

CHAPTER 5

RESPONDING TO NEW DEMAND IN TERTIARY EDUCATION

SUMMARY

A growing number of young people, and increasingly adults as well, are participating in tertiary education. The expansion in the first years of tertiary education has to a large extent been driven by demand – by the desire of a wider group of people to be educated to higher levels, together with a growth in the acquisition of upper secondary and other qualifications that gain them access. New groups bring new interests and needs, which oblige tertiary systems to diversify structures, programmes and styles of delivery. This chapter looks at where the new demand is coming from, at how systems and institutions are responding, and at the degree to which they are able to offer suitable courses that lead to completion rather than drop-out.

A continuing rise in demand can be seen not only in countries where tertiary education has expanded relatively recently, but also in those where it has been growing for some time. But new demand is coming from a greater range of age groups; even among people in their late twenties, participation rates are above 10 per cent in Denmark, Finland, Germany, Norway and the United States. Students therefore come to tertiary education with a wide range of prior experiences. They enter tertiary education programmes with either academic or vocational qualifications acquired in upper secondary education, often with some other post-compulsory or tertiary education experience as well and sometimes with validated experience gained outside educational institutions. This range of student background adds to the diversity of their interests and needs.

An increased number of students come from relatively disadvantaged backgrounds, although their share in the total student body does not appear to have risen markedly. A more dramatic change is in the number of women, who now comprise a majority of students in most countries.

As a result of these changes in demand, the character of tertiary education and of students' experiences is evolving. Three features are particularly notable:

- The widening of vocational or professional studies, whether through new “non-university” programmes or institutions or changes in the curricula of existing study programmes;
- The opening up by institutions of alternative pathways, particularly in countries where students have previously been channelled in pre-set directions within highly segmented systems;
- The opening up of such pathways by the students themselves, who are making new kinds of choices and thus creating new norms.

In managing these changes, an important challenge facing tertiary institutions is to reduce the incidence of inefficient routes and drop-out. Although non-completion is a big concern for many countries, it is difficult to measure how many students leave tertiary education for negative reasons, how many never intended to complete a full degree or diploma, and how many go on to complete tertiary courses other than those in which they enrolled initially.

Thus governments face the challenge of encouraging the development of diverse and flexible options which are clear in expectations, outcomes and links. Students need to be able to find courses that are well suited to their capacities, interests and needs. This greater flexibility has to be balanced with good information, guidance and structured programmes to ensure that learning efforts are not wasted.

5.1 INTRODUCTION

Tertiary education traditionally has educated an elite group of young people to higher levels immediately after they complete upper secondary education. Today, it provides opportunities for learning to a much larger section of the youth and adult population. Figure 5.1 indicates that tertiary institutions now reach a quarter to a third of people in their late teens and early twenties in a number of countries, and in some cases over 10 per cent of the population are enrolled even in their late twenties. This expansion has been driven primarily by demand from a wider and more diverse group of people for study beyond secondary schooling, as a result of social and economic developments common to all OECD countries. The challenge for tertiary education systems is not merely to meet demand with an expansion of places, but also to adapt programmes, and teaching and learning to match a more diverse set of student needs while also meeting the needs of the economy and society.

This final chapter looks at the structure of the demand, at how systems are responding and at the degree to which they are succeeding in meeting new needs and interests. It focuses on the first years of tertiary education (see Box 5A). Specifically, the chapter addresses the following questions:

- How much has demand risen?
- What are the routes into tertiary education?
- What is the profile of today's entrants?
- What kinds of option are being offered to these students?
- How many entrants fail to "complete" a first cycle of tertiary education, and how can drop-out be avoided?

These questions pose some clear challenges for policy makers. A system that caters for an increasingly heterogeneous group of students must work not only to develop its diversity, but also to ensure that students are in practice offered a range of choices that they can match to their needs. However, diversity and choice are not without limits. Students need to be

helped to acquire a complex range of advanced-level knowledge, skills and dispositions. They cannot do so simply by choosing from a vast, undifferentiated array of course options. The key role of institutions is their ability to organise learning in ways that reflect the complex structures of knowledge, its uses and the interrelationships among its elements. The challenge is how to provide for diversity and choice while ensuring the effectiveness and efficiency of well-designed, coherent programmes.

A further policy challenge is to address the needs of the economy and of society alongside individual demands. The OECD *Jobs Study* (1994) signalled the imperative of improving flexibility in the population to foster economic growth and employment. That flexibility can be partly realised through a progressive implementation of a lifelong approach to learning as set out by OECD Education Ministers (OECD, 1996a). But governments cannot expect to promote strategies for lifelong learning by directly controlling tertiary education. On the contrary, there is a need to build up the capacity of institutions to manage themselves and to forge new partnerships with employers and others, to help meet economic and social demands. An important requirement of these new partnerships is to move beyond a view of graduates as people with homogeneous attributes and knowledge, and beyond a single narrow conception of what a first degree or diploma should certify. This does not mean abandoning standards or quality control. Rather, within and among the diverse range of learning options, each study programme needs to have well-defined standards, content and qualifications. The characteristics of programmes should be made transparent to employers and others, and students should be able to move more flexibly among them.

5.2 THE RISE IN DEMAND

New demand for tertiary education has come from a variety of sources. Rising aspirations, changing patterns of employment and careers and rising incomes and wealth have made some continuation of education beyond the secondary level both an expectation and a perceived

Box 5A

WHAT IS MEANT BY THE FIRST YEARS OF TERTIARY EDUCATION?

Tertiary education refers to a level of broadly defined studies, provided through established forms of higher education, but also in other ways – through new kinds of institutions, by enterprises and in other non-formal settings.

Nevertheless, it is mainly through institutions – colleges, polytechnics, universities, whether public or private – that tertiary education is provided.

The *first years of tertiary education*, the subject of this chapter, refer to the period of study (typically three to five years) undertaken prior to the award of an initial qualification that is recognised on the labour market. Adult education, in a wide variety of forms, is generally excluded from this definition, as are programmes that lead primarily to awards at sub-degree level.

An element of imprecision is inevitable, given the different structural arrangements in Member countries and the choices students themselves make. See OECD (1997b).

necessity for a growing number of individuals. At the same time, a more educated population is collectively considered an important investment for societies and economies (see Chapter 2).

It is not possible to calculate precisely the demand for tertiary education in societies where most of its participants are dependent on supply decisions made by governments. Nevertheless, the rate of enrolment in tertiary education is one proxy measure of demand, since decisions to provide places are influenced by pressure from those who wish to participate. Another indirect measure is the rate at which people qualify to enter tertiary education by graduating from upper secondary programmes.

Figure 5.1 indicates that demand continues to grow not only in countries where rapid expansion occurred relatively recently, such as France, Portugal and Norway, but also in those with longer experience of high levels of participation such as Canada and the United States. But the age range at which enrolment rates are rising fastest varies from one country to another. In France, for example, the biggest growth from the mid-1980s to the mid-1990s was for the age group 18-21: the enrolment rate for this group rose from one-fifth to one-third of the total. But in the United States, one-third of the population aged 18-21 were already enrolled by 1985, and the growth in demand came rather from people in their mid-twenties. Higher participation among older age groups in some countries reflects a lengthening of the duration of studies, but it can also indicate more frequent alternation between work and study, or a growth in combined or complementary qualifications. All these possibilities add to the diversity of demand that tertiary education must respond to.

