23.0	21.1	21.9	26.5	26.5	27.9
TCD	515	663	1178	124	149	273	150	130	280
	65.3	70.4	68.1	15.7	15.8	15.8	19.0	19.0	16.2
UCD	1004	1145	2149	306	355	661	224	243	467
	65.4	65.7	65.6	19.9	20.4	20.2	14.6	14.6	14.3
UL	523	529	1052	63	45	108	180	119	299
	68.3	76.3	72.1	8.2	6.5	7.4	23.5	23.5	20.5
All universities	3627	4349	7976	824	971	1795	1001	979	1980
	66.5	69.0	67.9	15.1	15.4	15.3	18.4	18.4	16.8

SOURCE: Based on Morgan, Flanagan & Kellaghan (2001), Table 4.1

Table 3.4: Retention and completion rates for selected Irish universities, compared over 1992-1993 and 1985 cohorts

University	Graduating on time (%)			Graduating late (%)			Not completing course (%)		
	Male 1985	Female 1985	Total 1985	Male 1992	Female 1992	Total 1992	Male 1985	Female 1985	Total 1985
UCD	59.0	65.4	65.7	65.6	22.3	19.9	24.7	20.4	23.5
			56.8	50.2	12.2	23.0	19.1	21.1	16.5
NUI Maynooth	58.5	50.5	49.9	51.4	50.2	51.4	16.5	21.9	26.5
			67.5	72.4	12.5	11.8	13.8	12.9	13.7
UCC	68.6	72.0	72.8	67.5	72.4	72.4	18.9	16.2	18.8
			71.1	72.1	5.0	8.2	6.5	7.4	5.5
UL	71.1	68.3	76.3	71.1	72.1	72.1	23.9	23.5	23.4
			68.2	68.1	16.6	15.7	16.0	15.8	16.1
TCD	67.4	65.3	70.4	68.2	68.1	68.2	17.8	15.7	18.0
			69.7	64.2	16.4	14.5	7.7	14.3	12.3
DCU	65.7	62.3	65.8	69.7	64.2	69.7	18.1	19.8	18.0
			19.7	20.2	18.8	20.6	14.6	13.9	14.3
			32.1	21.9	29.3	33.8	26.5	29.0	32.1
			18.8	12.9	18.9	18.7	16.2	13.4	18.8
			23.4	23.5	22.4	22.4	23.4	23.5	20.5
			15.7	15.8	16.0	15.4	19.0	13.8	15.7
			21.4	14.4	17.8	18.1	23.2	19.8	21.4

SOURCE: Based on Morgan, Flanagan & Kellaghan (2001) Table 4.2

Examining these results, it appears that the Dublin universities had mixed results regarding retention over this time period, with University College Dublin (UCD) seeing a strong improvement in the percentage of enrollees graduating on time, and a decline in the percentage not completing at all, but Dublin City University (DCU) saw an increase in the percentage of students graduating late or not graduating at all; Trinity College Dublin saw little change between these two periods. The other three institutions all saw moderate-to-good reductions in the non-completion rate.

Table 3.5: Trends in completion and retention rates in Ireland

University	Change in rates between 1985/6 cohort and 1992/3 cohort								
	Graduating on time			Graduating late			Not completing course		
	M	F	T	M	F	T	M	F	T
UCD	6.4	11.0	8.8	-2.4	-4.3	-3.3	-4.2	-6.7	-5.4
NUI Maynooth	-8.0	2.8	-1.2	10.8	2.0	5.4	-2.8	-4.8	-4.2
UCC	3.4	6.3	4.9	-0.7	-1.0	-0.8	-2.7	-5.3	-4.2
UL	-2.8	5.1	1.0	3.2	0.2	1.9	-0.4	-5.2	-2.9
TCD	-2.1	1.5	-0.1	-0.9	0.1	-0.3	3.0	-1.6	0.5
DCU	-3.4	-8.4	-5.5	-1.9	6.6	2.1	5.4	1.7	3.4

SOURCE: Derived from previous table, Table 3.4

3.5 Causes underlying these trends

Little research has been conducted at the macro-level on the causes of non-completion: historically, the lack of detailed data has made it difficult to identify the potential covariates of non-completion. However, some recent studies funded by the HEA have examined retention and non-completion at specific institutions in a qualitative fashion, surveying students who leave the institutions attempting to ascertain the causes in each case.

In a study of Trinity College Dublin withdrawals, Baird (2002) found that students most often cited incorrect initial choice of course as the primary reason for withdrawal (37 out of the 131 responses); and a majority cited some kind of course-related issue as the primary reason for withdrawal (70 out of 131 responses, vs. 21 responses citing other university-related reasons for withdrawal⁷⁶, and 40 citing personal reasons⁷⁷). However, the majority of those surveyed had either re-entered university or intended to do so soon; therefore, it is possible that some of these students would be late-completers, rather than non-completers, and the study does not draw any distinction between the reasons why students ‘stop-out’ (leave and return) and the reasons why students ‘drop out’ (leave permanently). Similarly, in a study of University College Dublin withdrawals, Mathews and Mulkeen (2002) found that slightly more than 50 percent of respondents cited incorrect course choice as the most

⁷⁶ For example, poor social atmosphere (4 of 131), lack of support (4), ‘wanted a break’ (6).

⁷⁷ For example, health problems (14 of 131), stress (4), work problems (7), financial problems (4).

important reason for departure, but 95 percent of respondents had either returned to higher education or intended to do so in the near future.

The high re-entry rates reported illuminate two weaknesses in these studies: it is impossible to use the published reports to pin-point the reasons for departure of those students who do not eventually complete a degree; and (particularly given the low response rates) it is likely that the responses to the surveys are unrepresentative of the whole population of withdrawing students. If survey responders are different from non-responders, and permanent non-completers are different from 'stop-outs', then the broad findings of these studies may not be applicable to the populations of interest.

Despite these caveats, the results of these studies are interesting. Very few of the students surveyed cite issues relating to social integration or financial hardship as the primary causes for withdrawal, two major strands of concern in the retention literature produced in other countries; the Irish studies suggest that academic integration and progress are much more important. Optimistically, this may indicate that the Irish higher education system, with no tuition fees for full-time undergraduates and a relatively homogenous cultural environment, poses relatively few financial and social problems for students. Pessimistically, the results may indicate that the fairly rigid structure of course study, with students applying for entry to a specific course while still in secondary education and then following a prescribed course schedule in tertiary education, causes a relatively large number of academic mismatches. Alternatively, the results may be partly explained by response bias: students may prefer to attribute withdrawal to an incorrect choice of course, rather than to a failure to 'fit in', or to not being able to afford to attend.

3.6 Policies and approaches to increase retention and widen participation

3.6.1 Macro policies

At the macro level, a number of policies relate directly or indirectly to retention.

- In 1995, tuition fees were abolished for full-time undergraduate students. While not explicitly aimed at the issue of student retention, this policy clearly affects the financial position of students, and financial issues have often been cited in international retention literature as an important factor in non-completion.
- In 2000, the Higher Education Authority (HEA) introduced the Student Retention initiative, providing funding for pilot projects aimed at understanding the causes of student non-completion and improving student retention. Some of the individual projects are listed below, as micro-level policies.
- In 2001, the Conference of Heads of Irish Universities (CHIU) set up the Inter-Universities Retention Network as a subcommittee of CHIU, in order to facilitate the sharing of ideas and information on retention issues. The group, renamed the Irish Universities Association (IUA) in 2005, consists of seven members (one from each of the universities), with a mix of academic, administrative and student support representatives. It has discussed and piloted a number of initiatives, and

has also published a volume summarizing recent research conducted on these initiatives.⁷⁸

- Also in 2001, the HEA started the Technology in Education initiative, due to a perceived need to develop further the Information & Communication Technology programmes in Irish higher education and to reduce the number of students dropping out of IT-related courses. The initiative has funded a number of projects at 24 different higher education institutions; several are listed below as micro-level policies.
- In 2005, the HEA unveiled a new Student Record System (SRS) for higher education. The SRS allows much more detailed records to be kept of each student's progress through higher education than the previous data collection, and should provide valuable insights in the future regarding retention trends and the impact of policies. Since the introduction of the Student Record System (SRS) it is possible to track students in the university sector from 2004/05. The universities are returning data to the HEA through the SRS; and the institutes of technology are returning data on a trial basis.
- In 2004, a review of institutions' retention policies found that there has been considerable "mainstreaming" of activity in retention initiatives across institutions. It stated that many initiatives exist within the institutions that focus on the problem of retention and non-completion, and the range of these initiatives is quite comprehensive. Subsequently, funding for retention initiatives was ring-fenced within the core grant for institutions in 2005. The Inter-University Retention Network (IURN) was established to disseminate information that relates to the issue of retention among university students and to promote best practice on tackling non-completion. It has developed a common 'exit-interview' schedule for withdrawing students to enable the collection, comparison and analysis of standardised, qualitative information across the Irish university sector.

3.6.2 Micro policies

At the micro level, the individual higher education institutions have enacted a variety of policies designed to improve completion rates, some of which have been funded under the Student Retention and Technology in Education initiatives.⁷⁹

- **Research into causes of non-completion:** many institutions have started research projects designed to better understand the reasons why enrolled students fail to complete their course of study. These projects include surveys of non-completing students; the identification of risk factors; and questionnaires aimed at finding out about student expectations or academic integration. Most of these projects are still at an early stage, and have not yet had a major influence on other policies.

⁷⁸ Moore et al., *Keeping Students at University: The retention debate at third-level*, (Interresource Group Publishing, 2006)

⁷⁹ Flanagan and Morgan, *Evaluation of Initiatives Targeting Retention in Universities: A preliminary report of projects funded by the Higher Education Authority*, (2004), <http://www.heai.ie/uploads/word/finalversionMM%20retention.doc>, accessed 2/12/07.

