# Education Indicators
## 1998 Edition

**Ministère de l'Éducation**
Direction générale des services
à la gestion

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# Introduction

This edition of the *Education Indicators* deals with all levels of education, from kindergarten to university. Some indicators cover the education system as a whole, whereas others focus on each level of education. This year, new information has been added and new topics have been introduced: preschool education, as well as success in college and duration of college studies.

The purpose of publishing indicators is to keep Québec society abreast of major trends and developments in the education system by providing specific information on the resources allocated to education, on the various activities generated by the education system and on the results obtained. The indicators are presented under a series of headings classifying recent and historical data that help trace these developments over time. The 1998 edition contains 51 sections: 44 of these have been updated from last year, while the remaining 7 have been substantially revised or are altogether new. As well, the results of two new years of observation or estimates have been added whenever possible.

The development of education indicators in Québec is part of a larger movement. The Council of Ministers of Education, Canada (CMEC) has undertaken projects to develop indicators for Canada's provinces; the Organisation for Economic Co-operation and Development (OECD) has done the same for its member countries; and the United Nations Educational, Scientific and Cultural Organization (UNESCO) has published a series of indicators on education throughout the world. With its first edition of the *Education Indicators* dating back to 1986, Québec has been an active participant in this worldwide movement.

Examination of the indicators in this publication reveals a number of trends and developments that characterize Québec's education system. Some are explained briefly below. Additional information on these topics and others can be found further on in this booklet.

## Resources Allocated to Education

In 1997-98, Québec's educational spending, including operating expenses, capital expenses and the administrative expenses of the Ministère de l'Éducation, is estimated at $13.8 billion, representing 7.6% of the gross domestic product (GDP). The share of the GDP allocated to education in the rest of Canada is estimated at 7.0% and in the United States, 7.8%.

In 1996-97, the breakdown of operating expenses by level of education was as follows: elementary and secondary education (comprising school boards and subsidized private schools), 63.3%; college education (comprising CEGEPs and subsidized private colleges), 13.0%; and university education, 23.7%.

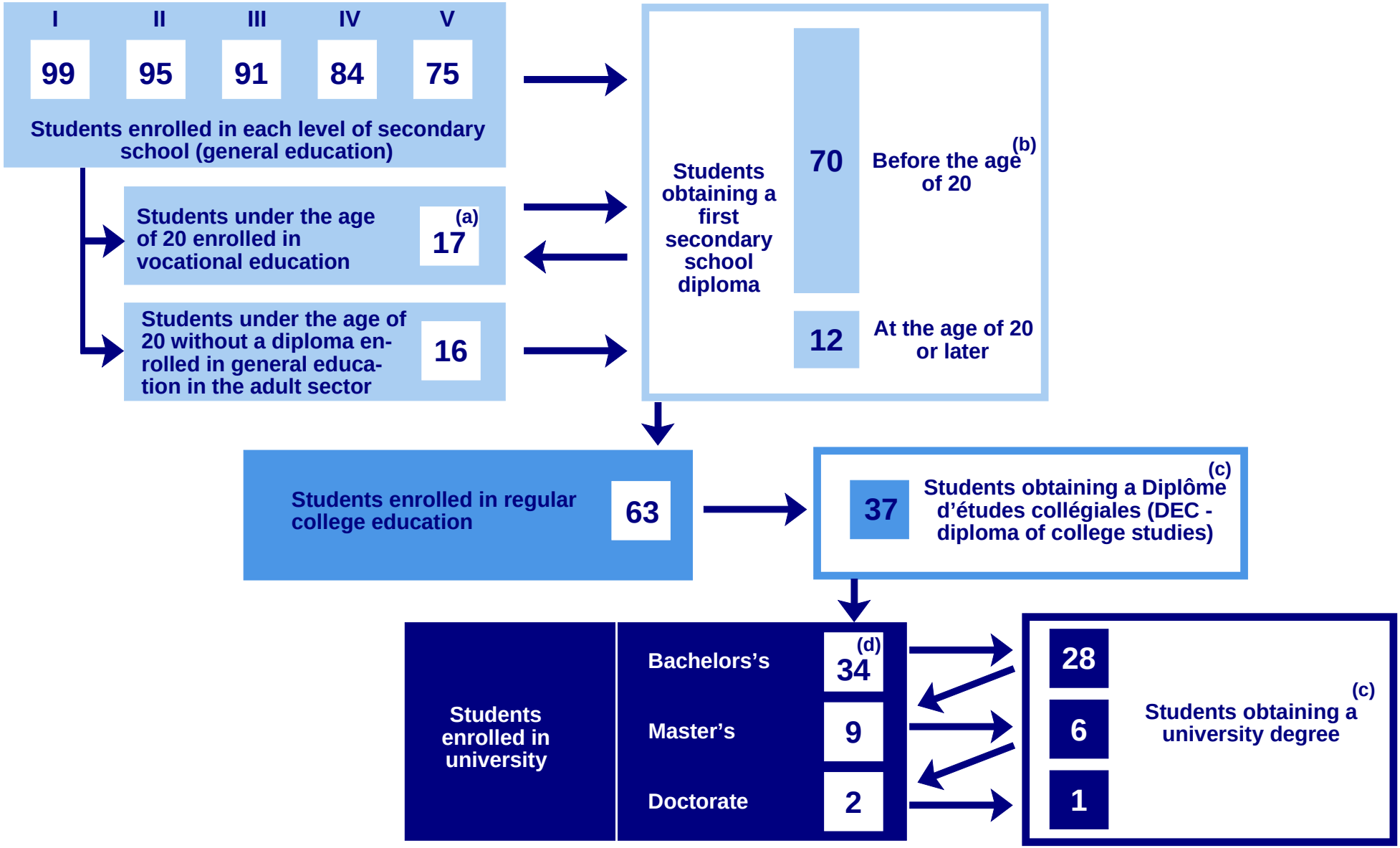
In 1997-98, in Québec, school board spending per student is estimated at $5 392, CEGEP spending per student at $6 287, and university spending per student at $11 489, not including subsidized research. Funding allocated to university research in 1995-96 totalled $587.3 million.

In 1996-97, 166 651 persons benefited from Québec's Student Financial Assistance Program. A total of $571 million was granted in the form of loans and $254.6 million, in bursaries.

## Student Retention from Elementary School to University

Student retention in Québec's education system for 1996-97 is illustrated on the following page. The schematic diagram represents the proportions of a cohort of young people who can expect to enrol and to obtain a diploma or degree in each level of education. The diagram shows that in a generation of 100 persons, 99 will reach the secondary level and 82 will obtain a first secondary school diploma, 37 will obtain a Diplôme d'études collégiales (DEC–diploma of college studies), 28 will earn a bachelor's degree, 6 will be awarded a master's degree and 1 will obtain a doctorate. Of the 82 students obtaining a secondary school diploma, 21 will do so in vocational education. Objectives for the educational success of a greater number of Quebecers have been set for the year 2010. Thus 85% of the students in a generation can expect to earn a secondary school diploma before the age of 20, 60% a DEC and 30% a bachelor's degree.

# Student Retention of 100 Quebecers in the Education System, Based on Findings for 1996-97




(a) This figure includes 11 general education graduates likely to obtain another diploma in vocational education.
(b) All diplomas earned in the youth sector are included, regardless of the age of the graduates.
(c) The most recent data available date from 1996.
(d) Students who enrol in university are not limited to those who hold a DEC.

Children who began elementary school in 1996-97 can expect to be in school for 15.4 years (if it is assumed that the success rates and retention rates prevailing in the education system in 1996-97 do not change). Secondary school graduates can expect to be in school for 11.2 years at an estimated cost of $74 347 in 1997-98; those obtaining a bachelor's degree can expect to study for 17.1 years at an estimated total cost of $153 501.

## Staying in School and Obtaining a Diploma

The dropout issue is a major concern of educators. Numerous approaches have shed light on this phenomenon. Educational success, reflected here by the probability of obtaining a diploma, is measured differently, depending on the level and sector of education. The proportion of a generation leaving secondary school in the youth sector without a diploma or not obtaining a diploma before the age of 20 in the adult sector was 30.4% in 1996-97. However, when the diplomas obtained in the adult sector are taken into account, regardless of age, the probability of leaving school permanently without obtaining a diploma drops to 17.6%.

The proportion of students in other education sectors who obtained a diploma and the proportion who left school either temporarily or permanently were determined by observing the number of students who leave school each year. Thus, of the students in Secondary Cycle Two in the adult sector who quit their studies before the age of 20, 65% did so with a diploma, while 35% left school for at least two years. In secondary-level vocational education, of 100 students of all ages enrolled in programs leading to a Secondary School Vocational Diploma (SSVD) who left secondary school, 66 did so with a diploma, while 34 dropped out of school. At the college level (regular education), 52% of students in technical programs leading to a DEC obtained a diploma, while 48% interrupted their studies for a period of at least two full years. Of the college students enrolled in pre-university programs, 64% left with a DEC, while 36% left without one. At the university level, 66% of students leaving bachelor's programs did so with a degree, while 34% dropped their studies. Of the students enrolled in master's programs, 65% earned their degree, while 35% dropped their studies, and at the doctoral level, 57% of candidates earned a doctorate, while the remaining 43% did not complete their program.

## Evaluation of Learning

In the subjects for which examinations were administered for the certification of studies by the Ministère de l'Éducation in June 1997, students in Secondary IV and V obtained an average mark of 71.9% and had a success rate of 84%. The boys' average was 71.3% and the girls', 72.5%. Students obtained an average final mark of 74.7% on the Secondary V French examination; 94.2% of the students obtained a passing mark.

On mathematics examinations held in 1997, under the supervision of the Council of Ministers of Education, Canada, 13- and 16-year-old students in Québec obtained the best results; more Francophone students in Québec placed in each level of performance than students from other provinces.

In the Third International Mathematics and Science Study (TIMSS) held in 1994-95, elementary and secondary school students in Québec placed second or third among some 20 OECD countries on the mathematics examination. On the science examination, Québec students scored higher than the international average.

With respect to holders of a diploma in vocational education at the secondary level, employers surveyed in 1997 considered that the graduates' knowledge of French and English needed to be improved, but 90% of the employers nonetheless thought the graduates' competence was moderate or high.

## What Becomes of Graduates?

When they finish school, graduates from secondary school, college and university have to make choices. Some decide to continue their education, while others have their sights set on the job market. In 1995-96, at the end of their college studies, 78.6% of pre-university program graduates under the age of 25 went on to university the following year, compared with 18.9% of graduates from a technical program.

In March 1997, students who had graduated in 1995-96 with an SSVD had an unemployment rate of 24.2%. A comparison of the unemployment rates for college graduates of technical programs and university graduates with comparable age groups in the work force confirms the correlation between holding a diploma from a higher level and a lower probability of being unemployed. Students who graduated from a technical program in 1995-96 had

an unemployment rate of 11.1% in March 1997, whereas in 1997, the unemployment rate for 20-to-24-year-olds in the work force was 15.6%. In January 1997, the unemployment rate for graduates with a bachelor's degree awarded in 1996 was 9.1%, and for those with a master's degree, it was 8.1%. These rates may be compared with those of the 25-to-34-year-olds in the work force, whose unemployment rate in 1997 was 11.6%.

Since 1990, there has been significant change in the structure of the job market in Québec. The number of jobs held by vocational education, college and university graduates in 1997 had increased by 463 000 compared with 1990. During this time, the number of jobs held by those with a Secondary School Diploma (SSD) in general education dropped by 373 000.

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Readers seeking a more in-depth analysis or an up-to-date picture of the situation should consult the individual sections in the pages that follow. The Ministère de l'Éducation and the Conseil supérieur de l'éducation also produce and publish specialized studies on these topics. Finally, general information on the education system is available in the following publications:

– *Basic Statistics on Education*
– *Rapport annuel* of the Ministère de l'Éducation
– Annual Report on the State and Needs of Education, published by the Conseil supérieur de l'éducation
– *A New Direction for Success: Ministerial Plan of Action for the Reform of the Education System*

The Ministère de l'Éducation also has a page at the Web site of the Gouvernement du Québec (www.meq.gouv.qc.ca).

# Québec's Education System: An Overview

Québec's education system offers a wide range of educational programs and services from kindergarten to university.

## Elementary and Secondary Education

Elementary school normally lasts six years; secondary school, five. Children are admitted to the first year of elementary school when they will have turned 6 years of age by October 1 of that school year. Kindergarten is not compulsory, but almost all 5-year-olds attend half-time and, as of the fall of 1997, full-time. School attendance is compulsory until the year in which students turn 16 years of age, which normally corresponds to Secondary IV.

Elementary education is offered in French, English or a Native language, and secondary education, in French or English. Students deemed eligible to study in English are chiefly those whose father or mother attended English elementary school in Canada. Public elementary and secondary education is provided by school boards. The school boards are managed by school commissioners, who are elected by residents in the territory under the school board's jurisdiction. The school boards hire the staff they need to provide educational services. In 1996-97, the Québec government funded 80% of school board operating expenses, while local taxes accounted for 13% of school board revenues, and other sources provided the remaining 7%.