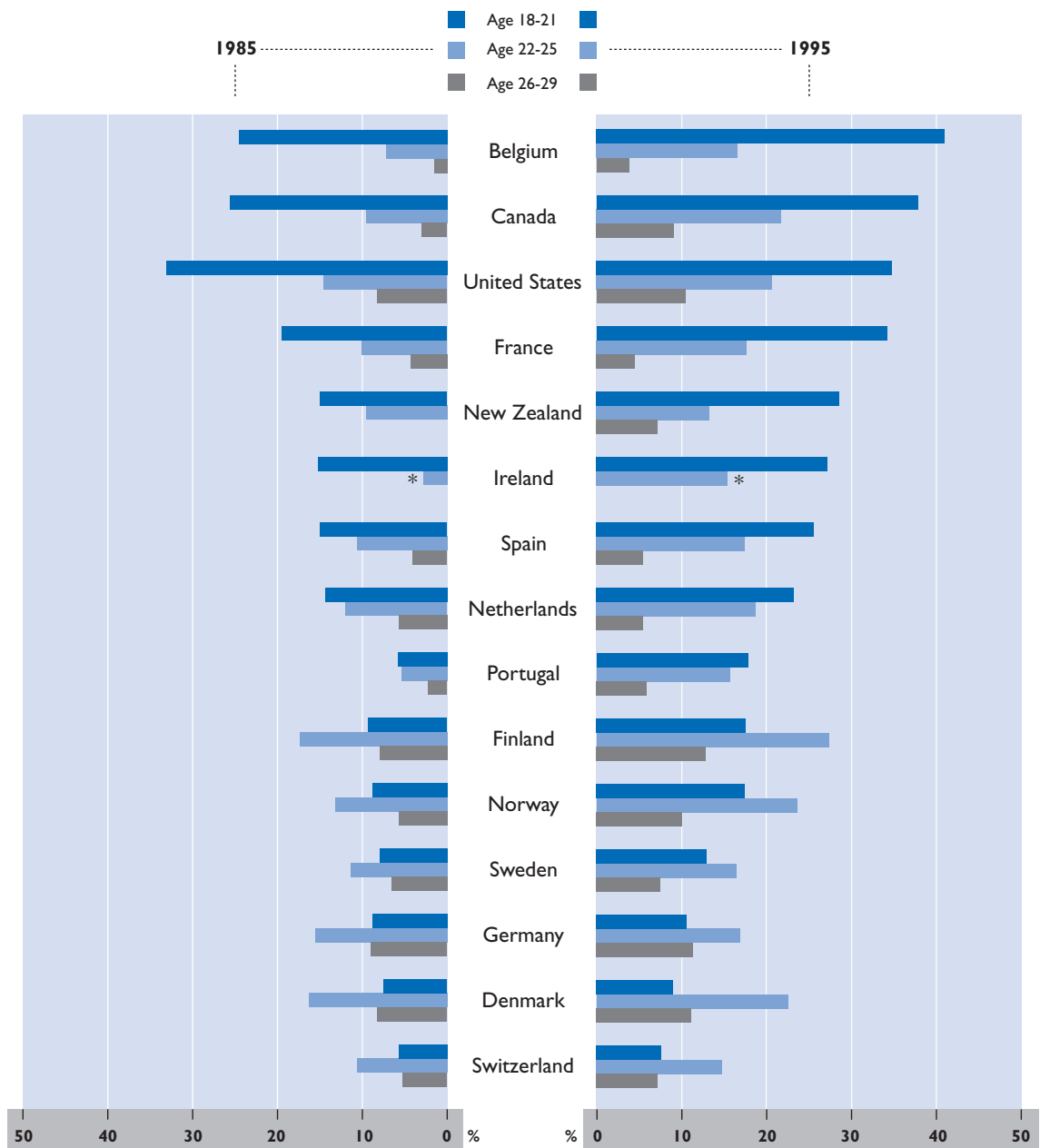
Since 1980 the proportion of young people who complete a full cycle of secondary education, and therefore qualify (in most cases) for entrance into tertiary education, has increased in all countries (see OECD, 1996b, p.15). By 1995, the proportion of the cohort completing upper secondary education exceeded 90 per cent in Belgium (Flemish Community), Finland, Ireland, Japan, New Zealand, and Norway (see Figure 5.2).

This increase in completion of upper secondary education tends to lead to higher participation in tertiary education independently of policies adopted for that sector. Once learning is realised on this scale in upper secondary education, it is hard to resist the consequent demand for tertiary studies – particularly in countries that offer a specific entitlement to further study to upper secondary-school graduates. In countries such as Australia, Denmark, France and Ireland, policies to increase the proportion of the age cohort completing secondary education have not only succeeded in achieving that objective but also led directly to a rise in the numbers entering tertiary programmes.

Figure 5.1

Trends in participation in tertiary education by age

Percentage of three age groups enrolled in tertiary education, public and private, 1985 and 1995



* Data refer to ages 22-29.
 Source: OECD Education Database.
 Data and notes for Figure 5.1: page 114.

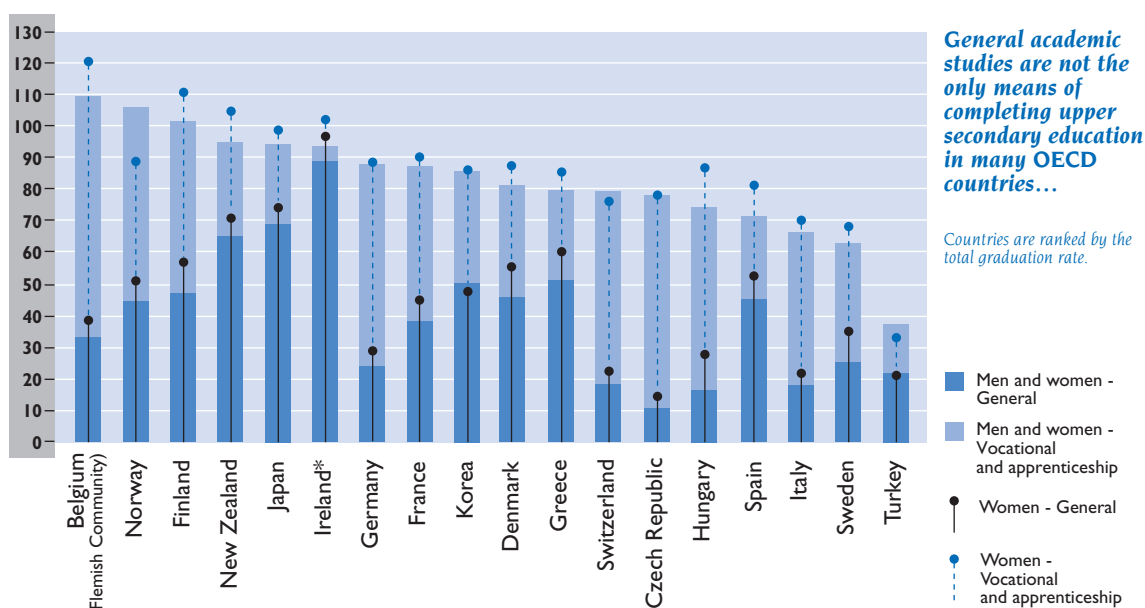
More young people are participating in tertiary education than before: not just teenagers, but in many countries, a substantial proportion of people in their early and late twenties.