- **Improved information for prospective students and entering students:** given the previous research findings on the damaging effects of incorrect course choice, some institutions have sought to provide secondary school guidance counsellors with more comprehensive information about the courses on offer; these policies aim to improve student course selection and help students to enter the institution with appropriate expectations. In addition, many institutions have provided more comprehensive orientation programmes and information for first-year students in order to ease the transition between second- and third-level education. It is difficult to evaluate the effect of any of these policies: as they apply to all enrolled students, there is not an obvious control group; as they are being introduced at the same time as other retention-oriented policies, it is not possible to make a simple comparison with historic data.
- **Peer-mentoring initiatives:** many institutions have started using second-year students to provide guidance and tutoring for first-year students, particularly in subject areas that experience high non-completion rates. The aim is to facilitate the transfer of useful advice from students who have gone through the first-year experience already, and also to help with integration into the academic environment; typically, student mentors meet with small groups of students for one hour each week throughout the academic term. Surveys of participants have found that both the mentors and mentored students believe that they gain from the experience. Furthermore, one study found that students who attend peer-support sessions tend to perform better on the examinations in the course than those who did not attend⁸⁰; however, this may simply show that the most motivated, hard-working students attended peer support sessions, and that the same students also did well on the exams, without indicating any causal link between the support sessions and academic performance.
- **Retention officers:** many institutions have appointed ‘retention officers’ (or equivalent), charged with addressing non-completion issues; providing support for students (particularly first-year students); and liaising with faculty, administrators and student service staff to produce a coherent retention effort. Some institutions have also appointed officers to deal with specific sub-groups, such as disabled students, socio-economically disadvantaged students, or mature students.
- **Study skills/learning support initiatives:** many institutions have taken steps to improve students’ ability to learn, with programmes providing advice on study skills, effective reading, critical thinking, exam strategy, time management, stress management, and communication and presentation skills. Programmes varied from compulsory to completely optional, and from general to subject-specific; some were offered at the start of the year, others were offered regularly throughout the year.

⁸⁰ Madhi “Peer-supported learning groups: A collaborative approach to learning”, in Moore et al., eds., *Keeping Students at University: The retention debate at third-level*, (Interesource, 2006).

- **Maths/Science/Engineering/IT-specific programs:** several institutions (and departments within institutions) introduced interventions specifically for students in heavily quantitative courses; anecdotal evidence has suggested that second-level standards in mathematics (and related subjects) are not preparing students adequately for studying these courses at third-level. In response, the University of Limerick set up a Mathematics Learning Centre in 2001 and an ICT Learning Centre in 2003, providing drop-in support for students. This support includes individual consultations with postgraduate students, programmes of support tutorials in the evenings, and access to course materials and computer-based self-administered tutorials. To address similar problems in Chemistry and Physics, University College Cork offered a two-week 'pre-entry Science' programme to first-year students who were enrolled in Science degree programmes; and also conducted an intensive revision programme over Easter for first-year science students, again focusing on Chemistry and Physics. Other institutions have used diagnostic tests to identify students who might struggle in mathematics programmes, and have provided remedial support.

While there are many micro-level policies aimed at improving retention, there are fundamental problems with evaluating their effectiveness. First, the lack of detailed historic data means that comparisons across multiple years and sub-groups are impossible. Second, as most of these initiatives are introduced university-wide (or department-wide), there may be no natural group of comparator students by which to judge the effectiveness of a policy; furthermore, studies that focus on the results for students who choose to take advantage of an initiative, compared with students who choose not to participate, are heavily susceptible to self-selection effects. Third, the funding available under the Student Retention and Technology in Education initiatives has led to multiple projects being undertaken simultaneously within each institution; even if non-completion rates do improve in the future, it may be impossible to separate out the effects of the individual initiatives.

4.1 **General overview of the higher education system⁸¹**

4.1.1 **Institutions**

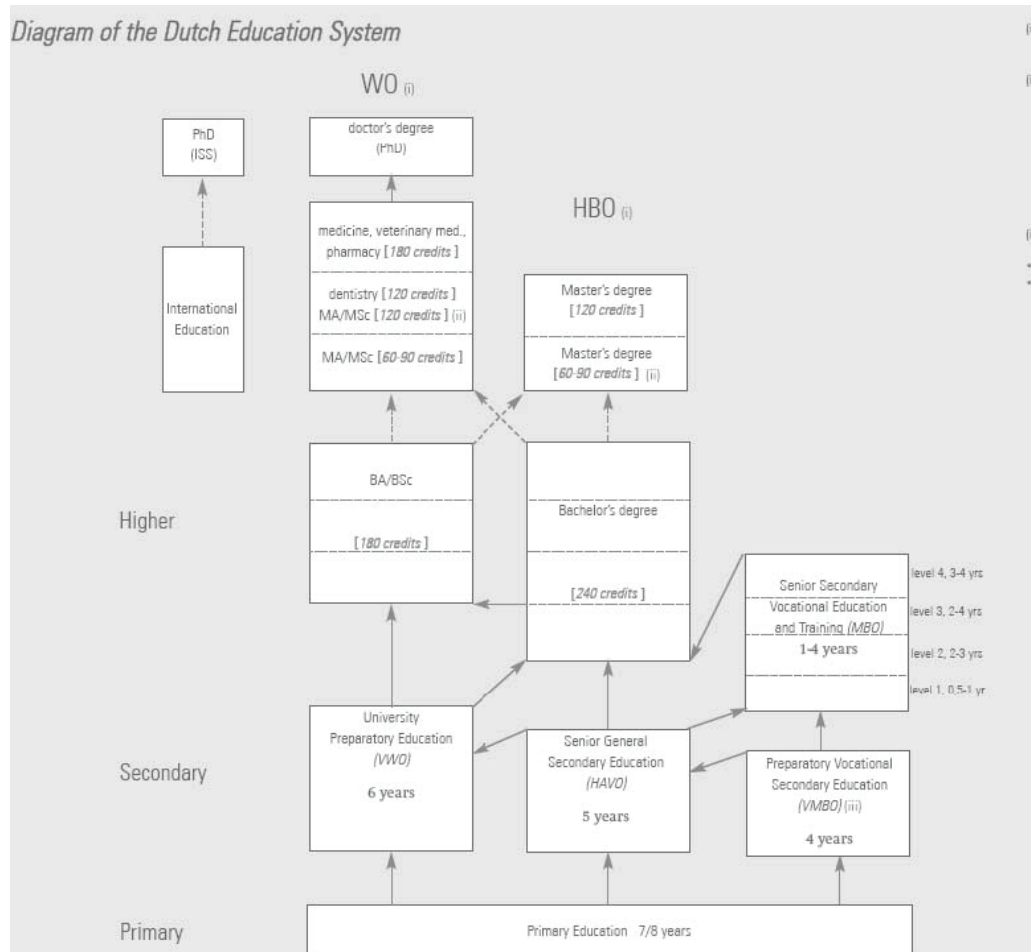
The higher education (HE) system in the Netherlands is based on a three-cycle degree system, consisting of a bachelor, master and PhD (for an overview see Figure 4.1). Until 2002, the first two cycles at research universities were combined in a single integrated cycle. The three-cycle system was officially introduced in the Netherlands at the beginning of the academic year 2002-2003 as a response to the Bologna reforms of the European HE system. In addition, the introduction of the three-tier degree cycle was aimed at reducing the overall length of time spent by students in HE. This was deemed a priority of the Dutch government. About 90 percent of the former courses have been changed into bachelor degree courses in the new system and in addition a large number of master's courses have been introduced. Degrees from the former system can be awarded until 2007-2009.

The Netherlands has a binary system of HE. This binary system means there are two types of programmes: a research oriented education (*wetenschappelijk onderwijs*, WO), traditionally offered by research universities; and professional higher education (*hogere beroepsonderwijs*, HBO), traditionally offered by *hogescholen*, or institutes of professional education. These programmes differ not only in focus, but in access requirements, length and degree nomenclature as well. Research activities are traditionally the task of universities, academic medical centres and research institutes. There is, however, a new trend (and policy) of conducting practice-based research at professional higher education institutes (HBO).

HBO prepare students for careers in seven main sectors: agriculture; engineering and technology; economics and business administration; health care; fine and performing arts; education (teacher training); and social welfare. WO offers degrees in a wide range of disciplines. These consist of language and culture; behaviour and society; economics; law; medical and health sciences; natural sciences; engineering; and agriculture.

⁸¹ This section is based on OECD, *Thematic Review of Tertiary Education: The Netherlands*, (Paris: OECD, 2006b); and NUFFIC, "Education System in The Netherlands". August (2004).

As of 2001, there are 56 government-funded higher professional education institutions and 13 universities. In addition, there are 61 approved private institutes of higher professional education and eight approved universities, which offer 500 programmes to about 70,000 students. These private institutes and universities do not receive government funding.



SOURCE: OECD (2006b), adaptation of Ministry OCW, Nuffic

Figure 4.1: Overview of the education system in the Netherlands

4.1.2 Finance

Universities and HBO are publicly funded. Public expenditure on higher education for 2006 was €1,868 (about £1,200m) for the HBO sector and €3,472m (about £2,200m) for the university sector. Public spending has increased since 2004 by 6.1 percent for HBO and 4.4 percent for universities.