The school board system is currently confessional and comprises Catholic school boards, Protestant school boards and non-denominational school boards. The latter serve primarily Native students in the Côte-Nord and Nord-du-Québec regions; they are the Cree School Board, the Kativik School Board and the Commission scolaire du Littoral. School boards vary in size, with enrolments ranging from 500 to 90 000; the median number of students is approximately 4 000. As of July 1998, the number of school boards will decrease to 72 and they will be reorganized according to language (except for the 3 non-denominational boards) into 60 French and 9 English school boards.

Elementary and secondary education are also provided by private institutions, some of which are subsidized by the Ministère de l'Éducation. The private school system accounts for 4% of elementary students and 15% of secondary students in the youth sector. More than half of the operating expenses of subsidized private institutions was funded by the Québec government. Elementary and secondary education are also offered by some public institutions that are not part of the school board system, but that fall under the Québec or federal governments; these institutions account for 0.3% of students.

Secondary school diplomas are awarded by the Minister of Education to students who fulfil the certification requirements. A Secondary School Diploma (SSD) is required for admission to college. A Secondary School Vocational Diploma (SSVD) generally leads to the job market, but also allows admission to college. The harmonization of educational services offered in the youth sector and the adult sector is a feature of Québec's education system. Adult education leads to secondary school diplomas that are the same as or equivalent to those offered in the youth sector.

## College Education

Students may enrol in college programs leading to a Diplôme d'études collégiales (DEC–diploma of college studies) or in short technical programs leading to an Attestation d'études collégiales (AEC–attestation of college studies). College education theoretically consists of a two-year program for students enrolled in pre-university education or a three-year program for those in technical education; technical programs aim primarily at entry into the job market, but also allow graduates admission to certain disciplines in university.

Students may pursue their college studies in the language of instruction of their choice. Public college education is provided by CEGEPs. CEGEPs are administered by boards composed of representatives from different interest groups, including members of the public, parents, students, staff members and college administrators. In 1996-97, the Québec government funded 86% of CEGEP operating expenses. The private school system accounted for 11% of college students. A total of 57% of the operating expenses of subsidized private colleges was funded by the Québec government. College education is also offered by several other schools that fall under a ministry other than the Ministère de l'Éducation and by MacDonald College, which falls under McGill University.

A DEC is awarded to a student by the Minister of Education following the recommendation of the institution attended. For shorter programs, other types of certification are awarded: the Certificat d'études collégiales (CEC–certificate of college studies), the Diplôme de perfectionnement de l'enseignement collégial (DPEC–diploma of advanced college studies) and the AEC. AECs are issued directly by the college. CECs and DPECs are being phased out as students stopped being admitted to programs leading to these types of certification in 1994.

## University Education

Québec has English and French universities; students are free to attend the university of their choice. University education is divided into three levels of studies. The first leads to a bachelor's degree (generally after three years, compared with the four years required elsewhere in North America), the second to a master's degree and the third to a doctoral degree. Universities also award certificates, diplomas and other forms of attestations to certify the successful completion of short programs. In 1996-97, 60% of university expenses was subsidized by the Québec government.

## The Ministère de l'Éducation

The Ministère de l'Éducation fulfils different functions for the various levels of education. For elementary, secondary and college education, the Ministère develops programs, and determines objectives and often content. In terms of labour relations, it negotiates and signs provincial agreements. In terms of financing, it defines the standard framework and provides the largest share of resources. At the university level, it promotes teaching and research by providing the resources required for the operation and development of universities while respecting their autonomy and fostering collaboration among the various partners.

## Reform of the Education System

In the fall of 1996, following the Estates General on Education, the Minister of Education, Pauline Marois, published the main guidelines for the reform of the education system. Seven major lines of action were defined:

- providing services for young children, in particular, by implementing full-time kindergarten
- teaching the essential subjects throughout elementary and secondary school
- giving more autonomy to schools
- supporting Montréal schools, given the particular challenges they are facing
- intensifying the reform of vocational and technical education
- consolidating and rationalizing postsecondary education
- providing better access to continuing education

Concrete changes have already been made, in particular, the implementation of full-time kindergarten for 5-year-olds in the fall of 1997. At the college level, a new financial measure promoting educational success was introduced in 1997-98: special fees of $2.00 per hour will be levied for each course that is not successfully completed (with the exception of the first course) and this should raise the success rate for courses from 83% to 90% by the end of the 1999-2000 school year. At the secondary level, the diversification of vocational education options has also been undertaken and will provide access to programs leading to an SSVD after Secondary III and the implementation of programs leading to a Vocational Education Certificate (VEC) that will prepare students who have completed Secondary II to practise a semi-skilled occupation.

# 1.1 Educational Spending in Relation to the GDP

It is estimated that in 1997-98, Québec will allocate 7.6% of its gross domestic product (GDP) to education,[1] compared with the Atlantic Provinces at 9%, Ontario at 6.6%, and Western Canada at 6.8%. The United States will allocate an estimated 7.8% of its GDP to education. Although Québec continues to earmark more for education than the rest of Canada, the gap between Québec and the Canadian average has narrowed. For the first time during the period under review, the share of the GDP allocated to education is lower in Québec than in the United States.

***It is estimated that in 1997-98, the share of the GDP allocated to education will be higher in Québec than in the rest of Canada as a whole, but slightly lower than in the United States. Compared with the situation that prevailed in the early 1980s, the gap between Québec and the rest of Canada has narrowed.***

From 1976 to 1981, the share of the GDP allocated to education in Québec decreased slightly, falling from 9.6% to 9.3%, while in the rest of Canada it dropped from 7% to 6.5%. In the United States, it went from 6.9% to 6.3%. With respect to educational funding, the gap between Québec and the rest of Canada was 2.8 percentage points in 1981-82; the gap between Québec and the United States was 3 percentage points.

Between 1981 and 1989, the share of the GDP earmarked for education in Québec dropped considerably (from 9.3% to 7.3%), while increasing slightly in the rest of Canada (from 6.5% to 6.7%), and showing a higher rise in the United States (from 6.3% to 7%). The gap of 2.8 percentage points between Québec's funding and that of the rest of Canada in 1981-82 narrowed to 0.6 percentage points in 1989-90; the gap between Québec and the United States decreased to 0.3 percentage points.

The fact that Québec has now reached the North American average can largely be explained by the more restrictive measures adopted by the Québec government to control spending during that period.

1. In 1997-98, it is estimated that $13.8 billion of Québec's $182-billion GDP will be spent on education. The concept of expenses used in this section is defined in Table 1.1.

Between 1989 and 1993, a period of economic recession, the share of the GDP allocated to education rose in all regions of Canada and in the United States, with the result that, in 1993-94, Québec spent 8.7% of its GDP on education, the rest of Canada spent 7.8% and the United States spent 7.3%.

If the share of the GDP allocated to education in Québec is compared with that allocated by the member countries of the Organisation for Economic Co-operation and Development (OECD) in 1994, Québec ranks among the countries with the highest educational spending. This is primarily because teaching costs are relatively higher in Québec than the average for the OECD countries.[2]

Between 1993 and 1997, the share of the GDP spent on education decreased in all regions of Canada, but Québec and Ontario experienced the greatest decrease due to large budget cuts and a reduction in labour costs. The share of the GDP allocated to education in Québec went from 8.7% to 7.6%, while in the rest of Canada, it went from 7.8% to 7%. The United States' educational spending has continued to grow and stands at 7.8% for 1997-98.

The fact that educational spending in 1997-98 represents a larger share of the GDP in Québec than in the rest of Canada as a whole can be explained primarily by the fact that Québec's collective wealth is relatively lower than the Canadian average. If Québec had the same level of collective wealth as the average for the other provinces, its current educational spending would represent a lower proportion of the GDP than elsewhere in Canada.

2. Refer to the OECD publication, *Education at a Glance–OECD Indicators* (Paris: 1997). The OECD's definition of expense is not the same as the Statistics Canada definition used in the calculations for the *Education Indicators*; however, even when Québec's data is adjusted to take into account the OECD definition of expense, Québec ranks among the countries with the highest educational spending. The most recent figures on the share of the GDP allocated to education for the OECD countries date to 1994.

## Table 1.1

# Educational spending[1] in relation to the GDP: Québec, other regions of Canada, and the United States (%)

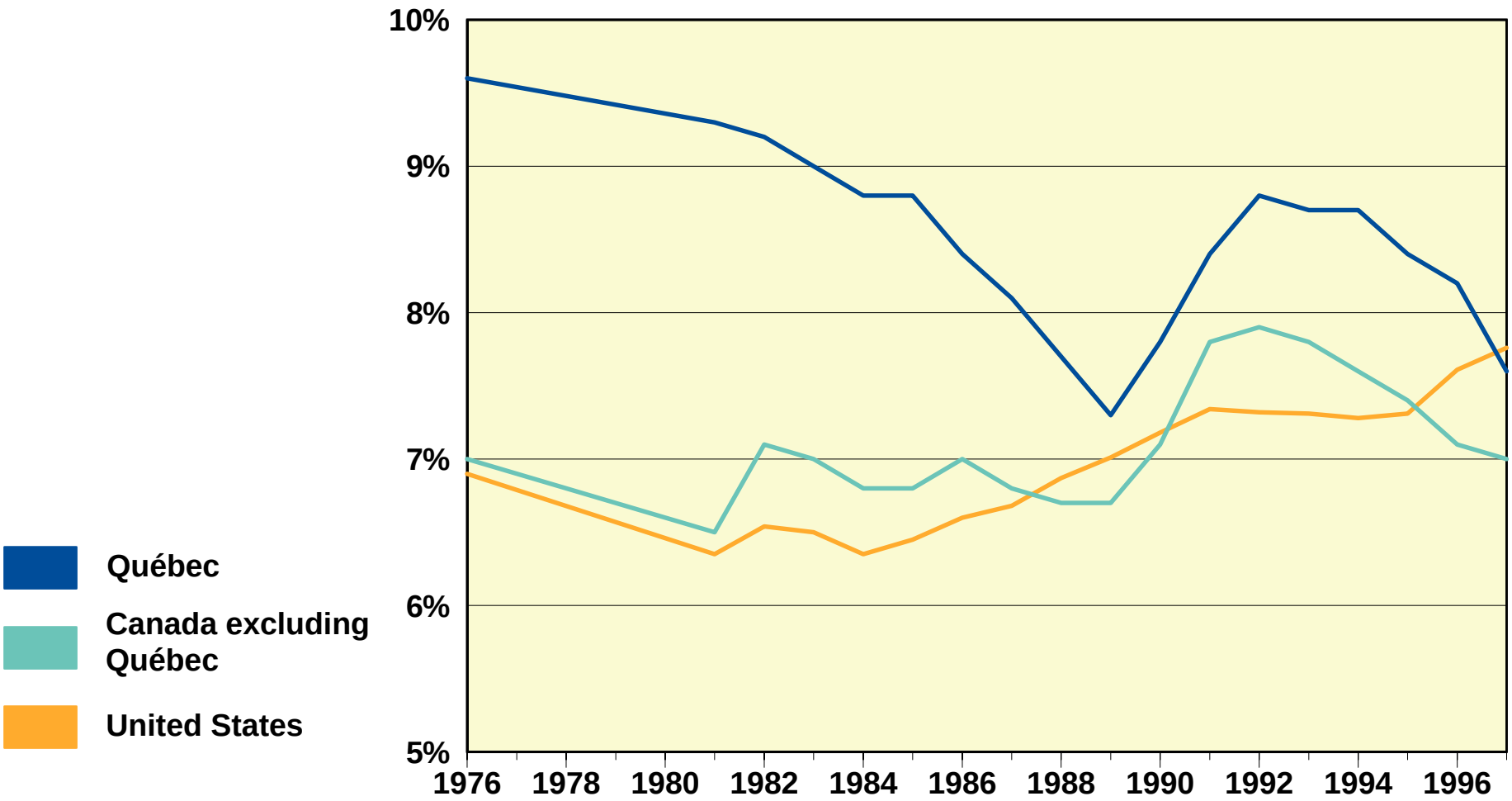
| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **9.6** | **9.3** | **7.3** | **8.7** | **8.2** | **7.6** |
| **Canada, excluding Québec** | **7.0** | **6.5** | **6.7** | **7.8** | **7.1** | **7.0** |
| Atlantic Provinces | 10.9 | 10.5 | 9.3 | 10.0 | 9.7 | 9.0 |
| Ontario | 6.8 | 6.5 | 6.2 | 7.6 | 6.6 | 6.6 |
| Western Canada | 6.3 | 5.7 | 6.6 | 7.4 | 7.1 | 6.8 |
| **Canada** | **7.6** | **7.1** | **6.8** | **8.0** | **7.4** | **7.1** |
| **United States** | **6.9** | **6.3** | **7.0** | **7.3** | **7.6** | **7.8** |

e: Estimates

1. These figures include the operating and capital expenses of all levels of public and private education, the Ministère's administrative expenses, government contributions to employee pension plans and other education expenses (according to Statistics Canada).