Countries are ranked by the net enrolment rates of 18-21 year-olds in 1995.

Figure 5.2a

Routes to upper secondary graduation

Ratio of upper secondary graduates to population at typical graduation age, by type of programme and gender, 1995



* "General" upper secondary education contains a number of strong vocational elements.

Data for Figure 5.2a: page 114.

Source: OECD Education Database.

However, it should not be taken for granted that upper secondary completion will continue steadily to rise. In the United States, for example, completion rates appear to have stabilised or decreased to levels below 80 per cent. But this does not automatically reduce the demand for tertiary study. While the proportion of US public high school students estimated to graduate fell from 73 per cent in 1986 to 70 per cent in 1994, the proportion who went on to participate in tertiary education rose sharply, from 43 per cent to 57 per cent (Mortenson, 1996).¹

In France, the number of those attaining the *baccalauréat* increased strongly to 1995 (a doubling over 10 years), but is expected to remain at present levels, about 60 per cent of the cohort, to 2005. While some French young people who lack this upper secondary school qualification pursue other forms of vocationally-qualifying education, an estimated 20 per cent of the cohort are expected to be students who

present themselves for the *baccalauréat*, but do not pass. Both the French and US cases thus illustrate a widespread and worrying polarisation between a greater number continuing on to tertiary studies and a substantial number failing during the course of secondary schooling (see also Chapter 4).

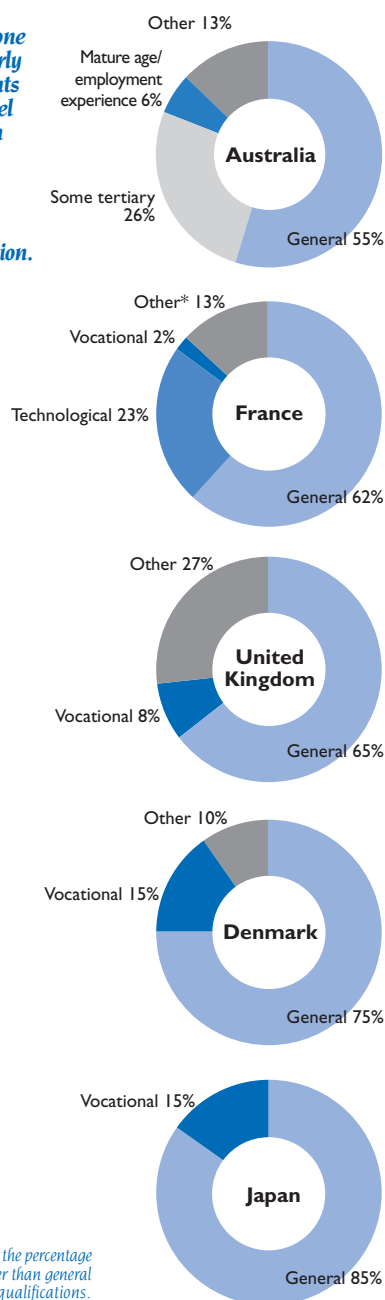
5.3 ROUTES INTO TERTIARY EDUCATION

Expansion in the number of young people completing either academic or vocational streams of upper secondary education explains only partly the increase in demand for tertiary education. There is also growing use of alternative routes and pathways for young people and adults who have some post-

1. The estimates for high school completion are based on public high school students who subsequently graduate; those for enrolment in tertiary education cover both public and private high school graduates.

Figure 5.2b
Routes to tertiary education
 Qualifications on entry in selected countries,
 percentage distributions, various years

... and between one in seven and nearly one in two students enter tertiary-level programmes with qualifications other than or in addition to general upper secondary education.



Countries are ranked by the percentage of new entrants with other than general secondary educational qualifications.

* Other includes students with a *baccalauréat* who changed programmes as well as students with some tertiary experience.

Data, notes and sources for Figure 5.2b: page 115.

compulsory or tertiary education experience. A growing number of entrants are adults who have long since left secondary school, many of whom use such alternative routes in.

Figure 5.2a shows that among those who complete an upper secondary programme, in some countries a large proportion do so through vocational and apprenticeship routes. This is partly reflected in the background of those who enter tertiary education. But, as indicated in Figure 5.2b, students entering tertiary education programmes may have prior experience in tertiary education or enter through other routes such as conversion courses, professional qualifications and on the basis of work experience.

In Denmark, for example, about a quarter of entrants into tertiary education come through upper secondary vocational education or non-traditional routes of access. In France, about one-sixth of first year enrolments in tertiary education have qualifications other than the general or technological *baccalauréat*; a large proportion of these students have switched from other tertiary-level programmes, bringing additional educational experience to their first year studies. In Australia, only just over half of those commencing bachelor's courses are admitted on the basis of the completion of the final year of secondary education. Of the remainder, over half have already undertaken a previous tertiary course, and are likely to have different needs from those who have just left secondary education. In the United Kingdom, more than one third of full-time, first degree and diploma students present qualifications other than A-Levels; the Council for Industry and Higher Education (CIHE) advocates that eventually A-Level qualifications (the "academic" route) should account for about half of entrants into tertiary education, with the other half comprised primarily of those with General National Vocational Qualifications (GNVQ).

Any policies addressing routes of access to tertiary education need to consider people's needs over their whole life rather than just at the point of leaving secondary school. As discussed in the next section, in some countries around half of new entrants into tertiary education are aged over 25. The routes by which these

adults qualify can no longer be seen as a side issue, but will influence the mission and character of the entire system.

5.4 THE PROFILE OF NEW ENTRANTS

People entering tertiary education come from a wide range of social backgrounds. Over time, the characteristics of those aspiring to tertiary-level studies have grown more diverse as a result of changes in policy aims, in levels of provision of post-compulsory education, in social welfare policies and in employment conditions and prospects. Three patterns in the profile of new entrants in particular should be noted:

Tertiary education caters for all social and ethnic backgrounds, despite a continuing bias towards privileged socio-economic groups.

A significant, although under-representative, group of students in tertiary education come from less privileged socio-economic backgrounds. The number, if not the share, of students from these groups has increased with expansion in most countries. There are no reliable and internationally comparable indicators on the social pattern of enrolment. But within countries, there is a tendency for working-class participation to be substantially greater (but still under-representative) on courses of brief rather than long duration and with a vocational rather than general orientation.

In Denmark, for example, a longitudinal study following the experiences of a cohort aged 14 in 1968 showed that by age 38, only 14 per cent of those who pursued long-cycle studies had "working-class" origins, compared to 30 per cent of students on short-cycle courses. But since 37 per cent of the survey population was classified as working class, this group was under-represented even on short-cycle courses. The professional class, constituting 7 per cent of the survey population, was slightly over-represented on short-cycle courses (8 per cent of students) and greatly over-represented in long-cycle studies (29 per cent).²

But has large-volume participation narrowed the gap between high and low socio-economic groups? The evidence is mixed.