Universities and institutes of professional education charge a flat fee to students, set at €1519 (about £1,000) for 2006-2007.⁸² Students can obtain publicly funded grants/loans

⁸² Exchange rates used in this chapter are current rates, 1 GBP: 1.47 euro.

for maintenance and fees (also to attend private institutes). These are set and can amount to €750 a month. The total grant consists of four components:

- basic grant for all students
- supplementary grant related to parents' income
- loan
- public transport season ticket.

The basic and supplementary grants are available for the established duration of the course (in general four years). In addition, loans and the public transport season ticket can be available for three years. The basic grant is available for every student irrespective of parental income. However the grant differs according to whether the student is living at home or not (€76 [about £50] for students who live at home with their parents, €233 [about £155] for those who do not). The supplementary grant is awarded to people with low parental income. The maximum grant is €241 [about £160] a month. Loans can be extended up to €259 (about £165) a month for students with a grant and to €787 (about £530) a month for those who do not have a grant. All loans have a low interest rate (2005 level: 3.05 percent).⁸³

There have been a number of changes for the students over the past ten years. Major changes were as follows.

- The maximum amount available as a loan was altered and the system was made more flexible. Loans could be changed each month and the maximum amount was raised.
- The duration of grants was changed. From 2000 onwards the duration of the grant is equal to the length of the course. Many students, especially at university, study longer than the normative course duration. This change forces students to find alternative sources of income after the fourth year.
- In 1996, the concept of 'performance grant' was introduced. This meant that students would have to pay back grants if they did not graduate within 10 years of entering HE. The public transport season ticket was also included in this performance grant, which means that those who do not graduate have to repay the price of the ticket.

4.1.3 Organisation of studies

Degree courses have operated on a credit system since 2003 (ECTS system), with 180 credits for a bachelor degree (3 years) in WO; and 240 credits (four years) in HBO and in certain disciplines such as engineering and nursing. One credit represents 28 hours of work, counting both contact hours and hours spent studying and preparing for assignments. Sixty credits make up one year of study. The grading system has been the

⁸³ OECD (2006b).

same for several decades. The scale runs from 1 (very poor) to 10 (outstanding). Six is the minimum passing grade. On average, students graduate after approximately 4.2 years.⁸⁴

The curricula of courses are somewhat fixed, with increasing freedom of choice as the study progresses (when a transfer of credits becomes possible). The first year normally consists of a fixed curriculum of core requirements with a possibility of a choice of courses afterwards.

Access to the system of tertiary education is conditional upon qualification from one of the following types of school or programme:

- intermediate level vocational education (MBO), which gives access to HBO
- five-year higher level of secondary education (HAVO), which gives access to HBO
- six-year highest level secondary education (VWO), which gives access to HBO and VWO
- successful completion of a first-year examination at HBO allows access to a university programme in the same area of expertise.

4.1.4 Students⁸⁵

Participation in HE in the Netherlands has increased in the period of 1998 to 2003 (see Figure 4.2). The total number of students in higher education rose from 450.000 in 1998 to just over 500.000 in 2002 (an increase of 11 percent in a four year period). The increase is slightly greater for HBO (11.8 percent) than for the universities (9.6 percent). The reasons for increased participation include higher economic growth, an increased size of the population, and a growth of the HBO sector. Economic growth facilitates higher participation in HE in two important ways: greater economic wealth of the average Dutch household, which makes attendance of HE more feasible; and a greater demand for graduates by the economy, which makes HE more necessary and desirable for young high school graduates.⁸⁶ At the same time, the HBO sector has expanded and has more places for high school leavers. Universities have also changed their admissions requirements to allow students with HBO diplomas to enrol, which have meant an increase of the intake of first year students in the period. This increased participation is spread across disciplines in universities (see Table 4.1). However, the largest percentage increases can be seen in the fields of health and agriculture. Law is one of the study areas of least growth.

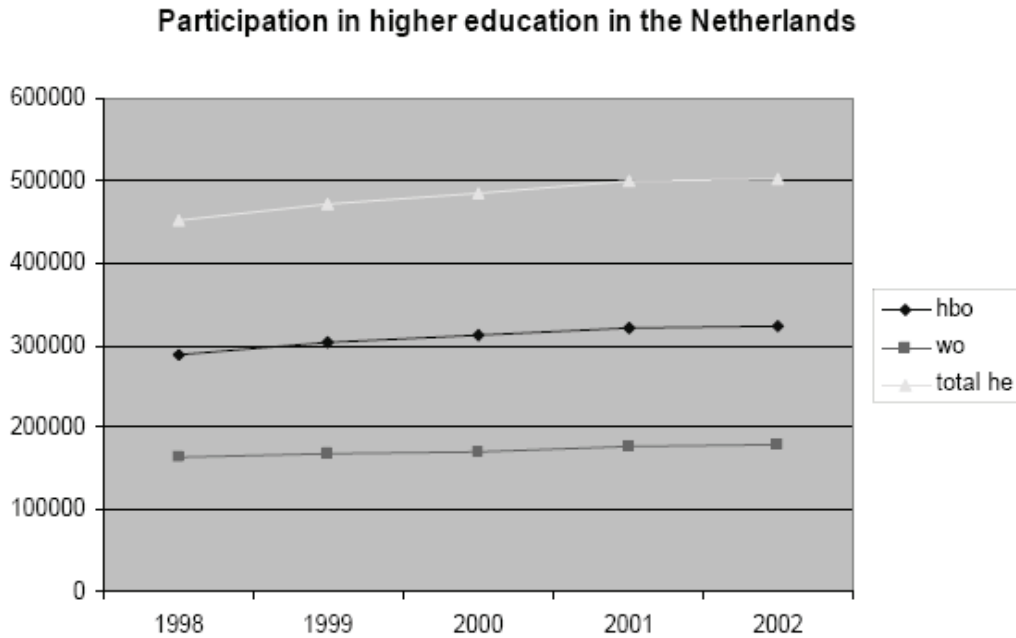
Eighty four percent of the student body was native Dutch in 2001. Sixteen percent was classified as of non-Dutch origin. Five percent of overall students were disabled. The Dutch also monitor the background of students and in particular whether parents have experience of HE. In 2001, 64 percent of students in professional education (HBO) had parents with no experience of HE compared to only 46 percent of students in university

⁸⁴ See OECD (2006b).

⁸⁵ This section is taken from Institute for Access Studies, *International comparative research: Under-represented groups in tertiary education* (Netherlands national report), (University of Staffordshire, 2003).

⁸⁶ See OECD (2006b).

education. So, background is a contributing factor whether students choose to attend HE and which type of HE they choose. In addition, Dutch statistics also reflect whether students live at home or whether they take on jobs to support themselves through HE. In 2001, 45 percent of students lived with at home or with family and 77 percent had part-time jobs to support themselves in HE.



SOURCE: OECDb 2006

Figure 4.2: Participation in higher education in the Netherlands

Table 4.1: Number of first year students per discipline in higher education in the Netherlands

	99/2000	2000/2001	2001/2002	2003	2004
Total inflow	32,230	33,375	35,953	37,932	40,738
Social Sciences	7,092	7,291	8,073	8,665	9,202
Economy	6,128	6,121	6,827	6,551	7,032
Law	4,342	4,378	4,576	4,438	4,834
Language and Culture	4,067	4,472	4,822	5,190	5,693
Health	2,794	3,075	3,345	4,091	4,447
Science	2,448	2,540	2,561	2,773	3,126
Technology	4,717	4,748	4,783	5,116	5,210
Agriculture	642	750	966	1,1108	1194

SOURCE: OECDb 2006

4.2 Definitions of student retention

There are five main definitions relevant to the topic of student retention in the Netherlands. These definitions are used in the literature to describe the progress of students through the system.⁸⁷ Firstly, ‘intake’ refers to the number of first-year students entering HE for the first time (*instroom*). Secondly, ‘progress’ refers to the number of students who continue in their HE course as expected (*doorstroom*). Thirdly, ‘drop-out’ refers to the students who leave HE after a particular number of years without achieving graduation. Most studies measure drop-out rates for the first two years of HE. Transfer students are not systematically captured in retention statistics. Nonetheless, some studies in particular describe the impact of ‘retention of transfer students’ (*omzwaaiers*). This is a fourth differentiation in defining student retention. Finally, ‘yield’ is described as the number of students in a given cohort who graduate on time (*rendement*). A student who graduated with two majors is normally only captured once in the statistics.

4.3 Presentation of (statistical) evidence on student retention

Most of the student retention data focuses on comparing native Dutch students with ethnic minority students. Less data is available on those other subgroups measured and identified in the UK. The reason for this particular data generation lies with the organisation that produces these measurements. The Expertise Centre for Diversity Policy (ECHO), a non-governmental organisation, has been given the task of promoting the intake and progress (yield) of ethnic minorities in Dutch HE. It develops new instruments

⁸⁷ Wolff, R., “Met vallen en opstaan” (Utrecht: ECHO, 2006); and Wolff, R and Crul, M. “Blijvers en uitvallers” (Utrecht: ECHO, 2003).

and policies to support this agenda. It receives funding from the ministry of education and is responsible for the coordination of initiatives between institutes of HE and universities.

The statistical office of the Netherlands (*Centraal Bureau voor de Statistiek*) publishes annual data on the retention of students, duration of study and yield of students. Retention data is given on the basis of cohort data. There have been a number of studies analysing cohort data. A first study of cohorts from 1997 to 1999 took place in 2003.⁸⁸ Tables 4.2 and 4.3 present the findings.