Graph 1.1

## Educational spending in relation to the GDP: Québec, Canada excluding Québec, and the United States (%)



# 1.2 The Cost of Educating Graduates and the Sources of Funding

In 1997-98, the cost of educating a secondary school graduate is estimated at $74 347; for a graduate from pre-university education and technical education, the cost is estimated at $97 717 and $124 632, respectively. The cost of educating a graduate from a bachelor's program is estimated at $153 501.

***The total cost of a bachelor's degree is $153 501, almost 90% of which is funded from the public purse.***

The concept of expenses used here includes operating and capital expenses, the Ministère's administrative expenses, government contributions to employee pension plans, the cost of financial assistance to students, and other education expenses. For graduates with a Secondary School Diploma (SSD), the cost is based on all the years during which school was attended at the preschool, elementary (regular) and secondary (general) levels. For students graduating with a Diplôme d'études collégiales (DEC–diploma of college studies) in pre-university education, the cost is based on all the years attended at the preschool, elementary (regular), secondary (general) and college (pre-university) levels. For students graduating with a DEC in technical education, the cost is based on all the years attended at the preschool, elementary (regular), secondary (general) and college (technical) levels. For graduates with a bachelor's degree, the cost is based on all the years attended at the preschool, elementary (regular), secondary (general) and college (pre-university) levels as well as in undergraduate university studies.

To calculate the cost of educating a graduate, an estimate of the annual spending per student at each level of education in 1997-98[1] was used, as well as the average duration of studies completed by those who obtained the diploma.[2] The expenses incurred by students leaving school without a diploma were not taken into account.

1. The cost of university studies has been determined for all levels. Figures for studies leading to bachelor's programs have therefore been slightly overestimated.
2. At the university level, one year of study is equivalent to two full-time terms. One part-time term counts as one third of a full-time term at university and one quarter of a full-time term at college.

It is also possible to break down the various sources of funding for a bachelor's degree. The total cost for all the years of schooling in preschool education, elementary school (regular), secondary school (general), college (pre-university) and undergraduate university studies is considered.[3]

Table 1.2b presents the main sources of funding for a bachelor's degree in 1996-97, in comparison with Ontario.[4] In Québec, the provincial government finances 80.8% of the total cost of a bachelor's degree, whereas the Ontario government contributes only 43.5%. Ontario relies much more heavily on local taxes than Québec (42.2% compared with 6.8%). Tuition fees, which are included in the category of "Individuals" in the table, are higher in Ontario than in Québec.[5]

If the government subsidies and school taxes are taken together, public funding stands at 87.6% in Québec and 85.7% in Ontario.

3. A typical individual attending a public institution has been used to determine the sources of funding for a bachelor's degree.
4. Since the data required to calculate the actual duration of studies in Ontario is not available, the real cost of obtaining a bachelor's degree in Ontario cannot be determined. Therefore, costs have been estimated on the basis of a hypothetical duration of studies. Quebecers who obtain a bachelor's degree without interrupting their studies spend 16 years in school: 6 at the elementary level, 5 at the secondary level, 2 at CEGEP and 3 at university. In Ontario, students progress through school in different ways: they spend 12 or 13 years in elementary and secondary school, and 3 or 4 years at university. For the simulation presented in Table 1.2b, it was assumed that students in Ontario spent 12 years in elementary and secondary school and 4 years at university.
5. See Section 1.14.

## Table 1.2a
## Total cost of various diplomas,[1] 1997-98[e]

| | Average duration of studies (years) | Cost of education ($) |
|---|---|---|
| Secondary School Diploma | 11.2 | 74 347 |
| DEC (diploma of college studies) | | |
| Pre-university education | 13.6 | 97 717 |
| Technical education | 15.0 | 124 632 |
| Bachelor's degree | 17.1 | 153 501 |

## Table 1.2b
## Sources of funding for a bachelor's degree, 1996-97[e] (%)

| | Québec | Ontario |
|---|---|---|
| Government subsidies[2] | 80.8 | 43.5 |
| Local taxes | 6.8 | 42.2 |
| Individuals | 5.1 | 8.7 |
| Other sources | 7.3 | 5.6 |
| Total | 100.0 | 100.0 |

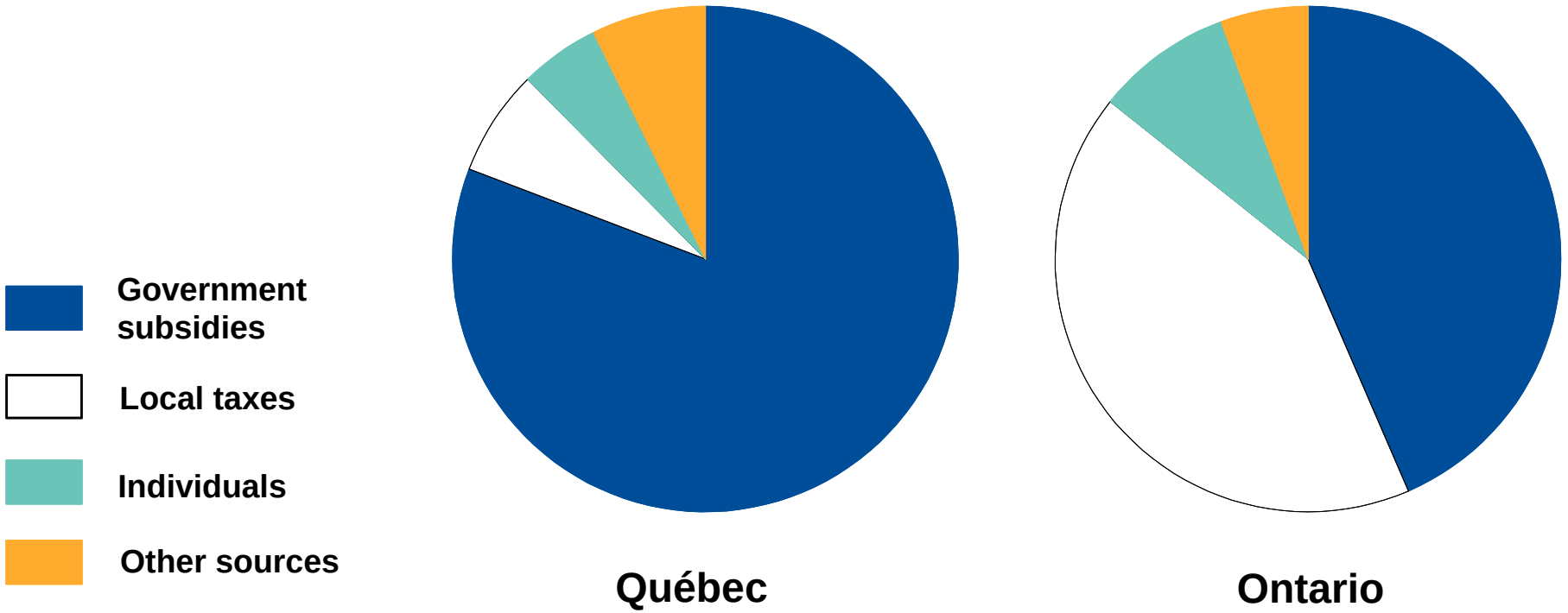
e: Estimates

1. The cost includes preschool education; however, with respect to the average duration of studies indicated in the table, the duration of preschool education has not been taken into account because this year is not generally recognized.

2. Includes provincial and federal government subsidies.

Graph 1.2

## Sources of funding for a bachelor's degree, Québec and Ontario, 1996-97



# 1.3 Spending on Elementary and Secondary Education in Relation to the GDP

In 1997-98, it is estimated that 4.3% of Québec's gross domestic product (GDP) will be spent on education,[1] compared with 4.8% for the Atlantic Provinces, 4.7% for Ontario and 4.2% for Western Canada. In the United States, the share of the GDP allocated to elementary and secondary education is estimated at 4.7%. Québec therefore spends less than the average for the rest of Canada and the United States, but it should be kept in mind that the duration of elementary and secondary education in Québec is shorter.[2]

***Between 1981 and 1990, the share of the GDP allocated to elementary and secondary education in Québec dropped considerably. Since 1990-91, it has increased slightly and then fallen again. In 1997-98, it is estimated that Québec will spend a smaller share of its GDP on elementary and secondary education than the average for the rest of Canada and the United States.***

Between 1976 and 1981, the share of the GDP allocated to elementary and secondary education dropped from 6.6% to 6% in Québec, while in the rest of Canada it went from 4.6% to 4.3%. In the United States, it fell from 4.4% to 3.9%. The gap between Québec and the rest of Canada with respect to educational funding was 1.7 percentage points in 1981-82, representing a total of $1.4 billion.

From 1981 to 1989, the share of the GDP earmarked for elementary and secondary education dropped from 6% to 4.4% in Québec, while it remained stable in the rest of Canada as a whole and increased in the United States. The gap of 1.7 percentage points recorded in 1981-82 between Québec and the rest of Canada narrowed steadily in subsequent years and disappeared almost entirely in 1989-90. That same year, the share of the GDP spent on elementary and secondary education in Québec was slightly higher than in the United States. The fact that Québec has now reached the North American average can largely be explained by the more restrictive measures adopted by the Québec government to control spending during that period.

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1. In 1997-98, it is estimated that $7.8 billion of Québec's $182-billion GDP will be spent on public and private elementary and secondary education. The concept of expenses used in this section is defined in Table 1.3.
2. The duration of elementary and secondary education is 11 years in Québec and at least 12 years in the other regions considered.

Between 1989 and 1993, a period of economic recession, the share of the GDP allocated to education rose almost everywhere in Canada and the United States, such that in 1993-94, Québec spent 4.9% of its GDP on elementary and secondary education. This is slightly less than the 5% spent in the rest of Canada. In 1993-94, the United States spent 4.4% of its GDP on elementary and secondary education.

When the share of Québec's GDP spent on elementary and secondary education is compared with that of the member countries of the Organisation for Economic Co-operation and Development (OECD) in 1994, Québec ranks among the countries with the highest educational funding. Québec's higher spending is primarily explained by the costs of teaching, which are relatively higher in Québec than the average for the OECD countries.[3]

Between 1993 and 1997, the share of the GDP spent on elementary and secondary education decreased in Québec and in the other provinces, following budget cuts to school boards. In the United States, spending on elementary and secondary education continued to rise.

3. Refer to the OECD publication, *Education at a Glance–OECD Indicators* (Paris: 1997). The OECD's definition of expense is not the same as the Statistics Canada definition used in the calculations for the *Education Indicators*; however, even when Québec's data is adjusted to take into account the OECD definition of expense, Québec ranks among those countries with the highest educational spending. The most recent figures on the share of the GDP allocated to education for the OECD countries date to 1994.

## Table 1.3

# Spending on elementary and secondary education[1] in relation to the GDP: Québec, other regions of Canada, and the United States (%)

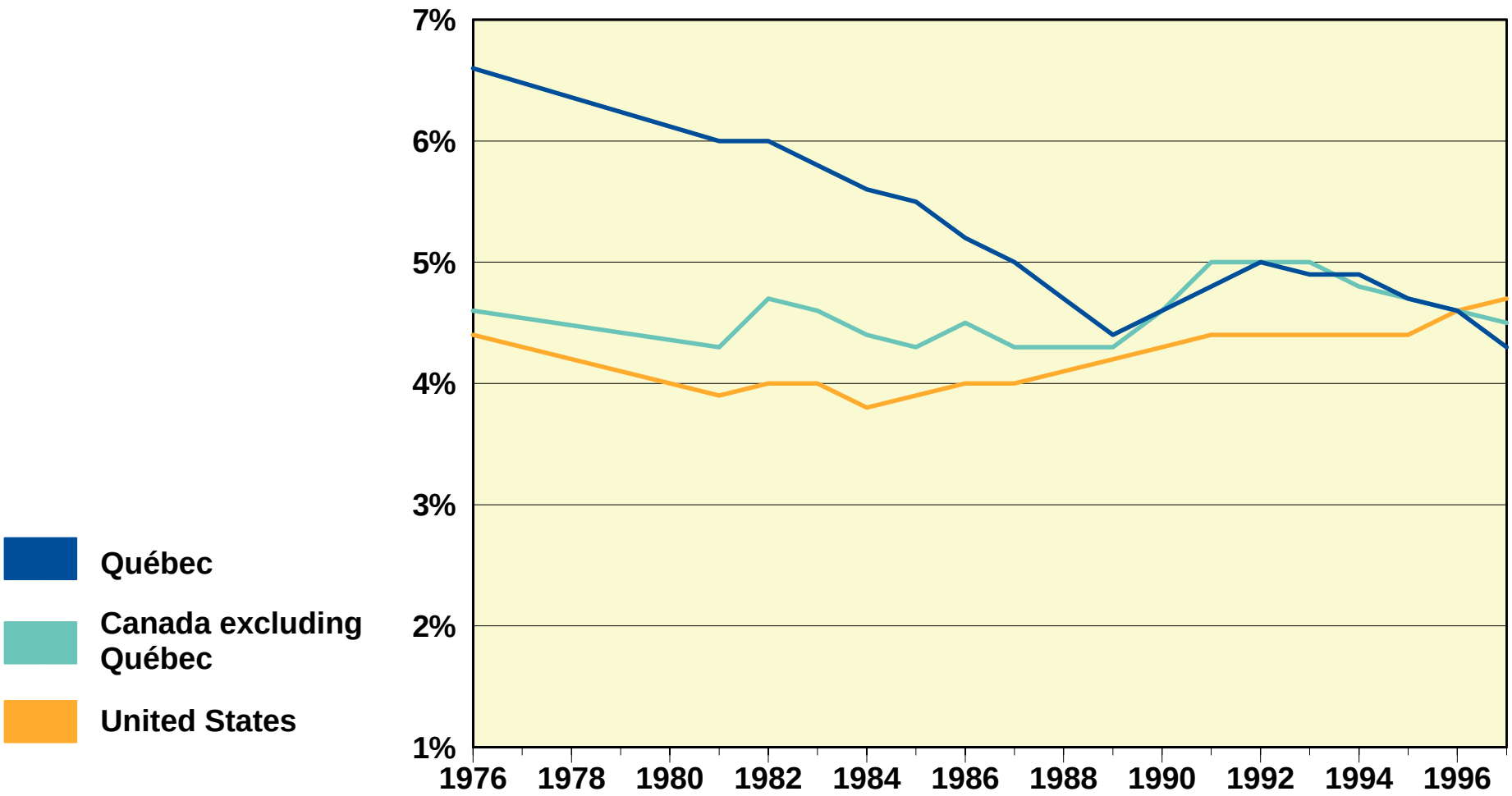
| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **6.6** | **6.0** | **4.4** | **4.9** | **4.6** | **4.3** |
| **Canada, excluding Québec** | **4.6** | **4.3** | **4.3** | **5.0** | **4.6** | **4.5** |
| Atlantic Provinces | 7.0 | 6.9 | 5.7 | 5.7 | 5.2 | 4.8 |
| Ontario | 4.5 | 4.4 | 4.3 | 5.2 | 4.6 | 4.7 |
| Western Canada | 4.2 | 3.7 | 4.1 | 4.6 | 4.4 | 4.2 |
| **Canada** | **5.1** | **4.7** | **4.3** | **5.0** | **4.6** | **4.5** |
| **United States** | **4.4** | **3.9** | **4.2** | **4.4** | **4.6** | **4.7** |