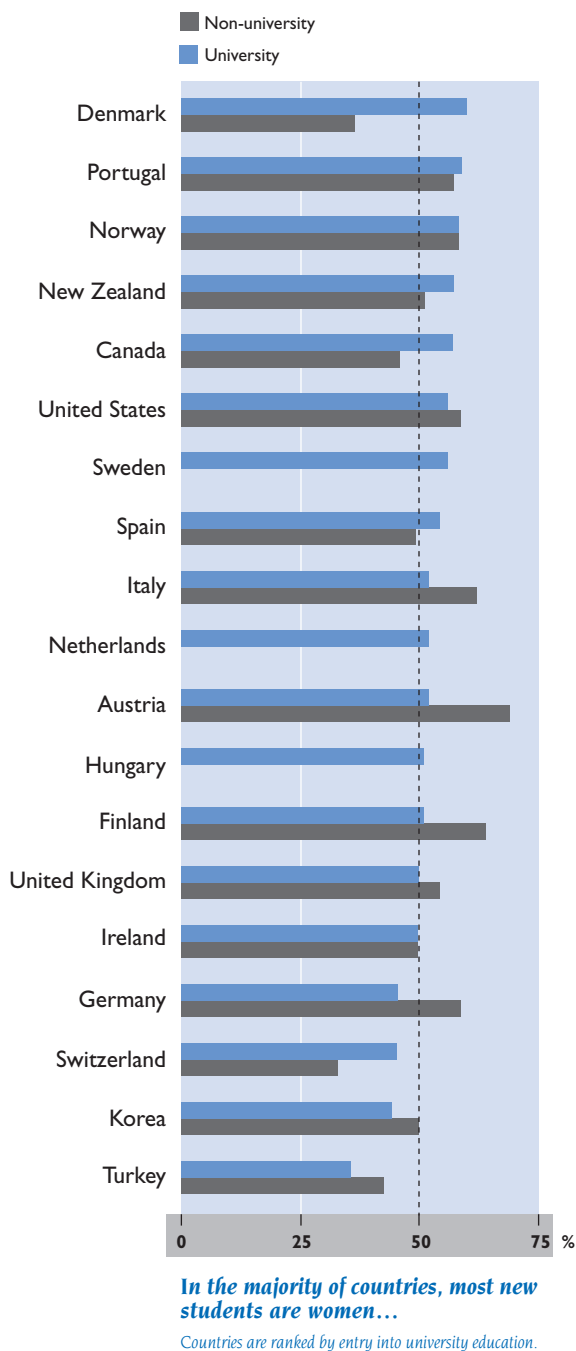
- In the United States, differentials have actually widened since the 1970s. Between 1977-79 and 1991-93, the participation rate of 18- and 19-year-olds from families in the top income quartile rose from 69 per cent to 75 per cent, while that of young people from the bottom quartile remained stable at 26 per cent (Kane, 1995).
- In Japan, the trend is less clear-cut: from 1980 to 1990 the share of student enrolment by young people originating from the bottom two income quintiles remained constant, but in the previous decade they had increased their share from 27 per cent to 36 per cent of tertiary enrolments (excluding special training schools) (Kaneko and Kitamura, 1995).

Many factors influence the participation of people from less privileged backgrounds. An increasing number of young people and adults from these groups participate in a widening range of post-compulsory education and training options instead of regular tertiary education studies. New teaching styles throughout the education system can help to make such studies more accessible to potential learners from some socio-economic groups than they have been in the past.

But as countries such as Australia, Italy, the Netherlands, New Zealand, Portugal and the United Kingdom introduce or consider policies requiring greater student (as well as third-party) contributions to meet part of the cost of tertiary education, there is a risk that those from less advantaged groups will be more reluctant to enrol. To attack the perception of unaffordability, current budget proposals in the United States would provide tax breaks introducing a transparent, federal "guarantee" of public funding sufficient to meet minimum tuition charges for anyone who aspires to and is able to benefit from tertiary education. The United States and other countries with tuition fees are seeking to reduce further the risk of weaker participation among lower socio-economic groups through the allocation of need-based financial support, or by postponement or forgiveness of repayment, when the incomes of graduates fall short of a given threshold.

2. For the purposes of the study, "professional class" comprises all who function in knowledge-based positions, including engineers; teachers and librarians; doctors, veterinary surgeons and dentists; and architects. See Hansen (1996).

Figure 5.3a
Women entering tertiary education
 As a percentage of new entrants, 1995



For reasons specific to the countries concerned, New Zealand and the United States have supported the development of separate, publicly-funded tertiary-level institutions to cater for specific needs and interests of some young people and adults from identified minority groups (respectively, Maori, and Native American and African American). Students from these groups already can be found in significant numbers in the programmes and institutions aimed at all young people and adults, but their overall participation rates remain relatively low.

Women are now a majority of participants in tertiary education, although their representation differs greatly by course type.

If the change in the social balance in tertiary education has been at best limited, the change in the gender balance has been dramatic. Figure 5.3a shows that, in a majority of OECD countries, most students enrolled are now women.

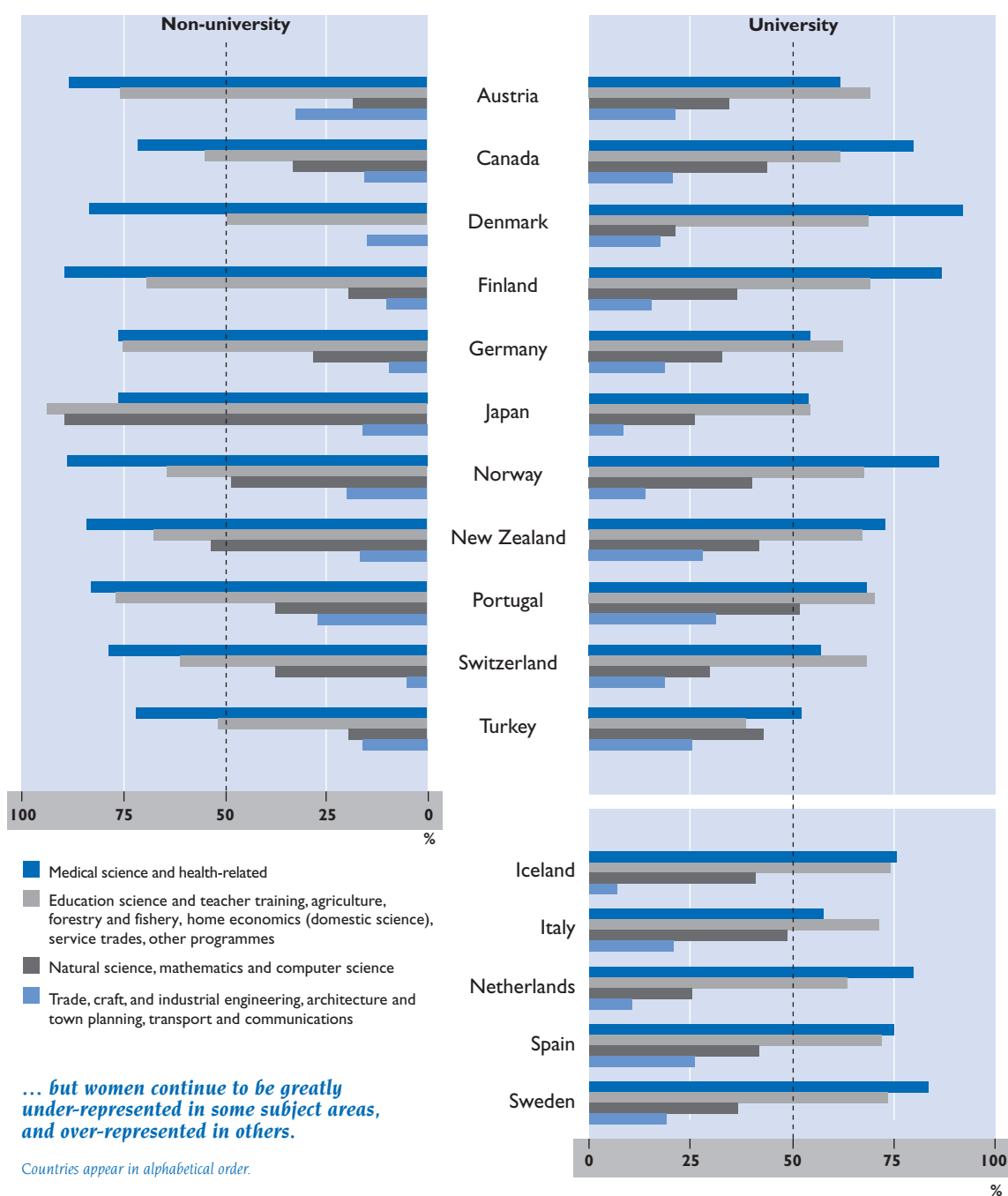
The growth in women's participation has been stimulated by high upper secondary school completion rates, particularly from general streams, which in a number of countries are more likely to lead to tertiary education. Indeed, in all but two of the 18 countries shown in Figure 5.2a, women are more likely than men to complete secondary school in general streams (exceptions are Korea and Turkey). In some countries, this appears to be because men are more likely to follow vocational options, as in Norway, where 50 per cent of women and 38 per cent of men graduate from general courses. In others, the gender difference is apparent even though there is relatively little vocational education. An example is Ireland, where 96 per cent of women but 83 per cent of men complete general streams in upper secondary.