Table 4.2: Retention rates for cohort entering HBO in 1997 in the Netherlands

Cohort	1997			1998			1999		
	Matriculation	drop-out % after 1 year	drop-out % after 2 years	Matriculation	drop-out % after 1 year	drop-out % after 2 years	Matriculation	drop-out % after 1 year	drop-out % after 2 years
Native Dutch	52,315	12.42	20.02	53,667	12.73	20.95	56,658	13.89	22.61
Non-Dutch origin	8,786	16.12	25.68	9,622	15.69	25.82	10,387	16.58	28.11

SOURCE: Wolff IMES 2003, taken from IBG

Table 4.3: Retention rates for cohort entering WO in 1997 in the Netherlands

Cohort	1997			1998			1999		
	Matriculation	drop-out % after 1 year	drop-out % after 2 years	Matriculation	drop-out % after 1 year	drop-out % after 2 years	Matriculation	drop-out % after 1 year	drop-out % after 2 years
Native Dutch	18,077	2.36	6.05	18,436	2.65	6.16	18,556	2.83	7.09
Non-Dutch origin	3,556	3.37	8.44	3,687	3.42	7.32	3,703	3.86	9.07

SOURCE: Wolff IMES 2003, taken from IBG

The study produced the following main findings.

- Across the board, retention rates in professional education (HBO) are lower than in universities (WO).
- Ethnic minorities are under-represented in HE (however, this concerns mostly students from non-Dutch Western origin) (see Figure 4.5).
- Ethnic minorities educated in NL (for five years) show no difference in retention outcomes to those for 'native' students.

⁸⁸ For results see Institute for Access Studies (2003) and Wolff, R., "Minority students and higher education in Europe", Thick paper outline for first meeting LIS/Maxwell EU Center Conference 'Immigration in Europe'-group, July 17-18 2003, Luxembourg (2003).

- There are noticeable differences in outcomes for ethnic minorities educated abroad.
- Disabled students show no difference in outcomes from those for non-disabled.
- Older students (19+) drop out at a rate twice as high as younger students (<19).⁸⁹
- Drop-out rates for ethnic minorities in WO and HBO are higher than for 'native' Dutch.

The initial cohort study seemed to suggest that the participation of ethnic minorities was not a major policy issue in the Netherlands. However, retention data showed an important gap between native Dutch students and students from ethnic minority groups. This retention gap varies across different groups of ethnic minorities, with the Surinam and Antillian groups underperforming compared to the other ethnic minority groups.⁹⁰ Furthermore, the study concludes that ethnic minorities educated abroad significantly underachieve compared to native Dutch students and students from ethnic minority groups. This raises the issue of the importance of preparation in secondary school for HE.

A more recent study, of cohorts from 2000 to 2002, not only focused on retention in the first two years but also looked at the yield rates (graduation on time/after six years of study) of the two main groups: native Dutch and ethnic minority.⁹¹ Its conclusions were revealing. When controlling for some variables to ensure full comparability of groups (e.g. education and socio-economic background), the retention gap in professional education between native Dutch students and students from ethnic minority groups seems to be falling in the period of 1997-2003. The findings seem to suggest that students from an ethnic minority background might even outperform native Dutch students in more recent years. Even more surprisingly, the findings suggest that first generation ethnic minority students might be outperforming second generation ethnic minority students and native Dutch students. This conclusion for professional higher education would contradict the normal assumptions around the issue of retention, namely that ethnic minority students (in particular first generation) underperform compared to the reference group of native Dutch students.

However, the results show different trends when looking at 'yield' and the university sector (WO). The yield rate in professional education institutes confirms the normal assumptions. The promising retention data for the first two years was not replicated when looking at yield data (graduation on time/within six years). This yield data showed a complete reversal, with native Dutch students showing a yield rate of 75 percent and students from first generation ethnic minority groups a yield rate of 65 percent. Second

⁸⁹ There is little data on part-time students or mature students. Mature students are classified as 19+ in the Netherlands.

⁹⁰ It is important to realise that variables such as gender, age, and first and second generation have to be taken into account to understand performance better. Certain groups might consist of a younger and first generation population, which can affect performance, see Wolf, R. (2006) and Wolf, R. and Crul, M. (2003).

⁹¹ Wolff, R. (2006).

generation ethnic minority groups have a yield rate of around 70 percent, with a low point of 65 percent in 1998.⁹² This trend is stable over cohorts from 1997-1999.

In the university sector (WO), we see a volatility/variability in the retention data for native Dutch students and students from ethnic minority groups. The first cohort study (1997-1999) showed that students from ethnic minority groups had lower retention rates than native Dutch students (see Table 4.3). However, retention rates for cohorts from 2000-2002 show similar patterns to HBO, with ethnic minority students showing higher retention rates than native Dutch students. However, when looking at yield rates, the same patterns emerge as for institutes of professional education. After six years, for the cohorts of 1997-1999, we see a ‘yield’ rate of 65 percent for native Dutch students and 45 percent for second generation students from ethnic minority groups, a difference of 20 percent.⁹³ Again, this yield rate is stable over the 1997-1999 cohorts, with a low point of 40 percent for second generation ethnic minority students in 1999.

Table 4.4: Participation of students in the Netherlands, cohort 1997-1999

	Number of 15 to 30 year olds in NL (2000)	Number of first year students in total student population (1997-2001)
Total population	3,058,622 (100%)	433,061 (100%)
Native Dutch	79%	84%
Non-Dutch origin	21%	16%
– of which of western origin	8%	5%
– of non-western origin	13%	11%

SOURCE: CBS; IBG/IMES (2003), taken from Institute for Access Studies (2003)

4.4 Trends in student retention over last ten years

To establish trends we look at the two main studies that compared the cohorts of 1997-1999 and 2000-2002. There are several main findings.

- It is not possible to predict yield rates (graduation on time) for student groups on the basis of retention rates.
- Students from ethnic minority groups show good performance over the first two years of HE compared to the reference group, but this performance does not translate to yield rates, which are substantially lower for ethnic minority students in HBO (up to 10 percent) and WO (20 percent) compared to the native Dutch student reference group.

⁹² Wolff, R. (2006).

⁹³ This means that 65 percent of native Dutch students graduate on time compared to 45 percent second generation ethnic minority students.

- Retention rates are higher across the board in the university sector (WO) than in professional education (HBO).
- There have been significant increases in the participation rates of ethnic minority groups from 1997-2005, which means that participation rates of ethnic minority groups are becoming more similar to those of the native Dutch reference group (61 percent compared to 57 percent for men and 39 percent to 43 percent for women in HBO [see Figure 4.5]).⁹⁴
- There is evidence that matriculation rates are growing and that they are growing faster for students of non-Dutch origin than for the native reference group.
- Specific ethnic minority groups show better performance in terms of participation and retention rates than others.
- Evidence that students are switching between degrees is increasing in HBO (3.3 percent of total students in 2004) and WO (1.50 percent of total students in 2004).⁹⁵
- Some data is broken down according to subject: agriculture seems to have the highest drop-out rate in HBO (17.8 percent after one year compared to the average of 10.6 percent); followed by education (12.6 percent); and language and culture (11.6 percent). In WO, the lowest retention rates are language and culture (8.3% in the first year compared to an average of 4.9 percent) and law (6.7 percent); health has high retention rate across HBO and WO.⁹⁶

These trends seem to indicate that the main policy issues in the Netherlands are those of continuation and graduation on time of ethnic minorities rather than retention in the first two years of HE and the participation of specific disadvantaged groups in HE.

4.5 Causes underlying these trends

It is hard to establish causes behind the trends on retention and yield rates for specific student groups. Part of the problem is that very little evaluation has been done on what happens to students after the first two years of study. Therefore, more is known about retention than about the factors that lead to higher yield rates. Some studies have tried to understand the difference in performance between the ethnic minority groups and the

⁹⁴ Wolff, R. (2006); It is interesting to note that participation rates are not positively correlated to better retention rates. Some of the groups with high retention rates compared to reference groups show lower participation rates than these reference groups (e.g. Turkish and Moroccan groups are relatively underrepresented).

⁹⁵ OECD (2006b). For a more detailed analysis of transfer students see De Jong, U., Van Leeuwen, M., and Roeleveld, J., "Deelname aan hoger onderwijs (Deel 5): Studievoortgang van eerstejaarsstudenten cohort 1997/98" (SCO-Kohnstamm Instituut/Stichting voor Economisch Onderzoek, 2000).

⁹⁶ De Jong, U., Van Leeuwen, M., and J. Roeleveld (2000).

reference native Dutch group.⁹⁷ They conclude on the basis of a meta-analysis of literature that the main underlying factors that explain the differences in retention are:

- age of commencement of study
- pre-HE schooling/preparation
- choice of study course.

Differences in these factors are particularly noticeable between native Dutch students and ethnic minority groups in professional education (HBO). For instance, ethnic minority students tend to be older, have lower quality of secondary schooling, and show different patterns in how their study choice was arrived at. These factors could explain some of the retention gaps identified for these two groups, especially for the 1997-1999 cohorts. The absence of major differences in these areas between the student groups (ethnic minorities and native Dutch) in the university sector (WO) could also explain the more insignificant retention gaps between student groups in this sector. It is important to note that these differences are getting smaller over time (1997-1999 cohort compared to the 2000-2002 cohort) in HBO and WO.

In terms of student yield (graduation after six years of study), it is difficult to come to conclusions that explain the differences between student groups over time. However, some studies have suggested that background factors, similar to the ones listed above, might mean that a student loses the connection and bond with the chosen study course over time.⁹⁸ Furthermore, other studies have suggested a strong correlation between the environment and curriculum offered by the institute or university and the continuation of studies.⁹⁹ Factors associated with environment and curriculum include:

- curriculum changes (e.g. timetabling)
- the spread of exams
- a student-centred approach (e.g. mentoring, targeted student support, improving overall environment).

These are areas that we will explore further in the next sections.