e: Estimates

1. These figures include the operating and capital expenses for public and private elementary and secondary education, the Ministère's administrative expenses (the portion attributable to elementary and secondary education), government contributions to employee pension plans and other education expenses (according to Statistics Canada).

Graph 1.3

## Spending on elementary and secondary education in relation to the GDP: Québec, Canada excluding Québec, and the United States (%)



# 1.4 School Board Spending per Student in Relation to per Capita GDP

***Québec's relative financial investment in school boards is higher than in the rest of Canada, chiefly because its level of collective wealth is lower.***

Per-student spending[1] is an indicator of financial investment in education, and the per capita gross domestic product (GDP) is an indicator of collective wealth. Relating the two provides an indicator of the relative financial investment in education, that is, per-student spending expressed as a percentage of the per capita GDP. In 1997-98, Québec's school board expenditures per student are estimated at $5 392 and the per capita GDP at $24 524, the former representing 22% of the latter. A comparison of this relative financial investment indicator with that of other areas of North America shows that Québec spends more on education than the other Canadian provinces and the United States.

Between 1976 and 1981, the ratio of per-student spending to per capita GDP grew significantly in Québec, from 23.8% to 29%, whereas in the rest of Canada and the United States, it rose more moderately, from 17.3% to 18.5% and from 17% to 18%, respectively. The gap between Québec and these areas has nevertheless narrowed considerably since 1981-82.

In fact, from 1981 to 1989, the ratio of per-student spending to per capita GDP shrank from 29% to 22.9% in Québec, while increasing more moderately in the rest of Canada (from 18.5% to 20.3%) and in the United States (from 18% to 20.4%). The steep decline in Québec's ratio stems from the more restrictive measures implemented to control spending, which slowed the growth of the school boards' expenditures per student.

Between 1989 and 1993, the ratio of per-student spending to per capita GDP increased throughout Canada and in the United States. In Québec, this ratio rose from 22.9% in 1989-90 to 25.9% in 1993-94; in the rest of Canada,

1. This refers to operating expenses, which exclude debt service, adult education (except for Québec as of 1990-91), capital expenditures financed directly from current revenues, and transfer expenses. As of 1990-91, the operating expenses of Québec school boards include adult education. This modification is a result of changes in the financial statements of Québec school boards. It is no longer possible to clearly separate operating expenses for the youth sector and the adult sector. The impact of this modification on the ratio of per-student spending to per capita GDP is negligible.

it climbed from 20.3% to 23% during this same period. This increase in the relative financial investment in education can be largely explained by the economic recession, which resulted in a much smaller increase in the per capita GDP. In Québec, per-student spending rose by 18% from 1989 to 1993, while the per capita GDP increased by only 4%.

Between 1993 and 1997, the ratio of per-student spending to per capita GDP decreased throughout Canada, primarily because of large budget cuts. In the United States, the ratio dropped slightly, and then rose again.

In 1997-98, it is estimated that Québec's relative financial investment in education is closer to the average for the other areas observed. This is explained by the fact that per-student spending by school boards in Québec, which has dropped considerably in recent years, is estimated to be 7% less than the rest of Canada ($5 392 compared with $5 779) in 1997-98.[2] Québec's level of collective wealth, as measured by the per capita GDP, is roughly 15% lower ($24 524 compared with $28 818), such that per-student spending represents 22% of the per capita GDP in Québec and 20.1% in the rest of Canada. Québec's relative financial investment in 1997-98 is expected to be similar to that of the United States.

2. See Section 1.6.

## Table 1.4

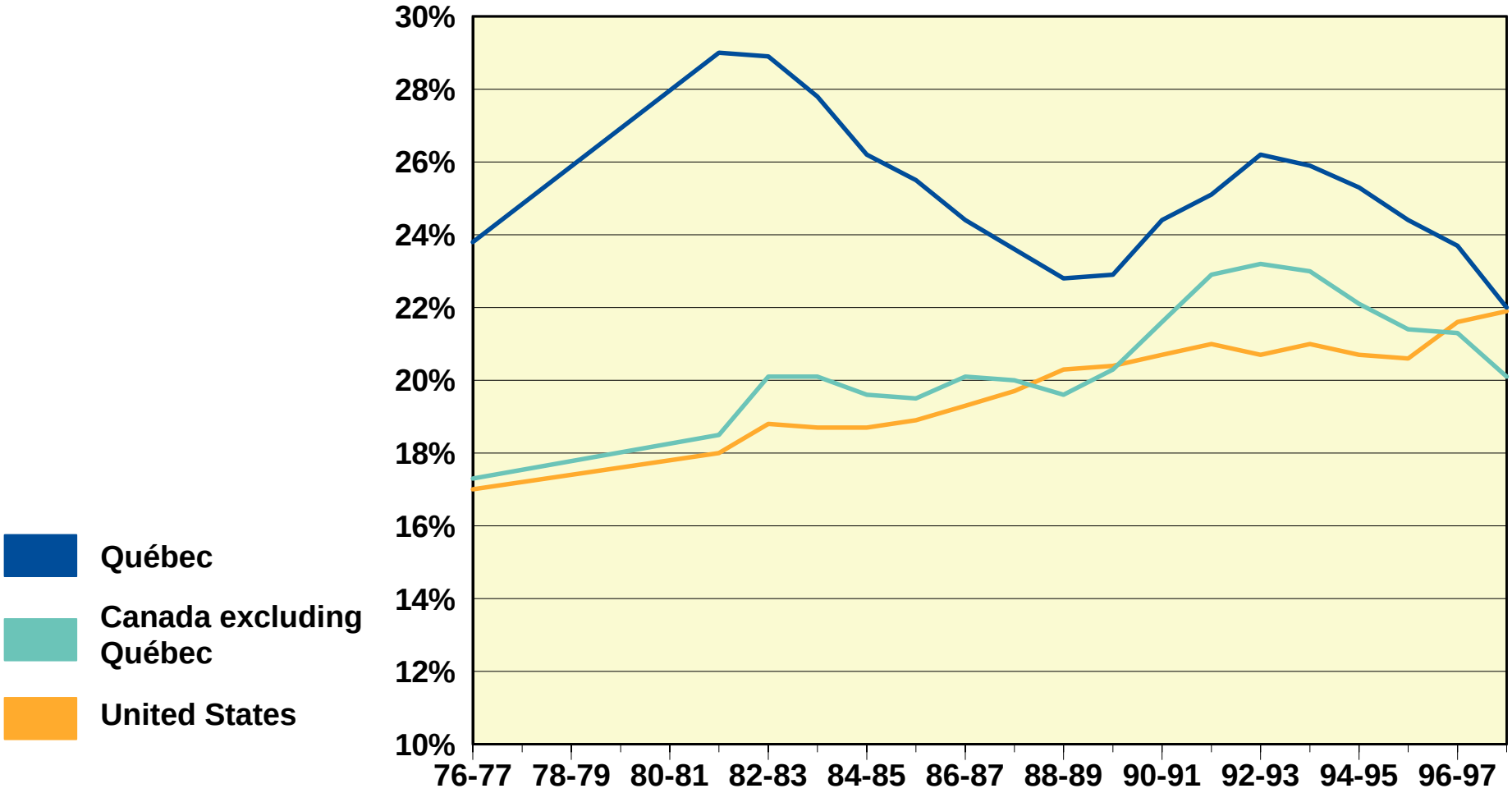
# School board spending per student in relation to per capita GDP: Québec, other regions of Canada and the United States (%)

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **23.8** | **29.0** | **22.9** | **25.9** | **23.7** | **22.0** |
| **Canada, excluding Québec** | **17.3** | **18.5** | **20.3** | **23.0** | **21.3** | **20.1** |
| Atlantic Provinces | 23.1 | 25.1 | 23.6 | 24.2 | 23.4 | 21.0 |
| Ontario | 17.4 | 19.2 | 20.4 | 24.0 | 21.6 | 20.4 |
| Western Canada | 16.2 | 17.0 | 19.3 | 21.4 | 20.4 | 19.2 |
| **Canada** | **18.8** | **20.7** | **20.9** | **23.7** | **21.9** | **20.4** |
| **United States** | **17.0** | **18.0** | **20.4** | **21.0** | **21.6** | **21.9** |

e: Estimates

Graph 1.4

## School board spending per student in relation to per capita GDP: Québec, Canada excluding Québec, and the United States (%)



# 1.5 School Board Spending

School board spending in Québec is estimated to be approximately $250 million less in 1997-98 than in 1993-94, representing a drop of 4%.[1] This drop can be explained by budget cuts and by significant cost-saving measures adopted by the school boards. These measures ensue largely from agreements between the government and unions that have made it possible to reduce labour costs.

***School board spending is estimated to be $250 million less in 1997-98 than in 1993-94. Per-student spending by school boards in constant dollars dropped by 9% between 1993 and 1997.***

Between 1976 and 1981, school board spending increased an average of 10.6% per year, but this rate dropped to 3.9% per year between 1981 and 1989, and to 4.8% between 1989 and 1993. Lower inflation, salary restrictions and generally more conservative budget policies have curbed the rapid increase in spending.

When increases in the price of goods and services used in providing educational services are taken into account, spending can be expressed in constant dollars.[2] Figures show that spending in constant dollars remained relatively stable between 1976 and 1981, while enrolments declined by 17%. This resulted in an increase in real funds available per student: per-student spending in constant dollars grew by 21% between 1976 and 1981. The following factors contributed to this rise: a lower student-teacher ratio, an increase in teacher qualifications recognized for salary purposes, and the higher cost of job security for teachers.

Between 1981 and 1989, spending in constant dollars changed very little. The level of teacher qualifications recognized for salary purposes increased slightly (an increase in real expenses), but the student-teacher ratio also increased slightly (a decrease in real expenses). Because enrolments decreased slightly during this period (2%), a small increase (3%) in per-student spending in constant dollars occurred.

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1. This refers to the school boards' operating expenses for the youth and adult sectors.
2. The school boards' education price index is used to express spending in constant dollars. This index indicates changes in the price of goods and services used to provide educational services. Changes in spending in constant dollars reflect changes in the real funds available to school boards.

At the beginning of the 1990s, school board operating expenses in constant dollars rose at a faster rate. This increase is attributable to a rise in enrolments (especially in the adult sector), as well as to the significant variations in certain expense items, including expenses for students classified as having special needs, consultation and workshop activities, and school bus transportation. If per-student spending in constant dollars is considered, the increase is less significant.

Since 1993-94, however, spending per student (in current and constant dollars) has decreased. Between 1996-97 and 1997-98 the drop has been particularly significant; as mentioned previously, budget cuts and the adoption of cost-saving measures by school boards, as well as the introduction of full-time kindergarten in Québec school boards in 1997-98 has resulted in a drop in per-student spending.[3]

3. The introduction of full-time kindergarten has increased the “relative weight” of a segment of the school population that is relatively less costly.