The gender balance varies widely in different fields of study. The programmes least likely to enrol women are those in natural sciences and in industrial and engineering fields. Women are more likely to enrol in fields related to the health professions, education and in the social and behavioural sciences (Figure 5.3b). In some countries, study programmes in the latter fields are found outside universities, and often limit enrolment in line with capacity constraints and estimates by public authorities of needed or desired supply of highly-qualified labour. The consequence,

Figure 5.3b

The gender balance in different subjects

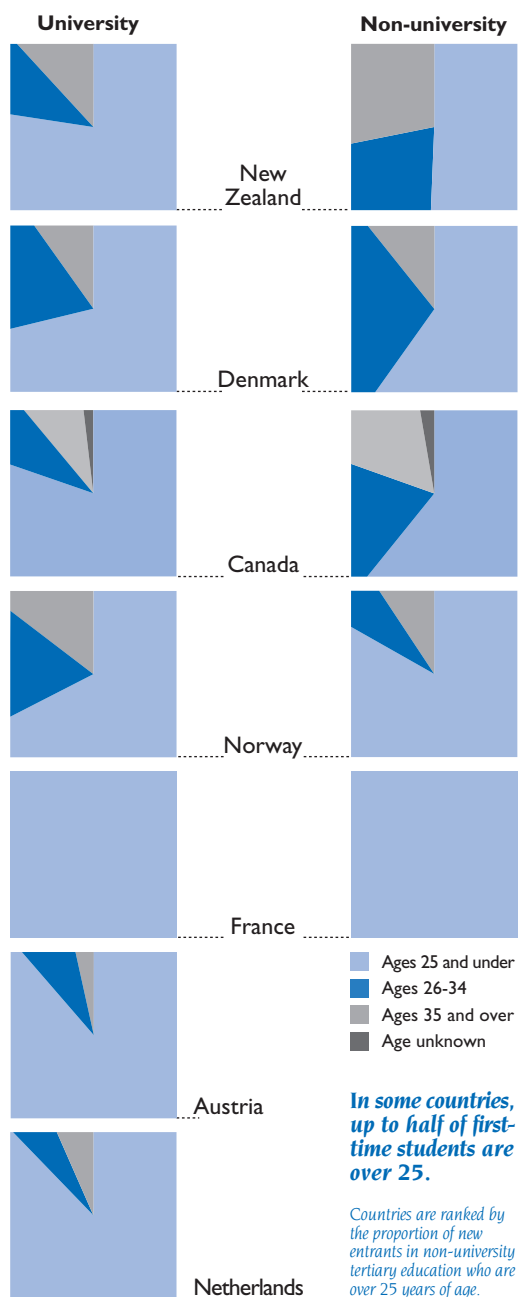
Percentage of new entrants who are women, selected subjects, 1995



Source: OECD Education Database.

Data for Figure 5.3b: page 116.

Figure 5.4
First-time entrants into
tertiary education by age, 1995



The surface represented by each square is equal in size to the estimated values provided in the corresponding table.
 Source: OECD Education Database.
 Data and notes for Figure 5.4: page 116.

in Denmark for example, is that young women may be less likely than young men to enter or succeed in their first choice programme or institution. Conversely, young women represent a significant reservoir of intellectual talent which could be brought into science, mathematics and technical programmes in tertiary education where capacity exceeds enrolment. This is a particularly attractive possibility in countries where the number of graduates in these subjects is considered to fall short of what is needed to undergird balanced medium-term economic development. Steps have been taken, in Denmark and other countries, to influence women's choices.

In some countries up to half of entrants to tertiary education are over age 25, although this varies greatly according to each country's situation.

Adult participation is creating a "quiet" revolution in tertiary student profiles. Figure 5.4 shows that, in a few countries, nearly half of students enter tertiary education for the first time after the age of 25. But this is by no means a general trend. In some countries, fewer than one in five new entrants are over 25; these include Austria and the Netherlands. In France, virtually all new entrants are under 25 years of age.

Where adult participation has grown, it has to a large extent done so because individuals have preferred to delay entry, because they wanted a "second chance" or because they felt that they needed to upgrade their skills, rather than because governments have followed specific policies to get adults to study. But in some cases such policies have indeed played a role: during the 1980s, Sweden's "25:4" scheme, which reserved tertiary education places for those at least 25 years of age and with four years of work experience, assured greater adult participation than had previously been the case. Australia and the United Kingdom have for some years had special admissions schemes for mature age students. These countries and Japan also offer open university programmes. In New Zealand, policy has long provided a favourable, "open admissions" route for adults. Indeed, the growth in adult enrolments has so raised concerns about rates of admission of younger New Zealanders that the government has put in place a "study-right" incentive for providers through which an increased level of public funding

is provided to institutions for each student *under 22* who enrolls in tertiary education for the first time.

The reasons why adults in some countries participate so much less than in others are complex, reflecting country structures and traditions. The extensive provision of vocational education and apprenticeships in Austria, Belgium, Denmark, Germany, the Netherlands and Switzerland has provided solid preparation and qualification for work and so reduced the perceived need to acquire formal tertiary-level studies at a later date. In these countries, many adults already participate in job-related education and training, outside formal institutions, as well as other forms of learning. The pattern may be changing, however, as growing numbers of young people with post-compulsory vocational qualifications seek to enter tertiary education: in Germany, an estimated 40 per cent of those participating in vocational training in the dual system eventually take up tertiary studies.