4.6 Policies and approaches to increase retention and widen participation

4.6.1 Macro policies

There are several government policies and levers that have been seen by studies to have an impact on student retention and, in particular, increasing the retention of ethnic minorities. These include the following.

⁹⁷ Wolff, R. (2006); Jennissen, R.P.W., “Allochtonen in het hoger onderwijs; prestaties blijven achter”, Demos, bulletin over bevolking en samenleving 22 (7) (2006) pp.65-68; Severiens, S., R. Wolff and S. Rezai, Diversiteit in leergemeenschappen, (Utrecht: ECHO, 2006); Wolff, R. and Crul, M. (2003).

⁹⁸ See meta-analysis in Wolff, R. and Crul, M. (2003).

⁹⁹ Severiens, S., Wolff, R. and Rezai, S. (2003).

- The university can use its discretion to advise students whether they should continue with their course or switch to another at the end of year one – this advice is binding where used, which allows an early determination of whether students are suitable for a course
- Greater flexibility in the curriculum and the introduction of the course credit system is deemed to have had a positive impact on retention.¹⁰⁰
- A reduction in financial aid can negatively affect retention and participation rates (especially for ethnic minorities).¹⁰¹

One further policy lever that is being discussed is the setting up of a national monitoring system for ethnic minority students, which collates information and data on the retention and yield rates of these students in HE and synthesises information on the real problems faced by ethnic minority students in HE.¹⁰² In the Netherlands, ECHO is active in promoting the generation of data on minority students, the coordination of initiatives between institutes of HE, and the development of instruments aimed at increasing retention and graduation of specific, disadvantaged groups. However, though the initiatives of ECHO and its coordinating role between universities and institutes of professional education are increasing (e.g. ECHO is now responsible for the coordination of initiatives between the seven largest universities), it still falls short of a national monitoring system.

Herfs (2003, p. 368) notes that the Workgroup Migrant Guidance (WAB) of the Faculty of Medicine of the University of Utrecht is an example of a well-functioning system within Dutch HE. He notes that “the workgroup consists of three lecturers, one student adviser, and two migrant students. The purpose of the Workgroup Migrant Guidance is to offer advice to those individual ethnic minority students (locally or foreign educated) who need and want this service. Assistance is offered through:

- WAB members who are all easily accessible for advice and consultation
- the student adviser who gives individual study progress counselling after each round of examinations
- the provision of special examination facilities (e.g. oral examinations, extra time during examinations, use of a dictionary) if desired
- referral to relevant language or study skills courses
- regular consultations between WAB and the Interaction and Orientation workgroup (an association of ethnic minority and native Dutch medical students)

¹⁰⁰ A noted side effect is that more flexibility might also encourage more students to switch between courses.

¹⁰¹ See for instance, Herfs, P.G.P., “Retention policy for ethnic minority students”, *Higher Education in Europe*, Vol. XXVIII, No. 3, October (2003).

¹⁰² Meta-analysis in Herfs, P. (2003).

- making students aware of the presence of WAB during information meetings and by informing tutors and mentors about the policy with regard to ethnic minority students.

Mary Tupan, Director of ECHO, pointed out in a telephone conversation that most policy initiatives in the Netherlands are now directed at improving the environment that students encounter in HE, rather than addressing the specific personal characteristics of ethnic minority groups, which might affect participation and retention in HE. She pointed out that research commissioned by ECHO showed an important relationship between improving the environment in HE and higher retention and yield rates for ethnic minority groups.¹⁰³ This observation does not mean that personal characteristics are not important in retention. However, ECHO clearly finds initiatives aimed at the HE environment more effective.

4.6.2 Micro policies

This section represents a list of initiatives that, according to independent evaluations in the Netherlands, have had an impact on retention in the first two years and yield (graduation after six years) in HE. They highlight an overall effect but do not associate initiatives with a specific effect.

- Associations for and by ethnic minority students in HE: Ethnic minority student associations appear to be the best means of bridging the gap between the isolated ethnic minority students. Evidence from the Netherlands, and in particular the University of Utrecht, suggests they have a positive impact on student retention (less is known about the impact on yield rates).¹⁰⁴
- An evaluation of the factors that determine whether students from ethnic minorities drop-out or stay in HE revealed a complex range of factors.¹⁰⁵ The study concludes that personal characteristics cannot be divorced from the social and academic integration support (following the “Tinto model”) given by the institute or university. For instance, given the same support in an institute or university, the differences in factors that determine whether a student stays or leaves (between a ‘stayer’ [*blijver*] and a ‘leaver’ [*uitvaller*]) are often the personal ability to build adequate networks, language ability, and the ability to solve problems. Surveys of ethnic minority groups show that many ethnic minority face similar problems in HE. The outcome often depends on the individual student’s ability to solve these problems. On the basis of the research, the authors offer the following policy recommendations.¹⁰⁶
 - Improve interventions aimed at supporting student choice of a HE course (improve the transition between secondary school and HE): students have a great need for concrete and realistic information about a course. ‘Good

¹⁰³ Wolff, R. and Crul, M. (2003).

¹⁰⁴ Herfs, P. (2003).

¹⁰⁵ Wolff, R. and Crul, M. (2003).

¹⁰⁶ Wolff, R. and Crul, M. (2003).

practice' examples include allowing prospective students to shadow established students for a day and organising information days for parents.

- Offer specific courses aimed at addressing retention problems (language; transition courses) and advertise their existence.
- Improve the academic integration of students: students often find organisation of a course upon arrival in HE is limited, for example there are inconvenient opening times for student support facilities, inadequate academic support and tutoring, and a shortage of study facilities. Introductory programmes familiarising students with the degree course also seem effective.
- Improve support for the student: initiatives range from improving the visibility of the student tutor to professionalising student support officials. The common complaint is that support is often offered when it is too late. The reasonable answer would be to introduce a monitoring system that – aside from academic achievement – lists contacts between tutors/officials and students, keeps a record of the meeting, and specific action points. The overall aim is to increase the number of contacts, which has proved effective in the Netherlands (e.g. University of Utrecht).
- Develop and use the support of student networks (see point above).
- Adapt the role of the teacher: an accessible teacher, who creates an environment in which a student feels part of the course and is challenged, is seen as a major positive factor in increasing student motivation.
- Research has noted that institutes of professional education have taken more innovative approaches to addressing the retention of disadvantaged groups. They offer smaller scale HE (e.g. seminars), specific courses aimed at disadvantaged groups, and have professionalised training for support staff and teachers. This is part of a wider student-centred approach that many evaluators see as instrumental to improving retention and yield rates of students.¹⁰⁷ Major universities in the Netherlands are still often somewhat behind in this development. Some of the initiatives taken by the Fontys group of institutes of professional education include:
 - Initiatives to facilitate an easier transition from secondary schooling to HBO, which involve agreements with secondary schools over the division of responsibilities in preparing prospective students and competences in education; the exchange of teachers between schools and institutes; and the introduction of specific transition classes.
 - developing a monitoring system to understand the problems students are facing: given the diversity of factors at play in students' decisions to stay or

¹⁰⁷ See Lansbergen J., *Literatuurrappport studiestakers en –switchers* (Fontys, 2003).

leave, the system aims systematically to map reasons for students leaving and switching and would allow for the targeting of policy levers.

5.1 General overview of the higher education system

5.1.1 Institutions

The United States has a diverse higher education system. The Carnegie Foundation classifies institutions by the highest degree type awarded. The main classifications, from highest to lowest, are: Doctorate-granting Universities; Master’s Colleges & Universities; and Baccalaureate Colleges and Associate’s Colleges. Alternatively, US HE institutions can be classified by length of undergraduate programmes (4-year, 2-year, or less-than-2-year), or by control (private, private non-profit, or public). Table 5.1 shows the distribution of institutions and enrollees: public institutions enrol roughly three times as many students as other institutions, mostly due to the large number of public “community colleges” offering Associate’s degrees. Although doctorate-granting institutions are relatively rare – only 6 percent of all institutions – they tend to be large research universities, enrolling much larger numbers of students (on average) than Master-, Baccalaureate- or Associate-level institutions.

Table 5.1: Student enrolment per type of HE institution in the US

	Institutions	% Institutions	Enrolled	% Enrolled
Associate's	1811	41	6,776,288	39
Baccalaureate	765	17	1,386,792	8
Master's	666	15	3,909,278	22
Doctorate	281	6	4,903,458	28
Other	865	20	589,092	3
Public	1734	40	13,079,874	74
Private non-profit	1746	40	3,589,913	20
Private	908	21	898,819	5

SOURCE: Distribution of Institutions and Students Enrolled, Fall 2004¹⁰⁸

¹⁰⁸Derived from Carnegie Foundation basic classification tables, <http://www.carnegiefoundation.org/classifications/index.asp?key=805>, accessed 2/9/07

In the US higher education market, quality and price vary widely: of undergraduates enrolled in 4-year institutions in 2005-6, 42 percent attended institutions whose maximum tuition fee is less than \$6,000; but 13 percent attended institutions whose published tuition fee is greater than \$24,000.¹⁰⁹

5.1.2 Finance

The federal government's Department of Education plays only a small direct role in funding higher education institutions: the FY2008 budget includes \$1.8bn for "Higher Education Programs", such as grants to institutions that have traditionally served minority students, funding for programmes that promote foreign language learning, and \$272m¹¹⁰ of direct funding for student support services.¹¹¹ This contrasts with the role of the federal government in providing student aid: the Department of Education FY2008 budget includes \$90bn for new grants, loans and work-study assistance for students.¹¹² In addition, other federal agencies regularly fund over \$20bn of research at various universities.¹¹³

State governments play a more direct role in funding higher education institutions. California alone has budgeted over \$14bn in FY2007-8 to support its public universities and community colleges, which represents slightly more than a third of the total budgets for those institutions.¹¹⁴

In addition to federal and state government, local governments provide some funding for public institutions. Taken as a whole, universities and colleges in the United States receive more revenue from tuition fees than from any other source; some universities also receive revenue from private grants and gifts, endowment earnings, sales and services of educational activities, hospitals and auxiliary activities.¹¹⁵

5.1.3 Organisation of studies

Generally, higher education institutions operate on a modular credit system. If a student transfers to another institution before completing a degree, the credits from the first institution can often count towards a degree at the new institution. Students graduating from two-year community colleges can often enter a four-year institution at the same level as students who have completed two years within the institution. States with large higher

¹⁰⁹Derived from Figure 1 of *Trends in College Pricing 2006*, College Board, http://www.collegeboard.com/prod_downloads/press/cost06/trends_college_pricing_06.pdf, accessed 2/9/07.