# Table 1.5
# School board spending[1]

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Total spending (in millions of dollars)** | | | | | | |
| In current dollars | 2 335.3 | 3 857.0 | 5 228.2 | 6 303.9 | 6 093.7 | 6 051.0 |
| In constant 1976-77[2] dollars | 2 335.3 | 2 337.7 | 2 348.0 | 2 539.3 | 2 407.4 | 2 382.1 |
| **Spending per student ($)** | | | | | | |
| In current dollars | 1 808 | 3 600 | 4 991 | 5 804 | 5 637 | 5 392 |
| In constant 1976-77[2] dollars | 1 808 | 2 182 | 2 242 | 2 338 | 2 227 | 2 123 |

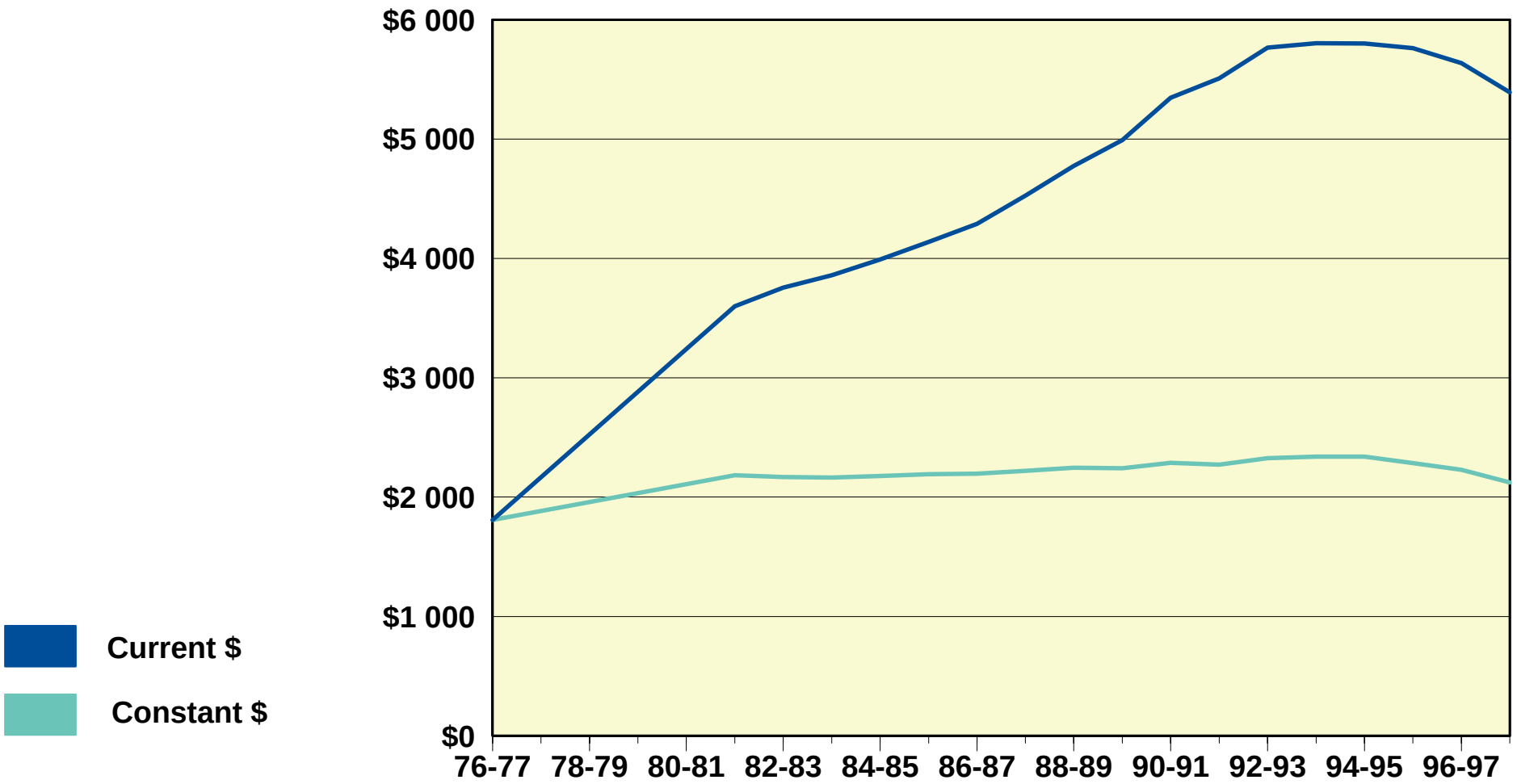
e: Estimates

1. Operating expenses exclude debt service (long-term and short-term debt), capital expenses financed from current revenues, transfer expenses and revenues of ancillary enterprises.

2. See Note 2 of this section.

## Graph 1.5

# School board spending in current dollars and in constant 1976-77 dollars



# 1.6 School Board Spending per Student

In 1997-98, spending per student by Québec school boards is estimated at $5 392, compared with $4 380 for the Atlantic Provinces, $6 089 for Ontario and $5 686 for Western Canada.[1] In the United States, per-student spending is estimated at $7 518.[2]

***In 1997-98, spending per student by Québec school boards is higher than in the Atlantic Provinces, but lower than in Ontario, Western Canada and the United States.***

Between 1976 and 1981, spending per student rose by 101% in Québec, compared with 82% in the rest of Canada and 73% in the United States. The sharper decline in Québec enrolments accounted for a large increase in per-student spending, owing to constraints which prevented expenses from being slashed in proportion to the drop in enrolments. More costly salary policies, a greater decrease in the student-teacher ratio and the higher cost of job-security policies also contributed to the more rapid rise in Québec's spending per student during this period. In 1981-82, spending per student in Québec was 28% higher than in the rest of Canada and 14% higher than in the United States.

Between 1981 and 1993, Québec's spending per student rose by 63%, compared with 110% in the rest of Canada and 115% in the United States. The increase was most pronounced in Ontario: 127%. In Québec, the slower growth in spending was a result of salary-restriction measures applied to school board employees. During that time,

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1. This refers to operating expenses, which exclude debt service, adult education (except for Québec as of 1990-91), capital expenditures financed directly from current revenues, and transfer expenses. As of 1990-91, operating expenses of Québec school boards include adult education. This modification is a result of changes in the financial statements of Québec school boards. It is no longer possible to clearly separate operating expenses for the youth sector and the adult sector. The enrolments used to calculate per-student spending correspond to this new concept. The impact of this modification on the level of spending per student is negligible.
2. For comparative purposes, per-student spending in the United States is expressed in Canadian dollars. U.S. dollars are converted into Canadian dollars using the purchasing power parity index produced by the Organisation for Economic Co-operation and Development (OECD). "Purchasing Power Parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. Thus PPPs are the rates of currency conversion which eliminate differences in price levels between countries." (OECD, *National Accounts*)

the working conditions of school board employees were improving significantly in Ontario and in the United States, with the result that per-student costs have been higher in these areas than in Québec since the mid-1980s.

Between 1993 and 1997, per-student spending decreased in Québec, in Ontario and in the Atlantic Provinces, while in Western Canada, it rose. In Québec, the 7% decrease is chiefly due to budget cuts, and more specifically, a reduction in labour costs. It should also be noted that the introduction of full-time kindergarten in Québec school boards in 1997-98 has brought down the per-student spending.[3] The decrease in per-student spending in Ontario ensues from the social contract legislation passed in 1993 to establish cost-cutting objectives in the education sector for the period from 1993 to 1996.

In the United States, per-student spending continued to increase and, in 1997-98, is estimated to be 39% higher than in Québec. In 1996-97, per-student spending in the United States was higher than in Québec in 46 U.S. states[4] and lower in 5 states (according to the most recent figures available for each state).

3. The introduction of full-time kindergarten has increased the “relative weight” of a segment of the school population that is relatively less costly.
4. Including the District of Columbia.

## Table 1.6

# School board spending[1] per student: Québec, other regions of Canada and the United States (in current dollars[2])

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **1 769** | **3 563** | **4 925** | **5 804** | **5 637** | **5 392** |
| **Canada, excluding Québec** | **1 522** | **2 776** | **4 968** | **5 841** | **5 869** | **5 779** |
| Atlantic Provinces | 1 190 | 2 169 | 3 918 | 4 472 | 4 616 | 4 380 |
| Ontario | 1 613 | 2 813 | 5 486 | 6 397 | 6 201 | 6 089 |
| Western Canada | 1 525 | 2 941 | 4 578 | 5 458 | 5 723 | 5 686 |
| **Canada** | **1 584** | **2 956** | **4 959** | **5 830** | **5 818** | **5 696** |
| **United States** | **1 800** | **3 121** | **5 917** | **6 718** | **7 279** | **7 518** |

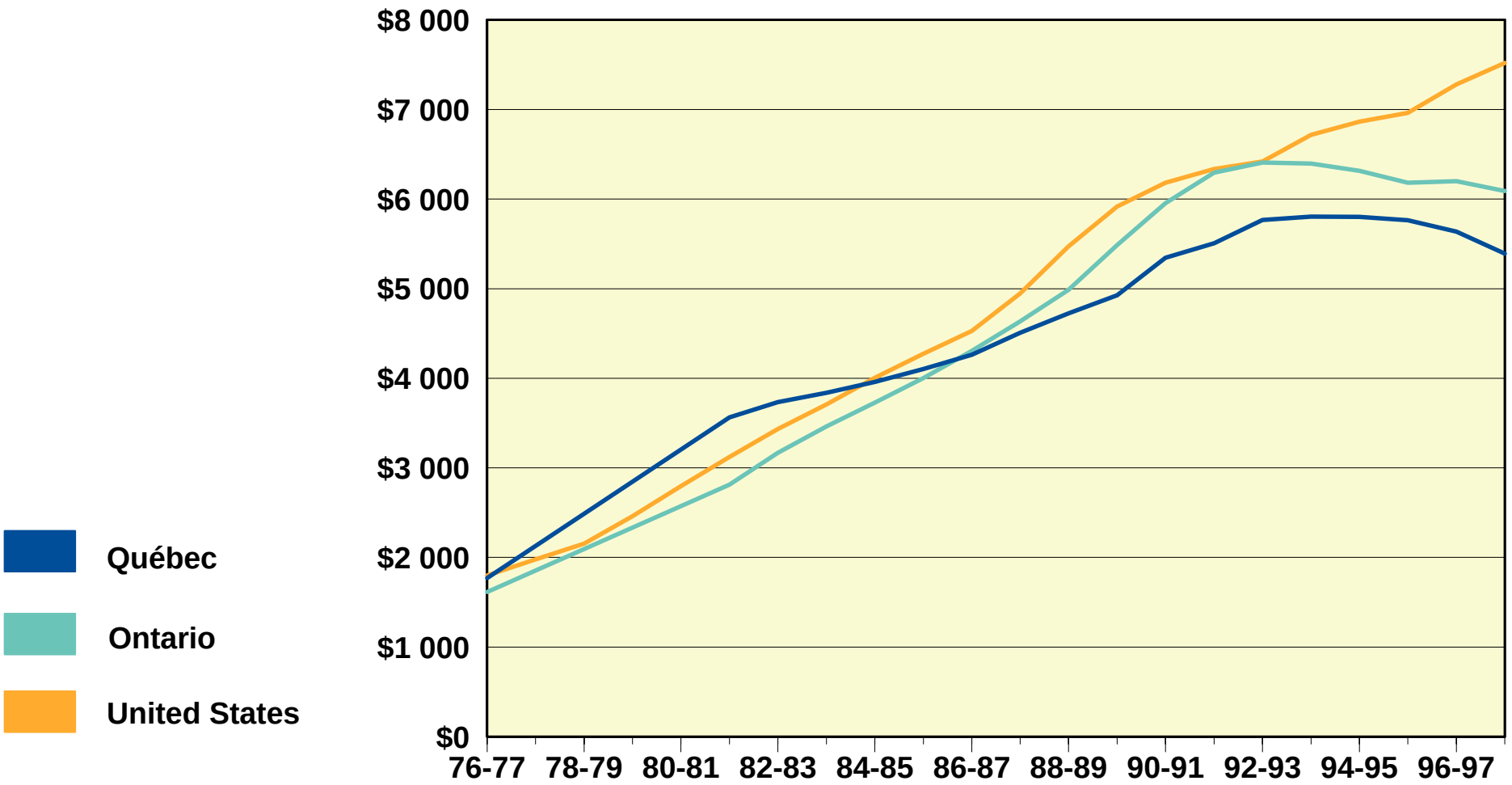
e: Estimates

1. Operating expenses exclude debt service (long-term and short-term debt), adult education (except for Québec as of 1990-91), capital expenses financed from current revenues, transfer expenses, as well as revenues from ancillary enterprises. Also, see Note 1 on preceding page.

2. See Note 2 of this section.

Graph 1.6

## School board spending per student: Québec, Ontario and the United States (in current dollars)



# 1.7 Student-Teacher Ratio in School Boards

In 1997-98, the average number of students per teacher in school boards is estimated to be 16 in Québec, 18.8 in Ontario and 16.7 in the United States. The student-teacher ratio is calculated by dividing the number of students by the number of teachers in the school boards. Data on enrolments and teaching personnel is expressed in full-time equivalents. The ratio therefore does not indicate the average number of students per class. To understand the difference between these two ratios, the student-teacher ratio must be considered as a composite indicator that is the result of three variables: the number of students per class, the average teaching time of teachers and the average learning time of students.