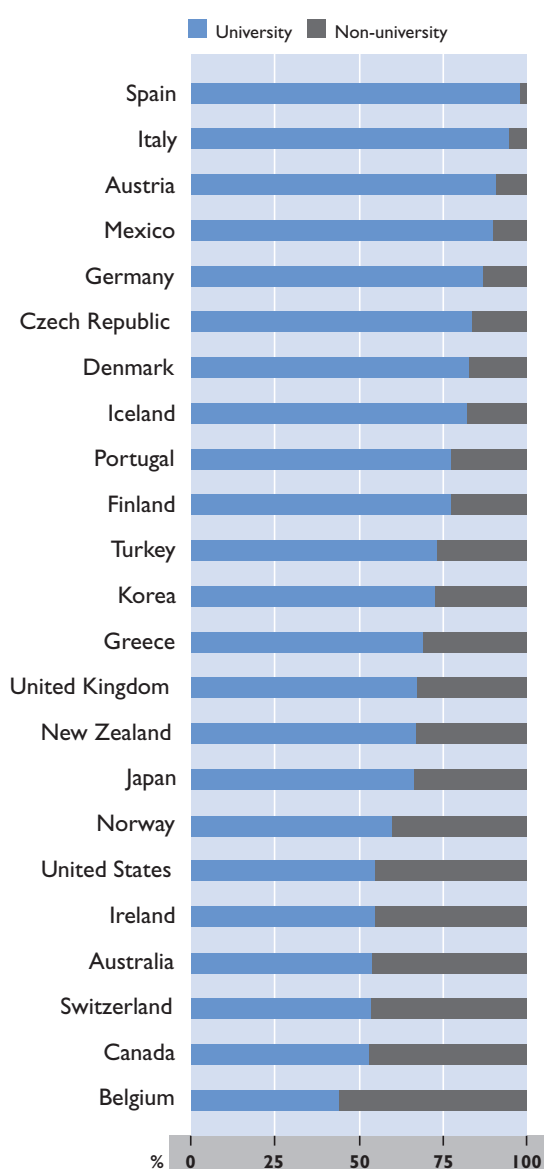
It is possible that the age distribution of learners will widen further as tertiary education becomes more open and accessible to all students, regardless of age. Such an opening up provides learners with greater scope to determine the best timing for their entry into tertiary education.

5.5 SUPPLY-SIDE RESPONSES

In response to large-volume participation and to new kinds of demand for tertiary education, a wide range of options have been developed. Diversification has taken a number of forms both within and outside tertiary institutions. It has included more “non-university” institutions and programmes, a blurring of the distinctiveness of programmes between sectors, better articulation between courses, the networking of institutions and programmes, “franchise” arrangements or distance learning.

One indicator of diversity is the introduction and further development of “non-university” programmes, that serve to broaden the forms of tertiary education available to learners. Figure 5.5 shows that around one half of students in the first years of tertiary education are enrolled in such programmes in certain countries. These programmes give greater emphasis to applications of learning and especially links to employment.

Figure 5.5
The split between university and other tertiary education programmes
Percentage of non-university tertiary education in total enrolment, first stage, 1995



The proportion of students enrolling in university courses ranges from the vast majority in some countries to around half in others.

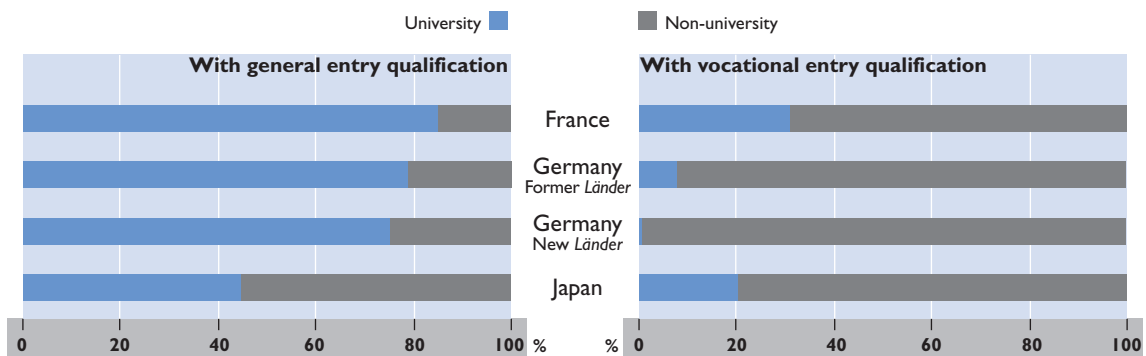
Countries are ranked by the percentage enrolled in university education.

Source: OECD Education Database.
Data for Figure 5.5: page 117.

Figure 5.6

Entry qualifications and type of programme

Initial destinations in tertiary education, selected countries, various years



Note: France: university includes preparatory classes for the *grandes écoles*; Japan: non-university includes junior colleges. Tertiary education destinations other than universities (as defined here) are varied: *Fachhochschulen* in Germany are not the equivalent of special training schools in Japan or the university institutes of technology or advanced technician sections of the *lycées* in France.

Source: OECD Secretariat.

Data for Figure 5.6: page 117.

Typically, students with general qualifications enrol in university courses while those with vocational qualifications enrol in other types of programmes. But a substantial proportion follow atypical routes.

Countries are ranked by the proportion with general entry qualifications.

Non-university programmes are particularly attractive to adults, owing to a short programme duration and more flexible organisational arrangements which support part-time, evening, work based and distance learning options. In some cases they have been seen as a tertiary level extension of technical and professional secondary education. Austria, the Czech Republic, Finland, Italy and Mexico have undertaken or are contemplating reforms aimed at developing new distinctive institutions and programmes of this type.

Regardless of the intent of existing structures, there has in practice been a considerable easing of the rigid tracks that in some countries have tended to preclude participation in tertiary education for students from secondary vocational streams, or to channel students from particular secondary streams into associated tertiary branches. Figure 5.6 shows that while some forms of entry qualification are more likely to lead to given types of tertiary education than others, the match is by no means a precise one. In France, for example, while about 85 per cent of those entering tertiary education with the general *baccalauréat* choose university programmes or preparatory classes for the *grandes écoles*, 15 per cent choose the short-cycle, vocationally-

oriented programmes offered through the university institutes of technology (IUT) or the advanced technician sections (STS) of the *lycées*. Conversely, while about 70 per cent of those entering tertiary education with the technological *baccalauréat* choose “matching” forms of tertiary education (IUT and STS), some 30 per cent enrol in university programmes. In Germany and Japan, similar patterns can be observed; for example, about one-fifth of Japanese graduates of the vocational stream of upper secondary education go on to enrol in university programmes.

While such “crossover” can be measured directly in countries where tertiary institutions are segmented into distinct categories, an equivalent growth in flexibility is occurring, if less visibly, in “unitary” systems with a single kind of institution. In both segmented and unitary systems, there is an increasing diversity of programmes and arrangements, within and among institutions, regardless of sector or status. The distinction between university and non-university is blurred almost everywhere. It is common for institutions of different types to offer programmes which might lead to similar jobs, if not providing similar coursework – for example in the

Box 5B

DIVERSIFYING THE SUPPLY OF TERTIARY EDUCATION

Diversity in Sweden's unitary system. Though diverse in character and programmes, all institutions operate under a single framework and on a single funding basis. Diversity and distinctiveness in programmes are maintained and enhanced through a reflection in university colleges of regional interests, and also through productive co-operative working arrangements between, for example, the University of Uppsala and the University College of Örebro in which Uppsala professors work in Örebro. Such co-operative arrangements permit each institution to develop its distinctive character while benefiting students and staff at both.