¹¹⁰ In this chapter, we use current exchange rates, 1GBP : 2US\$.

¹¹¹ Section II.E of *Fiscal Year 2008 Budget Summary*, available online from the Department of Education at <http://www.ed.gov/about/overview/budget/budget08/summary/edlite-section2e.html>, accessed 2/10/07.

¹¹² Section II.D of *ibid.*

¹¹³ For example, \$21.4bn in FY 2002 (Fossum et al., 2003, *Vital Assets: Federal Investment in Research and Development at the Nation's Universities and Colleges*, RAND Corporation).

¹¹⁴ *Governor's Budget 2007-08*, <http://www.ebudget.ca.gov/StateAgencyBudgets/6015/agency.html>, accessed 2/10/07.

¹¹⁵ Categories of revenue taken from the NCES *Digest of Educational Statistics 2005*, Table 328 http://www.nces.ed.gov/programs/digest/d05/tables/dt05_328.asp, accessed 2/10/07.

education systems tend to have processes in place to facilitate the transfer of students within the state from community colleges to public universities. As well as offering 'academic' associate's degrees that can be taken further at a higher institution, community colleges also offer a range of more vocational associate's degrees and other certifications not typically offered at higher level institutions.

Typically, normal progress towards a bachelor degree involves fulfilment of General Education (GE) requirements (which provide a broad base of educational experience in the Humanities, Social Sciences and Natural Sciences) in the first two years, followed by two years of more specialized concentration on a 'Major' area of study.¹¹⁶

5.1.4 Students

Table 5.2¹¹⁷ shows the distribution of student characteristics in the cohort entering higher education in the 1995-1996 academic year. Females slightly outnumbered males; white students greatly outnumbered all other ethnicities; most entering students were 19 years old or younger; a quarter of dependent students came from families with annual incomes of less than \$25,000, and a quarter came from families with more than \$70,000 in annual income; slightly less than half of the cohort entering higher education had parents who had no post-secondary education.

Students face widely differing costs of attendance for HE institutions across the United States. Average tuition, fees, room and board for public universities are \$12,796 in 2006-7; for private universities, the average is \$30,367.¹¹⁸ Students have access to some federally subsidized loans, and can take advantage of educational tax breaks. Federal government, state governments and institutions themselves offer various packages of student financial aid.

¹¹⁶ For further information on General Education requirements, see <http://www.ed.gov/about/offices/list/ous/international/usnei/us/edlite-underposted-geninfo.html>.

¹¹⁷ Based on tables in NCES, *Descriptive Summary of 1995-1996 Beginning Post-secondary Students* (1998) available online at <http://nces.ed.gov/pubs99/1999030.pdf> (last accessed 28/3/2007).

¹¹⁸ College Board (2006) *Trends in College Pricing*.

Table 5.2: Student characteristics US

Gender	%
Male	45.8
Female	54.2
Ethnicity	
White	70.0
Black	12.4
Hispanic	11.6
Asian/Pacific Islander	4.4
American Indian/Alaskan Native	0.8
Other	0.7
Age	
18 or younger	44.5
19 years	22.8
20-23	12.4
24 years or older	20.3
Family income (Dependent students)	
Less than \$25,000	26.1
\$25,000-44,999	24.5
\$45,000-69,999	24.8
\$70,000 or more	24.6
Highest level of parental education	
High school diploma or less	46.6
Some post-secondary	18.8
Bachelor's	20.2
Graduate degree	14.4

Source: College Board (2006)

5.2 Definitions of student retention

Student retention is discussed publicly in the United States, both in terms of the financial costs to the system of students who drop out, and (due to the relatively low retention rates of minority and disadvantaged students) as a civil rights issue. However, there is no universal definition of what constitutes “retention”, and data deficiencies make calculation of different measures of retention difficult.

In 1990, Congress amended the 1965 Higher Education Act to require all institutions participating in Title IV student financial assistance programmes to report the percentage of students completing a degree within 150 percent of the normal completion time (i.e. six-year graduation rates for four-year programmes, three-year graduation rates for two-year programmes). These reports could be used to create one measure of retention, but this would count as “successful” only those students who completed their degree at their first institution of enrolment – students who transferred institutions and completed degrees would be counted as drop-outs. Some states track students within their HE systems, which allows those states to have a more accurate idea of how many students enrolling in their state complete a degree in one of their state institutions, but this is not a universal practice, and does not take into account inter-state transfers. At the national level, the Beginning

Postsecondary Students (BPS) surveys conducted by the National Center for Education Statistics (NCES) provide longitudinal data tracking students over time, but only two cohorts have been tracked so far, there are only 9,000 students surveyed in each cohort, and the time horizon differed between the two cohorts (one stopped tracking after five years, the other after six years).

Graduation rates are not the only possible measure for retention. Some studies use “persistence” to capture those students who are still enrolled at a university after they were originally scheduled to graduate.¹¹⁹ These students include those who have temporarily suspended their studies and later resumed them, those who have fallen behind schedule due to having to retake classes, and those who started in a full-time programme but later decided to study part-time.

5.3 Presentation of (statistical) evidence on student retention

The most useful sources of data on national retention rates are the (infrequent) NCES BPS surveys (mentioned above). For reasons described above, it is difficult to find systematic and comprehensive data sources for calculating retention rates. See below for results derived from the 1995-6/1998/2001 BPS series.¹²⁰

Table 5.3 shows the differences in educational outcomes for students, across different subgroups, who entered a 4-year institution intending to complete a bachelor’s degree. Although there is little difference across genders, the other subdivisions show clear differences:

- the older a student is when starting higher education, the less likely he/she is to complete a bachelor’s degree (and the more likely he/she is to drop out altogether)
- the lower the student’s family income, the less likely he/she is to complete a bachelor’s degree (and the more likely he/she is to drop out altogether)
- the lower the student’s parents’ education is, the less likely he/she is to complete a bachelor’s degree (and the more likely he/she is to drop out altogether)
- Asian/Pacific Islander students are more likely to complete a bachelor’s degree than White students (and less likely to drop out); White students are much more likely to complete a bachelor’s degree than Hispanic students (and less likely to drop out); Hispanic students are marginally more likely to complete a bachelor’s degree than African-American students (with a wider advantage in drop-out rate). American Indian/Alaska Native students are a relatively small group, with slightly unusual outcomes – they have the second-best record of achieving bachelor’s degrees (behind Asian students), but the second-worst overall drop-out rate (ahead of African-American students).

¹¹⁹ For example, NCES, *College Persistence on the Rise? Changes in 5-year degree completion and persistence rates between 1994 and 2000* (2004).

¹²⁰ Results below are excerpted from NCES’s *Descriptive Summary of 1995-1996 Beginning Postsecondary Students: Six Years Later* (2003) <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003151>, accessed 2/10/07.

Table 5.3: Differences in educational outcomes across different student subgroups

Students entering a 4-year institution in 1995-6, intending to achieve a bachelor's degree [all numbers are %]	Highest degree achieved			Still enrolled (no degree)		Not enrolled
	Bachelor's degree	Associate's degree	Certificate	At 4-year institution	At less-than-4-year institution	
Total	28.8	10	12	8.8	5.6	34.8
Gender						
Male	27.7	11	10.1	10.9	5.2	35.2
Female	29.7	9.2	13.7	7.1	6	34.5
Age when first enrolled						
18 years or younger	44.1	9.7	5.4	10.5	4.5	25.8
19 years	19.6	15.6	11.4	10.8	7.1	35.5
20-23 years	6.9	9.6	20.4	8.6	9	45.4
24-29 years	4.1	6.6	32.2	2.5	8.3	46.4
30 or older	2.4	10	25.9	4.4	3.5	53.8
Race/ethnicity						
White, non-Hispanic	31.6	10.5	10.9	8.6	5.4	33
Black, non-Hispanic	17.3	5.6	17.3	8.4	6.1	45.3
Hispanic	18.5	11	15.2	10.1	6.3	38.9
Asian/Pacific Islander	39.7	10	7.9	9.4	7	26
American Indian/Alaska Native	34.9	3.4	8.7	8	3.4	41.5
Dependent family income in 1994						
Less than \$25,000	25.7	14	10.5	8.8	6.4	34.7
\$25,000-44,999	32.7	10.1	8.9	10.6	6.6	31.1
\$45,000-69,999	40.4	11.2	4.4	10.7	4.8	28.6
\$70000 or greater	56.2	6.2	2.8	10.1	4.3	20.4
Parental education						
High school diploma or less	16	11	17.9	6.1	6.3	42.8
Some postsecondary	22.2	9.8	10.5	10.5	7.3	39.6
Bachelor's degree	41	12.1	6.9	12.4	2.8	24.8
Advanced degree	60.6	5.4	2.3	10.6	4.3	16.9

SOURCE: NCES (2004)

5.4 Trends of student retention over last ten years

For the reasons noted above, it is difficult to measure trends in student retention accurately. The best analysis at the national level appears to be an NCES report comparing the two BPS cohorts: students who began postsecondary education in 1989/90 and those who began in 1995/96¹²¹. However, it is difficult to assert a ‘trend’ on the basis of just two time periods, particularly when they are just six years apart. The analysis found a statistically significant increase in *persistence* rates (defined as the percentage of students who had neither graduated nor dropped out altogether from higher education) at public four-year universities, but no significant changes in *five-year graduation* rates. No significant change was seen in graduation rates or persistence rates at private for-profit or non-profit universities.