***In 1997-98, the average number of students per teacher is lower in Québec than in Ontario and in the United States. The gap between these regions is not as wide, however, as in the early 1980s.***

The 1970s were marked by a significant decline in enrolments without any corresponding reduction in the number of teachers, with the result that the student-teacher ratio dropped in all three areas observed. In Québec, the drop was particularly steep during the first half of the decade, owing to lighter teaching loads and changes in the composition of the student population. The workload reduction was obtained as a result of centralized collective bargaining. In Ontario and the United States, negotiations between teachers' unions and employers are conducted locally in each school board and most collective agreements contained no provisions governing teaching loads during that time.

In the early 1980s, however, a major reversal occurred in Québec. As part of the cutbacks in spending that took place during that time, teaching loads increased, and the average number of students per teacher also rose slightly, from 16.2 in 1981 to 16.5 in 1989. Elsewhere, this number continued to drop, falling to 17.8 in Ontario and 16.7 in the United States in 1989-90.

Between 1989 and 1993, the average number of students per teacher dropped from 16.5 to 15.9 in Québec. This decline was largely due to changes in the composition of the student population under consideration. Since 1990-91, figures for enrolments and the number of teaching positions that had been used to calculate the student-teacher ratio have covered both the youth and adult sectors (in previous years, only the youth sector was

considered).[1] In Ontario, the average number of students per teacher went from 17.8 in 1989-90 to 17.6 in 1993-94, and in the United States, it rose from 16.7 to 16.9.

Since 1993-94, the student-teacher ratio has increased slightly in Québec, while decreasing slightly in the United States, but increased significantly in Ontario (from 17.6 to 18.8). This increase in Ontario is a result of staffing cuts under the social contract legislation passed in 1993. One of the objectives of this legislation was to reduce the number of teachers in the school boards by 4.75% by August 31, 1996. The reduction in personnel was expected to be carried out primarily by attrition, however, and attrition credits were to be allocated to take into account the fact that teachers were not being hired despite an increase in enrolments.

In 1997-98, the student-teacher ratio in Québec school boards is estimated to be 2.8 students lower than in Ontario and 0.7 students lower than in the United States.[2]

A comparison of Québec with the United States as a whole for 1996-97 reveals that the student-teacher ratio was higher in 27 states and lower in 24 states[3] (according to the most recent figures available for each state).

---

1. See Note 2 in Table 1.7.
2. The lower student-teacher ratio in Québec indicates a relatively higher number of teachers here than in the other areas observed. However, Ontario has a relatively larger number of non-teaching educators than Québec and this partially compensates for the higher number of teachers in Québec. The concept of non-teaching educators includes administrative personnel in schools as well as non-teaching professionals who work in schools (e.g. educational consultants, guidance counsellors and pastoral animators).
3. Including the District of Columbia.

## Table 1.7

# Student-teacher ratio[1] in school boards: Québec, Ontario and the United States

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| Québec[2] | 17.1 | 16.2 | 16.5 | 15.8 | 16.0 | 16.0 |
| Ontario[3] | 21.8 | 20.7 | 17.8 | 17.6 | 18.6 | 18.8 |
| United States | 19.8 | 18.5 | 16.7 | 16.9 | 16.8 | 16.7 |

e: Estimates

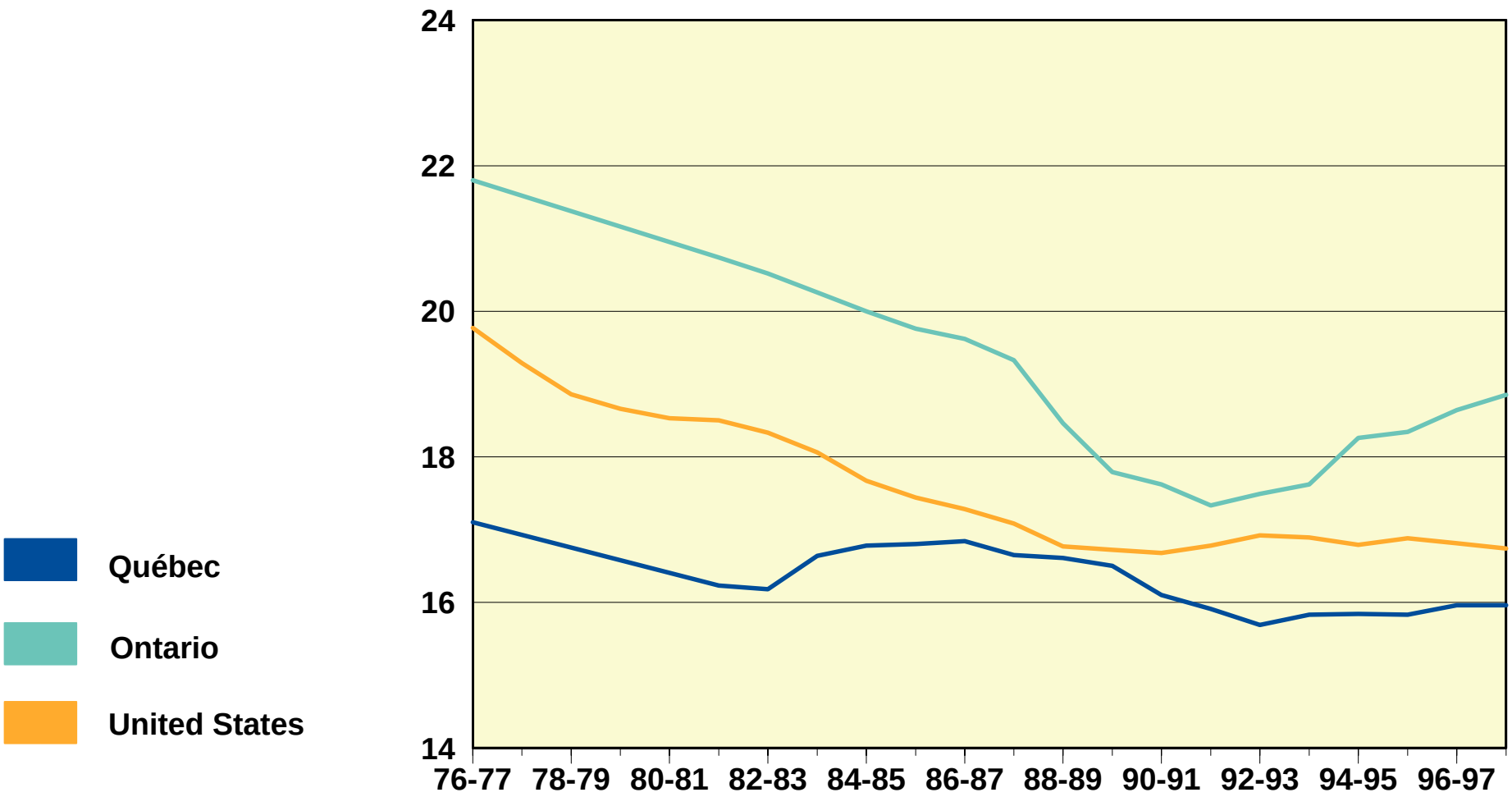
1. The enrolments and the teaching positions used to calculate the student-teacher ratio are based on full-time equivalents.

2. As of 1990-91, the enrolments and the number of teachers in Québec's school boards used to calculate the student-teacher ratio cover both the youth sector and the adult sector (in previous years, only the youth sector was considered). This modification is a result of changes in the school boards' financial statements, which no longer make it possible to clearly separate financial statistics for the youth sector and the adult sector. For the sake of consistency in the concepts used in all the sections dealing with financial investment in education, a decision was made to produce a student-teacher ratio covering both sectors as of 1990-91.

3. In order to take into account differences between Ontario and Québec in their definition of **teaching personnel**, some adjustments have been made to the Ontario data (e.g. the exclusion of principals and vice-principals). The figures used are therefore estimates.

Graph 1.7

## Student-teacher ratio in school boards: Québec, Ontario and the United States



# 1.8 Average Salary of Teachers in School Boards

In 1997-98, the average salary of teachers in Québec school boards is estimated at $44 135, compared with $55 300 in Ontario and $49 759 in the United States.[1]

***It is estimated that Québec teachers will earn an average of $44 135 in 1997-98, that is, 20% less than teachers in Ontario and 11% less than teachers in the United States.***

Between 1976 and 1981, teachers in Québec received higher raises (81%) than teachers in Ontario (66%) and in the United States (45%). Variations in salary policies explain these major differences.[2] In 1981-82, the average salary of Québec teachers was slightly higher than that of their Ontario counterparts ($28 983 compared with $28 672) and 17% higher than that of U.S. teachers ($24 671).

This trend was reversed in Québec between 1981 and 1993. As part of the general budget constraints during this period, salaries were rolled back and less generous salary indexation policies were set. Meanwhile, the salary conditions for teachers in Ontario and in the United States were improving, such that by 1993-94, Québec teachers were earning on average 21% less than Ontario teachers and 5% less than U.S. teachers.

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1. The average salary of teachers in the United States has been determined on the basis of data from the National Education Association; the data has been expressed in Canadian dollars using the purchasing power parity indexes of the Organisation for Economic Co-operation and Development (OECD). “Purchasing Power Parities (PPPs) are the rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries. Thus PPPs are the rates of currency conversion which eliminate differences in price levels between countries.” (OECD, *National Accounts*)
2. While inflation may explain the large increase in salaries in each area, it does not account for the much higher increase in the average salary of Québec teachers, since price hikes were very similar in Québec and in Ontario between 1976 and 1981. U.S. figures have been adjusted for the difference in price increases by means of the PPP index, which takes into account price differences among the various areas.

A comparison of the salary of teachers in school boards in Québec with that of the OECD countries is possible using indicators such as the starting salary, salary after 15 years of seniority and maximum salary.[3] According to these indicators, in 1993-94, the salary of teachers in school boards in Québec was relatively much higher than for most of the OECD countries.

Since 1993-94, the average salary of teachers in Québec and Ontario has remained relatively stable, while in the United States, it continues to grow. In Québec, in a battle against budget deficits, agreements between the government and unions resulted in the average salary of teachers rising very little, whereas Ontario experienced a period of budget cuts. The salary policy set out in the social contract legislation of 1993 was implemented and, with certain exceptions, no salary increases would be granted during the period from June 14, 1993, to March 31, 1996. Under the conditions stipulated, a school board granting a salary increase to its teaching personnel would have to introduce compensatory cost-saving measures to ensure that the overall objective of cutting costs was met.

In 1996-97, 27 U.S. states[4] paid their teachers a higher average salary than Québec, whereas 24 states paid their teachers less than Québec (according to the most recent figures available per state).

3. See the *Bulletin statistique de l'éducation* of the Direction des statistiques et des études quantitatives of the Ministère de l'Éducation du Québec: *Rémunération et temps d'enseignement des enseignants dans l'enseignement public primaire et secondaire (1er cycle); Une comparaison Québec - pays de l'OCDE,* which was published in November 1997. This document is available at the Internet site: http://www.meq.gouv.qc.ca.
4. Including the District of Columbia.

## Table 1.8

# Average salary of teachers in school boards: Québec, Ontario and the United States (in current dollars)

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| Québec[1] | 16 046 | 28 983 | 39 091 | 42 897 | 43 698 | 44 135 |
| Ontario[2] | 17 229 | 28 672 | 45 995 | 54 377 | 55 647 | 55 300 |
| United States[3] | 16 960 | 24 671 | 41 404 | 45 034 | 48 354 | 49 759 |