Extending tertiary provision in New Zealand. Secondary schools may be approved to offer tertiary-level course modules; those that do so typically have established articulation arrangements with nearby universities or polytechnics and may work co-operatively with teaching staff at these institutions. Funding is provided from the government to the secondary school, on the basis of the number of students enrolled.

Bachelor's degree in Denmark. The Ministry approved and has supported the introduction of a three-year bachelor's degree as the first tertiary-level qualification in universities, rather than the most common five-six year master's degree. There is successful experience in engineering and business, and wider acceptance of the degree is being fostered through means such as development of a "vocationally-oriented" six-month module to be attached to bachelor's degree programmes and an experimental linking of basic teacher education with the university to be established in the domain of science.

Work experience in the United Kingdom. The government's Enterprise in Higher Education initiative and the work of Training Enterprise Councils have had the effect of stimulating new active teaching partnerships. Co-operative arrangements enable students to apply what they have learnt in their formal studies in the work environment (often with an assessment and credit for the experience and knowledge gained) and provide a value-added service for the firm or organisation concerned.

New tertiary education option in Switzerland. In the face of reduced volume in apprenticeships, increased demand for tertiary education, and in order to make higher vocational education attractive for better students with practical training, a new upper secondary qualification (*Berufsmaturität/maturité professionnelle*) was introduced. This permits access to the newly created *Fachhochschulen/hautes écoles spécialisées*. The already well-developed, but scattered non-university sector which encompassed until now institutions of different status and levels is being progressively redesigned.

fields of commerce and computer science in Belgium (Flemish Community), France, Japan, New Zealand, the United States and also in Australia and the United Kingdom.

Many countries now have a broader range of institutions and programmes than ever before, accommodating both larger numbers and a wider diversity of interests and abilities. Box 5B gives examples. Although many innovations of this type are too recent to be well established, they represent significant efforts on the part of systems and providers to respond to demand, both individual and social.

An important, often unremarked feature of recent patterns of participation is that many new path-

ways are being created, not so much by the deliberate policies pursued by education authorities, but rather by the choices made by the students themselves. These choices reflect strategies aiming to take advantage of the options best suited to individual interests and need. Examples of such new, "spontaneous" pathways in tertiary education are described in Box 5C.

While growing diversity of supply already reflects a responsiveness to demand, there is a need for many countries to reinforce and extend this response. Firstly, they can encourage providers to facilitate further new means of entry to, exit from and mobility within tertiary education (through, for example, wider use of credit transfer and modules). Secondly, they can

Box 5C

DIVERSIFYING QUALIFICATIONS THROUGH STUDENT CHOICE

Double degrees in Australia. There is growing interest in combined or double degrees acquired at a single university, for which arts and law are a long established precedent. Double degrees now increasingly include elements of business, engineering or teacher education. Such studies usually require five years, as compared to a three-year full-time course for a generalist first degree, or four years' study for an honours degree.

Pathways through tertiary education in France. Successful completion of any first-cycle programme of study permits students to pursue studies in any field. As a result, French students follow a variety of paths to advanced degrees. The proportion of graduates of technical, employment-oriented programmes of the university institutes of technology (IUT) and advanced technician sections of the lycées who continue their studies has increased over time; by 1992, almost two-thirds of DUT (*Diplôme Universitaire Technologique*) holders and two-fifths of BTS (*Brevet de Technicien Supérieurs*) holders were continuing studies mostly in second cycle programmes in universities, engineering schools and business schools. These proportions are higher than expected, and they have had some influence on the nature of teaching and learning in the first cycle programmes. A related consequence is that technological and vocational *baccalauréat* holders who are unable to find places in IUT and STS (*Sections de Techniciens Supérieurs*) programmes, pursue tertiary studies in open access university programmes. More than 10 pathways to the specialised diplomas of higher education (DESS - *Diplôme d'Etudes Supérieures Spécialisées*) have been identified. The different choices of pathways imply educational costs per student ranging from 1 66 500 FF to 376 800 FF, reflecting both differences in the annual per student costs within the different elements of the pathways and differences in the average time actually needed to complete the various elements (including re-taking or extending a year's study).³

Multiple degrees in the Netherlands. Dutch students choose between higher professional colleges (HBO) and universities, each providing first degree courses usually requiring four years of study. Following the approval in 1988 of an act which provided HBO graduates with the possibility of obtaining a university degree in reduced time, increasing numbers of students now follow such programmes to obtain the two qualifications. While the statutory status of these abridged university degree programmes has been withdrawn and funding is now time-limited, Dutch research indicates that the interest in "stacking" qualifications may well increase as students and their families see this as a means of keeping options open, of making adjustments in choices and of pursuing academic study as an important activity and experience in its own right.

Seminars and workshops organised by student associations in Portugal. Partly in response to a broadening of employment destinations of graduates, Portuguese students are participating in a range of seminars, workshops and activities covering topics such as job search, work experience and entrepreneurship as well as basic computer skills. Within some universities, the activities are being organised by student associations.

Articulation and credit transfer in the United States. Young and adult students follow course modules in community colleges which afford them flexible options for transfer to institutions offering bachelor's degree programmes. In Virginia, a state policy on transfer has defined a "transfer module" which, if successfully completed at a community college, guarantees admission into a bachelor's degree programme in a public institution. One public university has a well-established articulation arrangement with its region's community college; the result is that the university's transfer enrolments are greater than freshman enrolments.

establish broad frameworks that help make alternative pathways and options more feasible. Such frameworks need to be inclusive: specific agreements between institutions on matters such as certification should not foreclose wider regional

or system-wide arrangements, providing for quality assurance, standards, assessment and recognition.

3. See CEREQ (1995) and Observatoire des coûts des établissements de l'enseignement supérieur (1997).

5.6 DROP-OUT AND NON-COMPLETION

Concern about failure, drop-out and non-completion has increased with growth and diversity in participation. Social and economic developments call for a shift in the orientation in the first years of tertiary education from selection to inclusiveness. From this perspective, drop-out and failure can be seen as indicators of how well tertiary education is adapted to the interests and backgrounds of learners. A more specific concern relates to the direct financial costs of failure and drop-out. In Belgium (Flemish Community), it is estimated that a 60 per cent improvement in pass rates on end-of-year examinations would reduce the average time to degree completion in universities by about one-fifth of a year in relation to study programmes of 4 to 5 years (longer for physicians).

Estimated rates of non-completion vary widely: 6-13 per cent in the United Kingdom; 23 per cent in

Denmark; 29-31 per cent in Germany; and 64 per cent in Italy. Japan is located at the low end of this range, the United States somewhere in the middle.