The NCES analysis also disaggregates students by gender, race/ethnicity, and family income. Broken down in this way, there are statistically significant increases in persistence among males in general (white males in particular), and among students from low-income backgrounds. Many of the other subgroups seem to show negative (but not statistically significant) effects: Black and Hispanic students seemed to have a lower completion rate in the 1995/96 cohort than in the 1989/90 cohort. Nevertheless, these trends may be misleading. The composition of the student body changed significantly between these two cohorts, with Black students rising from 9 percent of the student body to 12 percent, and Hispanic students rising from 8 percent of the student body to 12 percent. If increased access to higher education allows Black or Hispanic students to enrol who are less likely to complete their studies than the average Black or Hispanic student already in the higher education system, then the overall average completion rates for these groups might be expected to decline.

5.5 Causes underlying these trends

Researchers have examined cross-sectional and state/institution-level data to examine the reasons for students dropping out of higher education, and so supplement the national-level research – but, due to the relative paucity of national-level data on retention, few researchers have attempted to link changes in government policies (or other factors) over time to changing retention or persistence rates. Most studies confirm that financial considerations have an effect on retention, but many studies claim that some other factor is more important; the ‘other factor’ varies from study to study, and may depend on the research methodology employed, or on the unique characteristics of the data source for each study.

In a 1995 report¹²², the GAO investigated the effect of financial aid on drop-out rates. They used a national sample of students who graduated from high school in 1980 and a

¹²¹ NCES, *College Persistence on the Rise? Changes in 5-year degree completion and persistence rates between 1994 and 2000* (2004).

¹²² GAO, *Restructuring Student Aid Could Reduce Low-Income Student Dropout Rate* (1995).

detailed sample of low-income students from a large (unidentified) research university that had experimented with ‘front-loading’ some grant dollars (i.e. providing a high proportion of grant aid in the first year, and then increasingly substituting loan aid for grant aid in later years). The report found that grant aid significantly reduced drop-out rates, while results from loan aid were more mixed. Furthermore, front-loading seemed to increase the efficacy of financial aid in reducing drop-out rates, but caused some ethical concern about a ‘bait-and-switch’ strategy. A more recent report, a hazard simulation based on the University of Minnesota’s 1986 entering cohort, predicted that providing grant aid would be more effective than loan aid, and that front-loading existing grant aid would also reduce drop-out rates.¹²³ Another recent study¹²⁴, based on state-level data from Ohio, suggests that Pell Grants reduce drop-out rate.

Other studies emphasize the importance of other factors. A study of freshmen and sophomores at Virginia Commonwealth University¹²⁵ found that increases in net cost of enrolment (tuition costs minus grants) slightly increased attrition; but that increased loans had no significant effect; and that academic progress and academic integration were much more important factors. A study drawn from student data at a Nevada institution¹²⁶ found that a scholarship programme increased enrolment and first-term retention among low-income students, but that these gains did not persist into second-term retention; the study found that Grade Point Average (GPA) was the strongest predictor of retention, with performance in second-term mathematics classes particularly important.

Important theoretical work begun by Tinto¹²⁷ (and continued by others) emphasizes the importance both of academic integration and of *social integration* for understanding student drop-out decisions. However, models relating to social integration are more difficult to construct than financial or academic integration models. On the one hand, financial variables can be measured precisely, and data is routinely collected; academic integration has reasonable quantitative proxies (such as GPA), and can be presumed to be affected by policies that change the academic environment of an institution. Social integration, on the other hand, is a more elusive construct, and cannot easily be quantified or included in models in the same way as financial data. Furthermore, self-reported social integration information can be misleading – college drop-outs may blame social integration difficulties for their drop-out decision as the easiest explanation, particularly if they are not fully aware of the reasons for their decision¹²⁸.

¹²³ Desjardins, Ahlburg & McCall, “Simulating the Longitudinal Effects of Changes in Financial Aid on Student Departure from College”, *The Journal of Human Resources* 37 (3) (2002) pp.653–679.

¹²⁴ Bettinger, “How Financial Aid Affects Persistence”, *NBER Working Paper 10242* (2004).

¹²⁵ Wetzel, O’Toole & Peterson, “Factors Affecting Student Retention Probabilities: A Case Study”, *Journal of Economics and Finance*, 23 (1) (1999) pp.45–55.

¹²⁶ Herzog, “Measuring Determinants of Student Return vs Dropout/Stopout vs Transfer”, *Research in Higher Education*, 46 (8) (2005) pp.883–928.

¹²⁷ For example, Tinto, “Dropout from higher education: A theoretical synthesis of recent research”, *Review of Educational Research*, 45 (1975) pp.89–125; Tinto, *Leaving College: Rethinking the causes and cures of student attrition* (University of Chicago Press, 1987).

¹²⁸ Sieveking & Perfetto, “A Student-Centered Individual-Level University Retention Program where Attrition is Low”, *Journal of College Student Retention*, 2 (4) (2001) pp.341–353.

5.6 Policies and approaches to increase retention and widen participation

Many policies have been put in place in universities across the United States with the aim of increasing retention or widening participation. However, few have been implemented on a large scale, and very few have been independently evaluated as successful.

On the largest macro level, the Federal Department of Education does relatively little to increase retention and widen participation, apart from its disbursement of student aid. The Department of Education (DoE) does provide funding through the TRIO Student Support Services (SSS) programme for individual projects at universities around the country, including: instruction in basic study skills; tutorial services; academic, financial, or personal counselling; assistance in securing admission and financial aid for enrolment in four-year institutions; assistance in securing admission and financial aid for enrolment in graduate and professional programmes; guidance on career options; mentoring and special services for students with limited English proficiency (LEP); and college scholarships.¹²⁹ Low-income first-generation students and disabled students are eligible for these programmes. However, the budget for SSS is only \$272m, compared with \$90bn in financial aid administered by the DoE, and serves only 200,000 students.¹³⁰ Evidence of the effectiveness of the SSS programme has been mixed, with some early evaluations showing few positive results, and a more recent (1998) evaluation finding positive effects for some of the funded projects and negative effects for others¹³¹; however, due to self-selection and differential use of the different services available to eligible students, it is difficult to evaluate the projects accurately. The DoE also provides funding for middle- and high-school programmes aimed at improving the educational prospects of students from low-income families by providing them with academic instruction, tutoring, mentoring, counselling and other services: a study evaluating the Upward Bound programme found that students who entered the programme with low educational aspirations were twice as likely to enrol in a four-year university as low-aspiration students in the control group.¹³²

At a lower macro level, state governments enact various policies to improve graduation rates.¹³³ In Florida, every institution uses the same numbering system for courses, and every institution must accept credits awarded by other institutions within the state, which facilitates the transfer of students completing their degrees and saves the state money by removing the need for transfer students to retake classes. Also, all students completing

¹²⁹ Taken from DoE's TRIO SSS program description, <http://www.ed.gov/programs/triostudsupp/index.html>, accessed 3/16/07.

¹³⁰ <http://www.ed.gov/programs/triostudsupp/sssgrantees2006.xls>.

¹³¹ Chaney, Muraskin, Cahalan & Goodwin, "Helping the Progress of Disadvantaged Students in Higher Education: The Federal Student Support Services Program", *Educational Evaluation and Policy Analysis*, 20 (3) (1998).

¹³² US Department of Education Policy and Program Studies Service, 2004, *The Impacts of Regular Upward Bound: Results from the Third Follow-Up Data Collection*, accessed online at <http://www.ed.gov/rschstat/eval/highered/upward/upward-3rd-report.pdf>, accessed 2/11/07.

¹³³ The examples in this paragraph are taken from the US General Accounting Office report, *College Completion: Additional Efforts Could Help Education with Its Completion Goals* (2003).

associate's degrees at community college in Florida are guaranteed a place as a Junior (third year student) in the state university system, strengthening the incentive for students starting at community college to persist. In Kentucky, students can take credit classes in a 'virtual university' to count towards their degrees, which allows students to make progress towards a degree even if work or family commitments make it impossible to attend a traditional campus full time. In addition, many states provide financial aid to students, directly fund support services at universities, or fund summer 'bridge programs' to prepare high school graduates for their first year at university.

At the micro level, institutions have experimented with various types of projects designed to improve retention outcomes. Some elite institutions, led by Princeton, have addressed the financial component of the retention problem by offering a greater proportion of their financial aid as grants, rather than loans. Other institutions have offered programmes designed to address retention through improving the social and academic integration of students (particularly first year students) in the university; some of these programmes, or categories of programmes, are described below.

Creation of smaller learning communities: Various universities attempt to smooth the transition from the small, teacher-directed classroom experience of high school to the large, self-directed lecture experience of college by fostering the creation of smaller groups within the first-year cohort. Typically, classes consist of large lectures given by the professor, and smaller discussion groups led by teaching assistants; some universities have experimented with keeping freshmen in the same discussion groups for multiple first-year classes, in order to create small, coherent academic peer groups for students. These academic peer groups may help with social integration, and also encourage academic collaboration among students. The University of Arkansas instituted a variant of this scheme, the Freshman Academic Support and Tracking (FAST) programme¹³⁴: freshmen were required to enrol in 'blocks' of classes – taking multiple classes with the same sub-group – participate in various organized social activities with their group, and also receive mentoring from members of the faculty.