e: Estimates

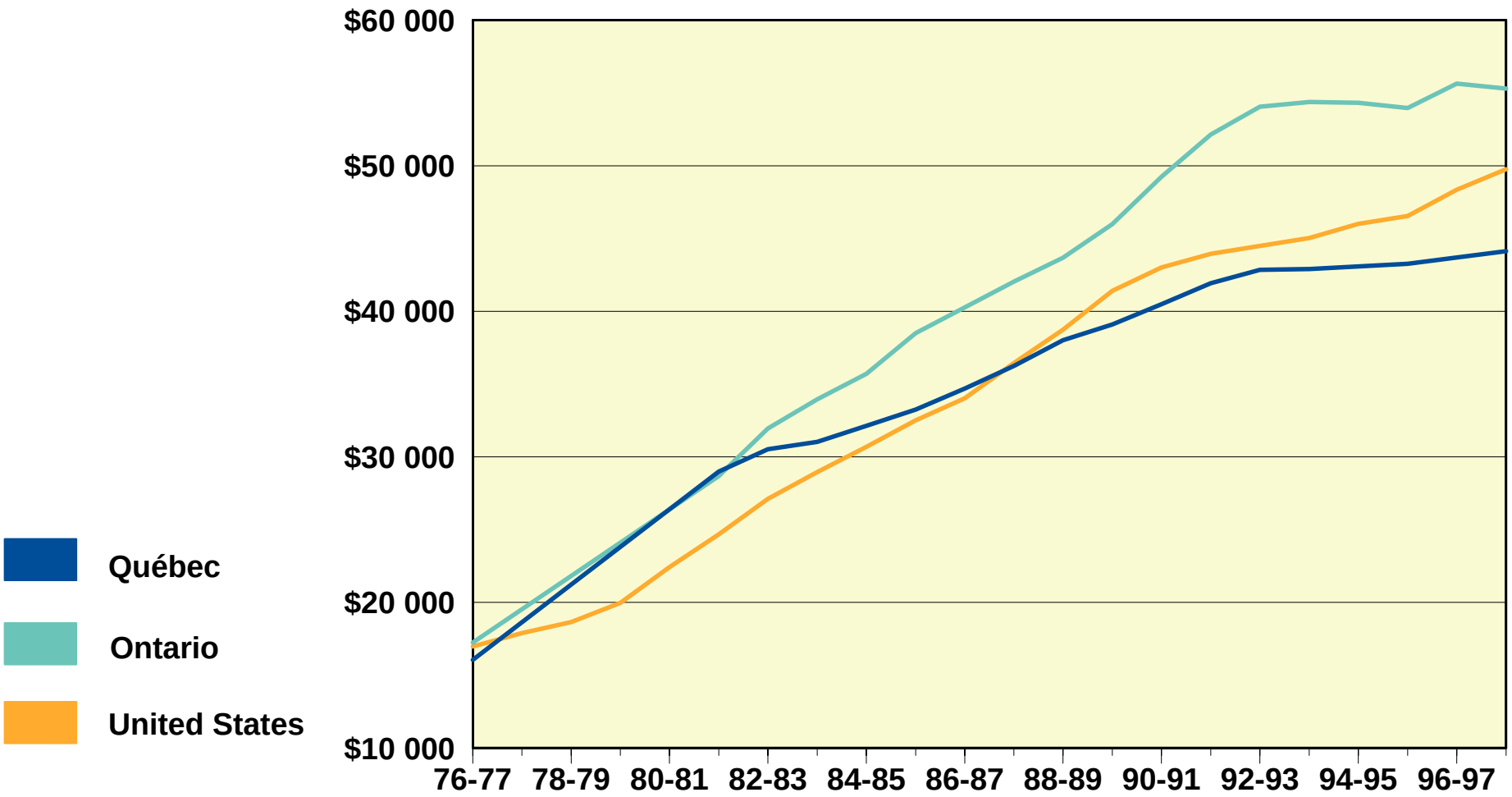
1. As of 1990-91, these figures refer to the average salary of teachers in both the youth sector and the adult sector (in previous years, only the youth sector was considered). This modification is a result of changes in the school boards' financial statements, which no longer make it possible to clearly separate financial statistics for the youth sector and the adult sector. For the sake of consistency in the concepts used in all the sections dealing with financial investment in education, a decision was made to produce an average salary of teachers covering both sectors as of 1990-91.

2. In order to take into account differences between Ontario and Québec in their definition of **teaching personnel**, some adjustments have been made to the Ontario data (e.g. the exclusion of principals and vice-principals). The figures used are therefore estimates.

3. See Note 1 of this section.

Graph 1.8

## Average salary of teachers in school boards: Québec, Ontario and the United States (in current dollars)



# 1.9 CEGEP Spending

In 1997-98, it is estimated that CEGEPs will spend slightly more than $1 billion on regular education (the regular day division) and funding will be provided for roughly 162 800 students.[1] Per-student spending is estimated at $6 287.

***In 1997-98, CEGEP spending is estimated to be similar to that of 1991-92, in spite of a 17% increase in enrolments. This can be primarily explained by budget cuts and a reduction in labour costs.***

Between 1976 and 1981, CEGEP spending on regular education increased at an average compound rate of 14.8%. This rapid growth can be explained primarily by a high inflation rate, by salary increases exceeding the inflation rate, and by a considerable rise in enrolments (an average rate of 3% per year). This resulted in a 4.2% increase in per-student spending in constant dollars between 1976 and 1981.[2]

Between 1981 and 1989, the rise in operating expenses of CEGEPs was curbed sharply, with the annual average rate of growth dropping to 4.2%. This decrease was a result of a curtailment in the inflation rate, as well as budget cutbacks adopted by the Québec government. Enrolments also continued to rise until the mid-1980s, but then declined. Per-student spending in constant dollars was slightly lower in 1989-90 than in 1981-82.

In 1990-91, per-student spending in current dollars was $6 920, or 8.6% higher than in 1989-90 (which corresponds to an actual rate of growth of 3.4%). This increase can be primarily explained by a decline in the student-teacher ratio, following the addition of new positions as part of a collective agreement. The rise in the number of teachers applies to activities such as departmental committees, practicums, professional development for teachers, and student support services.

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1. This refers to the enrolments in regular education that are used to determine the number of teachers subsidized by the Ministère.
2. The CEGEPs' education price index is used to express spending in constant dollars. This index indicates the changes in the price of goods and services used to provide educational services in CEGEPs. Changes in spending in constant dollars reflect changes in the real funds spent by CEGEPs on education.

Between 1990 and 1995, as a result of the Québec government's salary restriction policy, spending per student in current dollars remained relatively stable, and per-student spending in constant dollars once again declined.

In 1996-97 and 1997-98, there was a decrease in CEGEP spending in current dollars that is primarily attributable to budget cuts and the adoption of cost-saving measures by the CEGEPs. These measures ensue largely from agreements between the government and unions that have made it possible to reduce labour costs. However, as the agreements with the various unions are not the same, the cost-saving measures do not affect all the employees of a given category of personnel in the same way.

Thus, depending on the union that a teacher belongs to, the salary cut may be higher or lower. As a trade-off for the salary cut, teachers receive a compensatory leave. There has also been a net decrease in the number of CEGEP employees, a decrease in departmental committees, a restructuring of teaching, and savings due to the influx of younger personnel.

Thus, between 1995 and 1997, per-student spending dropped by 9% in current dollars and by 10% in constant dollars.

## Table 1.9
# CEGEP spending[1] on regular education

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| Total spending in current dollars (in millions of dollars) | 298.7 | 596.0 | 830.7 | 1 074.9 | 1 081.2 | 1 023.6 |
| Spending per student in current dollars | 2 810 | 4 831 | 6 370 | 6 876 | 6 720 | 6 287 |
| Spending per student in constant 1976-77[2] dollars | 2 810 | 2 928 | 2 869 | 2 786 | 2 677 | 2 482 |

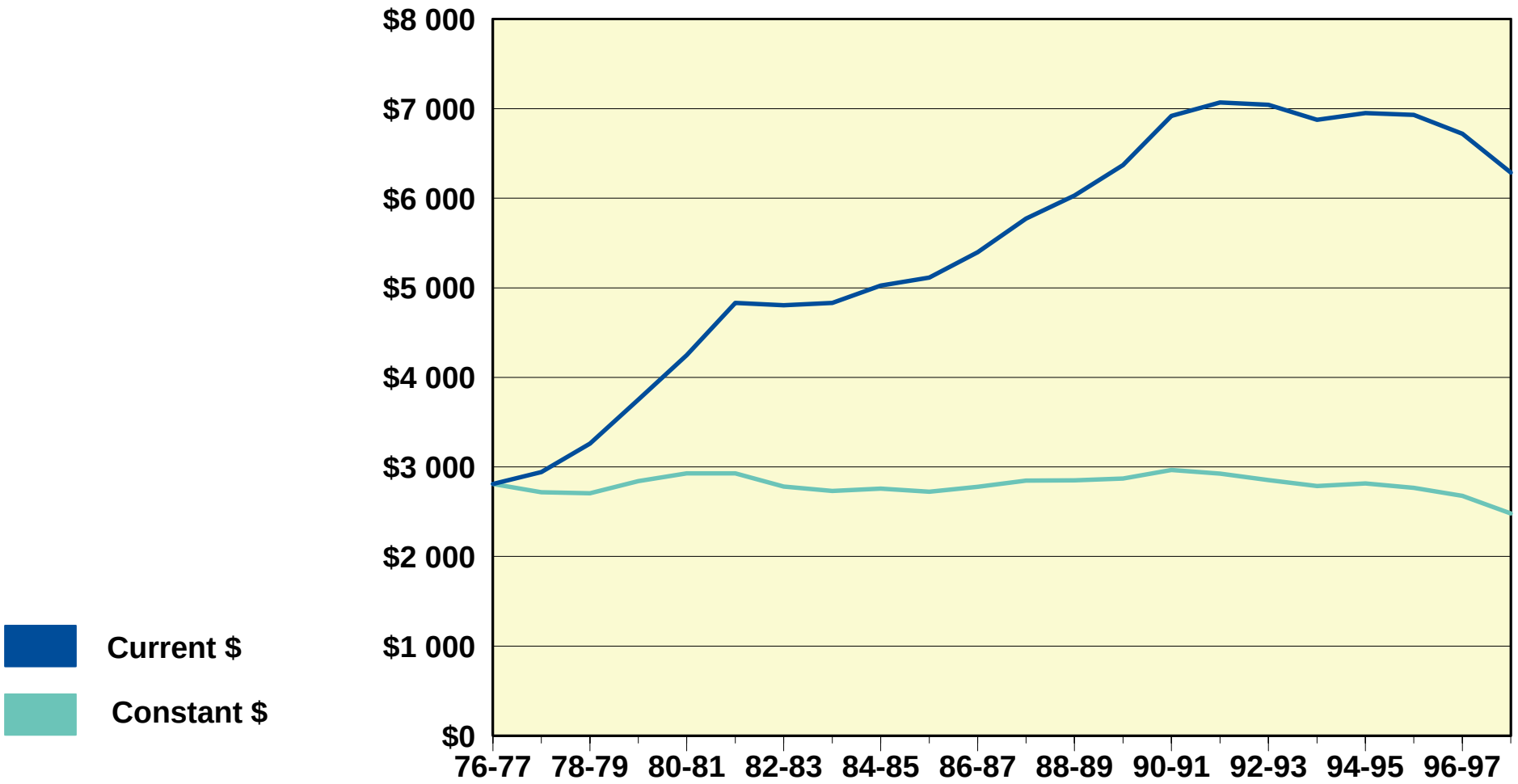
e: Estimates

1. Operating expenses include debt service (long-term and short-term debt) and capital expenses financed directly from current revenues.

2. See Note 2 of this section.

Graph 1.9

## CEGEP spending per student in current dollars and in constant 1976-77 dollars



# 1.10 CEGEP Spending per Student in Relation to per Capita GDP

In 1997-98, spending per student by CEGEPs is estimated at $6 287 and the per capita gross domestic product (GDP) at $24 524, the former representing 25.6% of the latter. This proportion is an indicator of the relative financial investment in CEGEPs.

***The recent decrease in CEGEP spending per student in relation to per capita GDP can be explained primarily by budget cuts and a reduction in labour costs.***

Between 1976 and 1981, the ratio of per-student spending to per capita GDP rose from 37.8% to 39.3%. During that time, expenditures per student grew somewhat more rapidly than the per capita GDP.

Between 1981 and 1989, a period of budget cutbacks, per-student spending increased much more slowly than the per capita GDP, and the relative financial investment indicator declined sharply, dropping from 39.3% in 1981-82 to 29.6% in 1989-90.

Between 1989 and 1992, the ratio of per-student spending to per capita GDP increased once again to stand at 32% in 1992-93. This increase can be largely explained by the economic recession, which led to a very small increase in the per capita GDP. During this period, per-student spending rose by 11%, while the per capita GDP increased by only 2%.

However, following budget cuts and the adoption of cost-saving measures in CEGEPs,[1] the ratio between CEGEP spending per student and the per capita GDP has decreased once again, and is estimated at 25.6% in 1997-98.