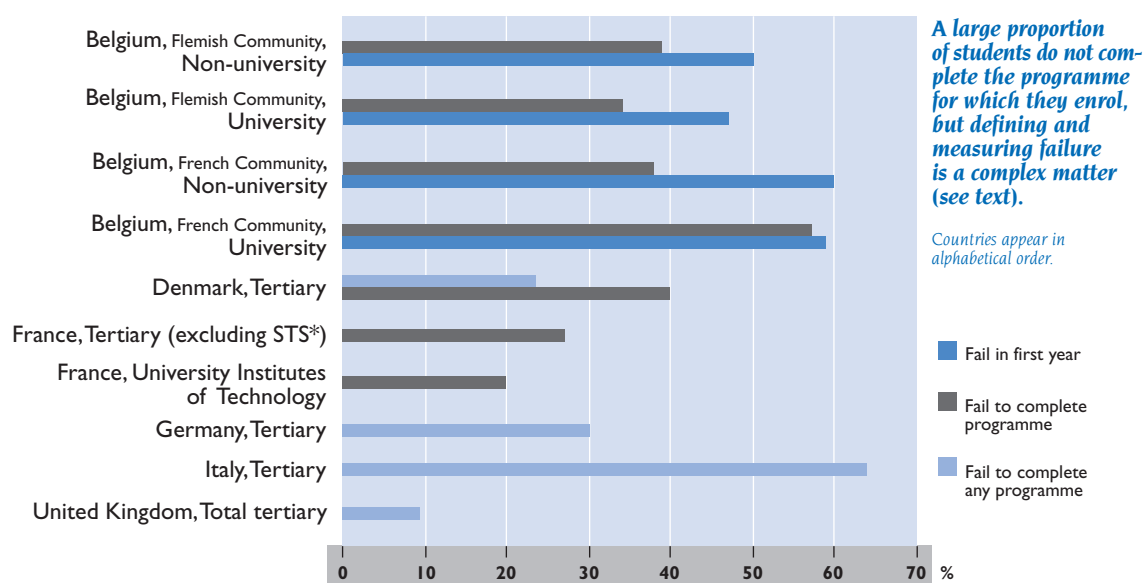
These figures fail to convey fully the context for and experiences of those identified as “drop-outs” or “non-completers”. In Italy, for example, it is estimated that many of the 23 per cent who leave tertiary education early in the course of their studies (accounting for more than a third of the overall rate of non-completion) do so without having attended a lecture or sat an examination (Moortgat, 1996). In the United States, it is increasingly common for learners to register for modular courses with no intention of completing a degree or diploma programme.

More detailed patterns of failure and non-completion for six European cases are presented in Figure 5.7.

Figure 5.7

Non-completion rates

Various forms of failure or non-completion in tertiary education in selected countries, various years



* Sections de Techniciens Supérieurs.

Note: Figures have been drawn from several sources, and are therefore subject to differences in coverage and methodology. Further work to improve the comparative information base is needed.

Sources, data and notes for Figure 5.7: page 118.

In interpreting the findings, it should be noted that:

- It is possible to fail in part of the system and still gain a qualification. In Belgium, open access to tertiary education focuses attention on pass rates at the end of the first year, estimated to be about half of all first-time students. But as students may retake failed exams, the proportion who, once enrolled, fail to complete the first cycle of their study programmes is generally lower.
- Changing courses is not the same as dropping out. The available data are weak, but it is estimated that in Denmark for example, while two-fifths of those commencing a course leading to the first degree will fail to complete that programme, 15 per cent will change programmes and institutions. Thus, about one-quarter of those entering tertiary education will leave without acquiring a qualification.
- Non-completion can potentially increase with expansion. In the United Kingdom, although rates of retention and programme completion remain high relative to experience in other countries, concern is being expressed about whether such high rates can be sustained in the wake of the rapid expansion of enrolments during the early 1990s. Rates of failure or non-completion appeared to increase, for example, in Belgium (French Community) and Germany, from about 1970 to the beginning of the 1990s. In both countries, participation in the first years of tertiary education expanded over this period.

Information to help understand “drop-out” or “non-completion” is limited and uneven. The nature of the problem is not well-defined within countries and it may be changing with the growing numbers and increased diversity in backgrounds and interests of those now participating. Non-completion is not always a negative phenomenon. It can potentially reflect:

- an intent to “stop-out”, rather than “drop-out”.
- a desire by the student merely to take a course rather than a full degree or diploma; or

- a decision to change orientation once enrolled.

On the other hand, non-completion can indicate:

- a failure to realise an intended degree or diploma objective; or
- a lack of an appropriate diversity in options, pathways or range of forms of teaching responsive to the varied backgrounds and interests of learners.

So implications for policy are unclear. Patterns of failure, drop-out and non-completion vary within countries by programme, secondary school qualification, social background and age. The underlying problems giving rise to these patterns have not been fully identified. In France and Belgium (Flemish Community), for example, students with technical and professional preparation in secondary education are more likely to fail in university studies and less likely to fail in short-cycle, non-university programmes. In the United States, studies have demonstrated that the least well-prepared students (as measured by high school grades and scores on college entrance tests) are five times more likely to drop-out than the best-prepared students. Rates of drop-out vary among programmes and institutions, in line with prior preparation of students enrolled. Programmes with larger numbers of less well-prepared students tend to have higher drop-out rates – but this is not always the fault of the programmes, which may do a better job in retaining these students than programmes in which they are less common.

If the direction for development is the gradual realisation of a lifelong approach to learning, the response to failure should not be to channel students into narrow options thought to suit their abilities, but rather to give them more options and greater support. In particular, there is a need for counselling and for instruction methods well suited to students who have followed non-traditional routes, who are older or who come from less well-represented backgrounds.

5.7 CONCLUSIONS

To help shape an appropriate response to wider participation in tertiary education, policy makers need to address the many new interests and needs of a larger student body that is more varied than previously in age, social background and prior educational experience. International indicators that can reflect this diversity do not yet exist. The principal weakness is a lack of comparative information on individual characteristics and choices. Most of the available indicators derive from programme- or institution-reported data, and so fail to provide the kind of information needed to understand better deliberate choices such as programme changes, drop-out/stop-out and combinations of different types of tertiary-level studies.

Policy frameworks in Australia, New Zealand, the United Kingdom and Japan, among others, are seeking to recognise if not foster such choices. With demand, both individual and social, as the driving force, a new orientation is needed in policies and practices of inclusiveness rather than selection. Demand will need to be accommodated with appropriate, effective provision designed at the system, institution and programme levels, and aimed at encouraging participation and reducing failures. Current practices and new initiatives in Member countries are beginning to reflect such an orientation, but more could be and should be done.

Among the key policy implications that follow from this analysis are the following tasks for governments and tertiary education systems:

- to improve quality and to ensure that all young people successfully master core learning objectives through secondary education;
- to promote and sustain diversity in provision, in ways that affect programme content, teaching and learning within as well as among institutions;
- to break from a channelling of students along preset routes, by creating greater flexibility in student pathways in practice as well as policy, and reducing the need to “double-back” when moving from one programme to another;
- to permit learners to time participation in the first years of tertiary education when it is best suited to their capacities, interests and needs;
- to balance this greater flexibility with good information, guidance and structured programmes, teaching and learning to ensure that learning efforts are not wasted;
- to strengthen management and leadership capacities at the institutional level, in order to widen the scope for the exercise of autonomy by providers within a policy framework that encourages responsiveness to demand and supports the development of administrative and teaching staff. ■

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