Creation of living/learning environments for commuter students: When large numbers of students live far from campus, students tend to feel less strongly tied to the institution, and spend less time building relationships with classmates. Seattle University addressed this problem with their Collegia programme¹³⁵: the university created pleasant areas on campus for commuter students to work outside of class time – complete with computers, kitchens and comfortable furniture – to create a home-like environment for students.

¹³⁴ Mangold, Bean, Adams, Schwab & Lynch, "Who goes who stays: an assessment of the effect of a freshman mentoring and unit registration program on college persistence", *Journal of College Student Retention*, 4, (2) (2002) pp.95–122.

¹³⁵ Schmitz, *A "home away from home" for commuter students: The Seattle University Collegia Program* [originally accessed at www.naspa.org, but no longer available online], referenced in Braxton, Hirschy & McClendon (2004), *Understanding and Reducing College Student Departure*, ASHE-ERIC Higher Education Report: 30 (3) (2002).

Peer mentoring: Various universities have used some form of peer mentoring to help first year students to adjust to university life. Formal peer mentoring schemes may be particularly relevant for students from under-represented groups, who may feel out of place and may struggle to find students from similar backgrounds to themselves. In some universities, such as the University of California, Los Angeles, peer mentoring schemes are initiated by campus student organizations; at other universities, peer mentoring schemes are initiated by the institution itself. The University of Georgia, where most students are Caucasian, created the Continuing the Legacy of African-American Student Success (C.L.A.S.S.) programme¹³⁶, which placed African-American C.L.A.S.S. Advocates (CAs) in several of the residence halls to provide support to students and facilitate interactions between students with cultural differences. All students were eligible to seek support from the CAs, but the programme was designed to be of maximum benefit to African-American students.

Tailoring academic programmes to different cultural contexts and needs: Chabot College, a 2-year community college in the San Francisco area, was the first institution to adopt the Puente Project, an innovative organizational approach to improve retention for Latino students¹³⁷. The Puente Project offers intensive English classes in which Latino students read and write about their cultural heritage and identity; employs Latino academic counsellors who can relate to some of the challenges that are unique to Latino students; and forges mentoring links between Latino students and professionals in the local Latino community. The project aims to provide better guidance for students to create a coherent programme of study (promoting academic integration), and allow students to place their academic path in the context of potential career goals, as well as bringing students to the levels of English proficiency required to transfer to a 4-year institution. The Puente Project has now been rolled out all over California's community college system, and operates in collaboration with the University of California.

Student-centred approaches in low-attrition institutions: In institutions that already have low attrition rates, it can be difficult to predict at-risk students without an inefficiently high 'false-positive' rate: at low-attrition institutions, it is difficult to target support services or programmes at students who actually need it. Vanderbilt University introduced a programme called "Decision Tree" that aimed to tailor student support at the level of the individual. The university Psychological and Counseling Center (PCC) sent letters to each freshman student 4-6 weeks in to their first year at Vanderbilt, directly asking whether the student was considering leaving the university, and, if so, whether he/she would be interested in discussing the decision with somebody. Students who indicated interest were given an initial interview to determine their needs, and were then referred to one of a myriad of service providers (the basis for the name "Decision Tree"). Service providers included internal PCC counselling services; other psychological/medical professionals; financial aid officers; academic advisors; and leaders of student clubs and organizations.

¹³⁶ Taylor & Miller, "Necessary Components for Evaluating Minority Retention Programs", *NASPA Journal*, 39 (3) (2002).

¹³⁷ Laden, "An Organizational response to welcoming students of color" in Levin (ed.), *Organizational change in the community college: A ripple or a sea-change?*, New Directions for Community Colleges, No. 102 (1998).

However, most of the programmes cited above have not been independently evaluated. The evaluations published (cited in the footnotes to this report) have mostly been written by the instigators of the programmes, which calls into question their objectivity. Furthermore, the programme directors normally aim to provide services for as many students as possible, and are reluctant to withhold services from students in order to create a control-group by which to evaluate the programme. Therefore, evaluations of these programmes tend to rely on comparisons between programme users and non-programme users, who may differ in important respects. It is possible that all of the programmes cited above do have positive effects on retention, but higher quality research and evaluation is required to ascertain exactly how effective each programme is, and to investigate the joint effects of instituting multiple projects.

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APPENDICES

Appendix A: Methodology

In the **initial stage** of the proposed project, the NAO study team and the RAND Europe project team agreed on the template of questions to be used and the selection of the four countries to be reviewed.

The template closely followed the categories set out in the Invitation to Tender (ITT). These included, for instance:

- the organisation of higher education systems in selected countries
- the retention rates in higher education courses
- trends in retention rates over the last ten years and the underlying causes that affect trends
- the approaches used by higher education institutions to maximise the likelihood of student retention (also with a focus on specific sub-groups).¹³⁸

The full template is given in Appendix B.

In terms of the selection of countries, we identified three main criteria for selection:

- the availability of data and information on student retention in a specific country
- particularly high retention rates across courses in specific countries or positive trends in the development of student retention rates over time
- evidence of interesting or innovative practice in maximising the likelihood of retention in higher education courses (also with a focus on measures aimed at specific student sub-groups).

The first criterion is a pragmatic consideration. Given the short time-frame and limited budget of this research, we felt that the study should focus on cases where data and information is readily available from publications and web resources. The next two criteria were geared towards selecting case studies that could offer interesting practice for the UK and hold transferable recommendations.

¹³⁸ These groups include part-time and mature students; students following courses in further education colleges; entrants from low-participation neighbourhoods; students with disabilities; and those reading strategically important subjects. (Taken from ITT GEN 6/82.)

In order to test the adequacy of the countries selected on the basis of the two criteria listed above, we undertook a quick review of a number of countries. These countries included, in no particular order, the Netherlands, Sweden, Finland, New Zealand, the United States and Ireland. On the basis of the quick review, we arrived at a selection of Australia, Ireland, the Netherlands, and the United States.

The research approach consisted of four main stages. **Stage one** involved the RAND Europe team, who were assigned countries according to their nationality, relevant experience and language skills, undertaking an **initial search** to collate easily identifiable information through desk-based research, and to identify potential sources and establish the contacts for less easily available information. Sources included:

- documents from international organisations such as the OECD (e.g. PISA, IMHE, and PEB programmes)
- government, university and higher education council publications in the respective countries
- databases such as the Eurydice database, Education-Line at Leeds University, ERIC of the US Department of Education
- projects run at the Institute of Access Studies at the University of Staffordshire and other university departments
- other academic databases accessible through the RAND library such as JSTOR and Web of Science.

At this stage, we also identified potential contacts in the countries to be studied to bridge any data and information gaps. The assistance of the NAO study team and its international affairs department in setting up contacts was welcome, given the potential sensitivities involved in asking government sources in other countries for help in a study for the UK NAO.

Stage two was a **mid-term meeting**. This meeting was held to provide the RAND Europe team and the NAO study team with the opportunity to share findings, identify difficult areas, draw out emerging themes for overarching analysis, compare understanding of the questions in the template and identify areas for further investigation. Officials from the Higher Education Funding Council for England (HEFCE) also attended this meeting to give feedback on the comparative work and to help identify areas of specific interest to the English Higher Education sector.

Stage three consisted of the **refinement of the case studies**. On the basis of the common understanding and agreement achieved through the workshop, the RAND Europe team completed the case studies. Team members refined their investigation through further document analysis and, where desirable (in terms of data and information gaps), personal contact with informants in the countries selected. The interaction with the contacts ranged from phone calls to sending e-mail requests for verification or additional information.

Stage four was **synthesis and analysis and presentation of the final report**. The RAND Europe project team in this phase synthesised the research and prepared the final deliverables.

Appendix B: Template for Country Studies on Student Retention

1. General overview of the Higher Education system

a. Institutions

- Organisational and cultural features of HE system
- What are the main bodies involved in HE and the lines of public accountability:
 - at a national level
 - number and type of HE institutions (HEI)

b. Finance

- Financial features of the HE system
- How and by whom is HE funded?

c. Organisation of studies

- How are studies organised (including length), are they modular on a credit system or follow a fixed curricula?

d. Students

- Numbers and social composition of student body
- Cost of HE for students (Admission fees, student loans, grants, etc.)

2. Definitions of student retention

- How is student retention defined (e.g. continuation, completion of studies, etc.)?
- Is student retention discussed publicly as a distinct issue?

3. Presentation of (statistical) evidence on student retention

- Data on student retention, non-continuation or completion respectively
- Consideration of differing definitions and methods
- Disaggregation into subgroups:

- part-time students
 - mature students
 - students from low participation or deprived neighbourhoods
 - disabled students
 - students in strategically important subjects (STEM Subjects: science, technology, engineering, maths and modern foreign languages)
- Data for national aggregate as well as for individual HEI

4. Trends of student retention over last 10 years

- Identification of trends over the last 10 years – national aggregate and across institutions
- Disaggregation into subgroups

5. Causes underlying these trends

- Underlying causes of these trends (e.g. impact of certain policies)
- Why did student retention rates increase, diminish or stagnate?

6. Policies and approaches to increase retention and widen participation

- Most important macro-level policies to increase student retention by government and other overarching institutions
- Examples of interesting micro-level policies of individual HEIs to improve retention rates
- Review of existing evaluations and outcomes if available