1. See Section 1.9.

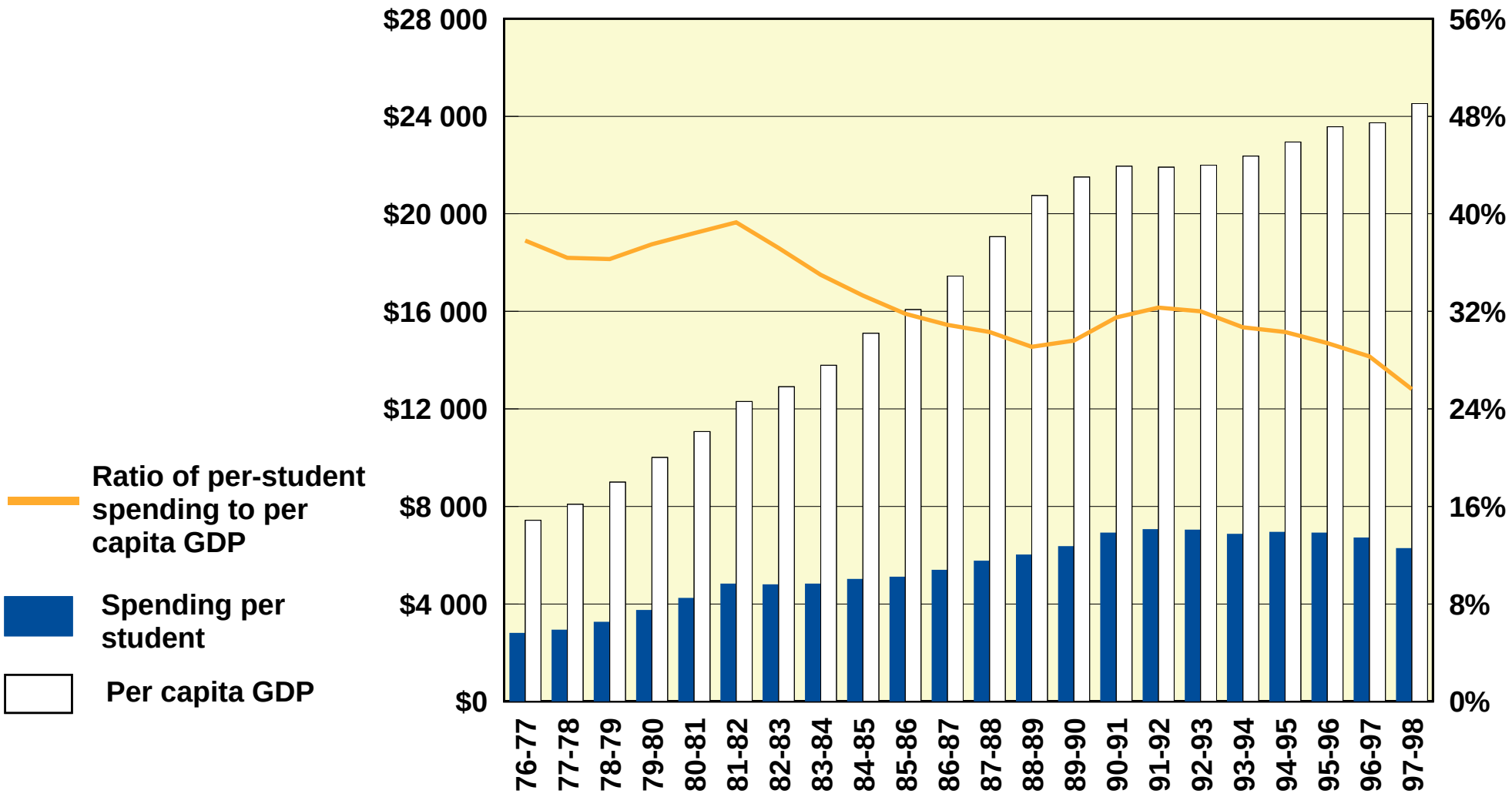
## Table 1.10
# CEGEP spending per student in relation to per capita GDP

| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| Spending per student (in current dollars) | 2 810 | 4 831 | 6 370 | 6 876 | 6 720 | 6 287 |
| Per capita GDP (in current dollars) | 7 429 | 12 302 | 21 509 | 22 372 | 23 737 | 24 524 |
| Ratio of per-student spending to per capita GDP (%) | 37.8 | 39.3 | 29.6 | 30.7 | 28.3 | 25.6 |

e: Estimates

Graph 1.10

## CEGEP spending per student (in current dollars), per capita GDP (in current dollars), and ration of per-student spending to per capita GDP (%)



# 1.11 University Spending in Relation to the GDP

In 1997-98, it is estimated that Québec will allocate 1.65% of its gross domestic product (GDP) to university education,[1] compared with 1.98% for the Atlantic Provinces, 1.08% for Ontario and 1.34% for Western Canada.[2]

***In 1997-98, the share of the GDP allocated to university spending in Québec is estimated at 1.65%, compared to 1.27% for the rest of Canada. Québec's higher level of university spending is primarily explained by a lower per capita GDP.***

In 1976-77, the share of the GDP spent on university education in Québec was the same as in Ontario, but in the years that followed, Québec's financial investment rose, while that of Ontario and Western Canada dropped.

From 1981 to 1989, this share of the GDP decreased slightly in Québec, Ontario and the Atlantic Provinces, while it rose in Western Canada. At the beginning of the 1990s, however, Québec's financial investment in university education climbed significantly, while in the rest of Canada, less marked increases were observed.

A significant gap therefore developed between Québec's spending on university education and that of the rest of Canada. From 1986 to 1993, university spending in Québec increased by 73%, compared with 56% in the rest of Canada. This greater growth in Québec can be explained partly by the considerable increase in university research,[3] as well as by a larger increase in the resources allocated to teaching.

Between 1993 and 1997, the share of the GDP allocated to university education decreased in all regions of Canada. In Québec, this share of the GDP went from 1.99% in 1993-94 to 1.65% in 1997-98, following budget cuts and a reduction in labour costs. The decrease was most pronounced in Ontario: its share of the GDP spent on university education dropped from 1.42% in 1993-94 to 1.08% in 1997-98, following the large budget cuts of recent years.

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1. In 1997-98, Québec will spend an estimated $3 billion of its $182-billion GDP on university education.
2. Data on the universities has not been adjusted to take into account organizational differences in education systems.
3. See Section 1.15.

In 1997-98, university spending is estimated to be higher in Québec than in the rest of Canada (except for the Atlantic Provinces), due to higher per-student spending, but primarily because Québec's collective wealth, as measured by the per capita GDP, is relatively lower than for the rest of Canada.

## Table 1.11

# University spending[1] in relation to the GDP: Québec and other regions of Canada (%)

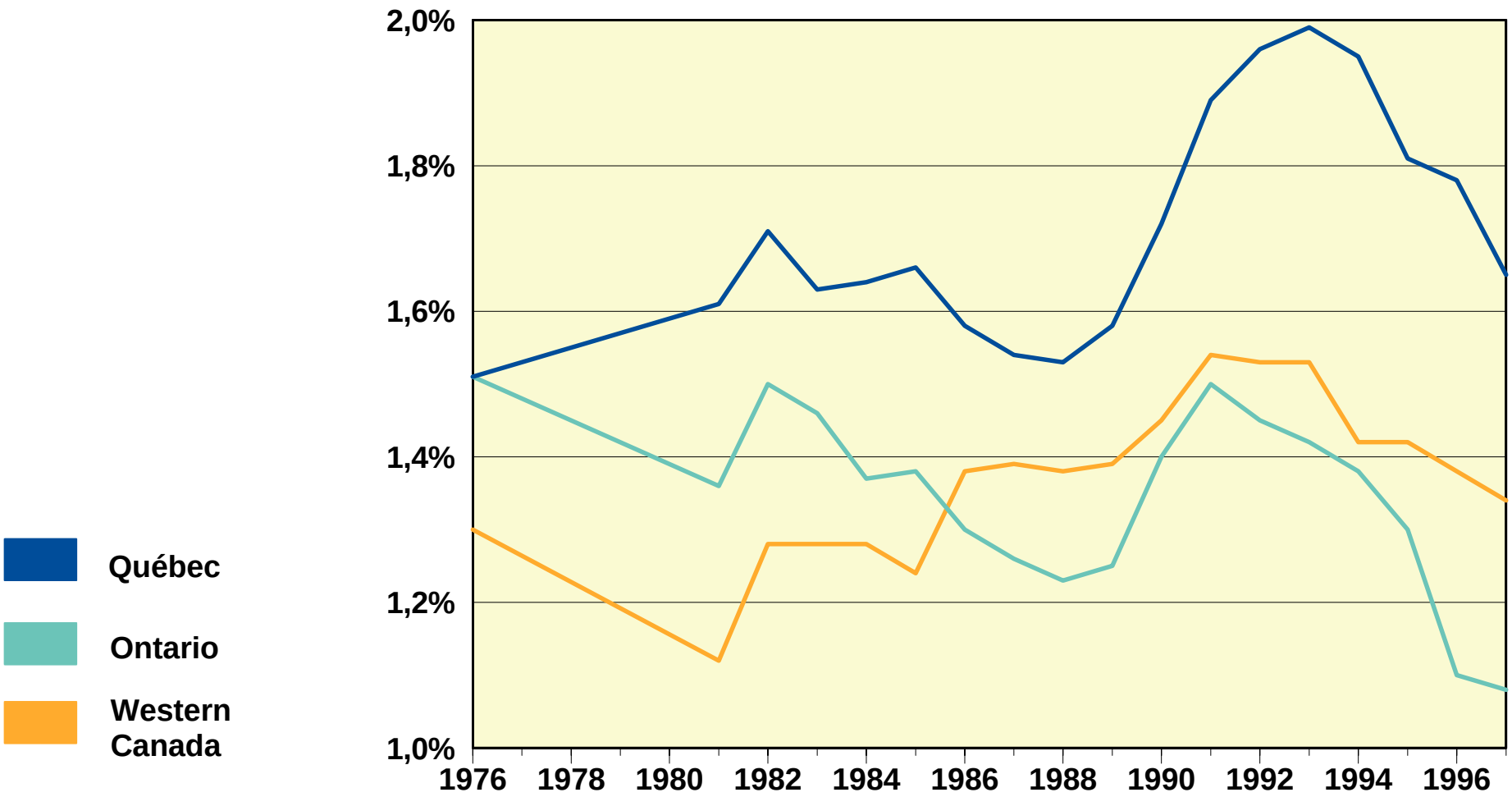
| | 1976-77 | 1981-82 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **1.51** | **1.61** | **1.58** | **1.99** | **1.78** | **1.65** |
| **Canada, excluding Québec** | **1.50** | **1.34** | **1.40** | **1.56** | **1.31** | **1.27** |
| Atlantic Provinces | 2.32 | 2.36 | 2.22 | 2.33 | 2.13 | 1.98 |
| Ontario | 1.51 | 1.36 | 1.25 | 1.42 | 1.10 | 1.08 |
| Western Canada | 1.30 | 1.12 | 1.39 | 1.53 | 1.38 | 1.34 |
| **Canada** | **1.50** | **1.40** | **1.44** | **1.66** | **1.41** | **1.35** |

e: Estimates

1. University expenses include operating expenses and capital expenses, financial assistance to students, funded and sponsored research and the administrative expenses of the Ministère de l'Éducation (the portion attributable to university education). Statistics Canada's basic data is used to calculate the share of the GDP allocated to university education.

## Graph 1.11

# University spending in relation to the GDP: Québec, Ontario and Western Canada (%)



# 1.12 University Spending per Student

In 1997-98, university spending per student in Québec (excluding sponsored research) is estimated at $11 489, compared with $10 711 for the Atlantic Provinces, $10 356 for Ontario and $12 308 for Western Canada. Data on the universities presented here has not been adjusted to take into account organizational differences in education systems.

***Budget cutbacks in recent years have resulted in a decrease in per-student spending in Canadian universities.***

In 1981-82, per-student spending was 25% higher in Québec than in Ontario, but following salary restrictions and budget cutbacks in Québec universities in subsequent years, the gap was considerably reduced; in 1986-87, spending per student was 1% lower in Québec than in Ontario. In 1986-87, per-student spending by Québec universities was 5% lower than in the Atlantic Provinces and 11% lower than in Western Canada.

Between 1986 and 1993, per-student spending in Québec rose by 37%, compared with 22% in Ontario, 18% in the Atlantic Provinces and 31% in Western Canada. During this period, the consumer price index (CPI) rose by 30% in Québec.[1]

The more rapid rise in per-student spending by Québec universities was made possible by the growth in government funding per student, as well as by the increase in revenues from tuition fees.[2] Between 1986 and 1993, the share of tuition fees in the funding of universities (excluding funded research) rose from 6% to 14%.

When per-student spending is broken down into four categories–salaries of teaching personnel, salaries of non-teaching personnel, fringe benefits and non-salary expenses–it can be observed that during the period from 1986

1. An education price index such as those developed for school boards and CEGEPs is not currently available for universities. For information purposes, it should be noted that the education price index for CEGEPs rose by 27% between 1986 and 1993.
2. Once the freeze on tuition fees was lifted in 1990-91, the share of these fees in the funding of Québec universities rose from $94 million in 1989-90 to $294 million in 1993-94.

to 1993, the expenses in these categories all increased faster in Québec than in Ontario.[3] In 1993-94, the average salary of teaching personnel at Québec universities was lower than that of their Ontario colleagues, but the average number of students per professor was also lower. These two factors have an inverse effect on the cost of teaching personnel per student, but the difference between the average number of students per professor is such that the cost of teaching personnel per student is higher in Québec than in Ontario.[4]

Between 1993 and 1997, spending per student declined in Canada. In Québec, the decrease is explained by budget cuts and, more specifically, the reduction in labour costs. Ontario universities have also experienced major cutbacks in recent years. In 1997-98, university spending per student in Québec is estimated to be 11% higher than in Ontario, 7% higher than in the Atlantic Provinces and 7% lower than in Western Canada.

3. It would appear that, during this period, salary policies were relatively more costly at university than at the other levels of education in Québec. This would explain, at least in part, the faster growth in the salaries of university teaching staff. Thus, the average salary of full-time university research professors increased by 38% between 1986 and 1993, while the average salary of CEGEP teachers rose by 29% and that of teachers in school boards, by 26%.
4. It is not possible to determine the average number of students per professor in full-time equivalents (including lecturers) with the current information systems on university personnel. The data available does, however, allow us to estimate that the student-professor ratio is lower in Québec than in Ontario.

## Table 1.12

# University spending per student[1]: Québec and other regions of Canada (in current dollars)

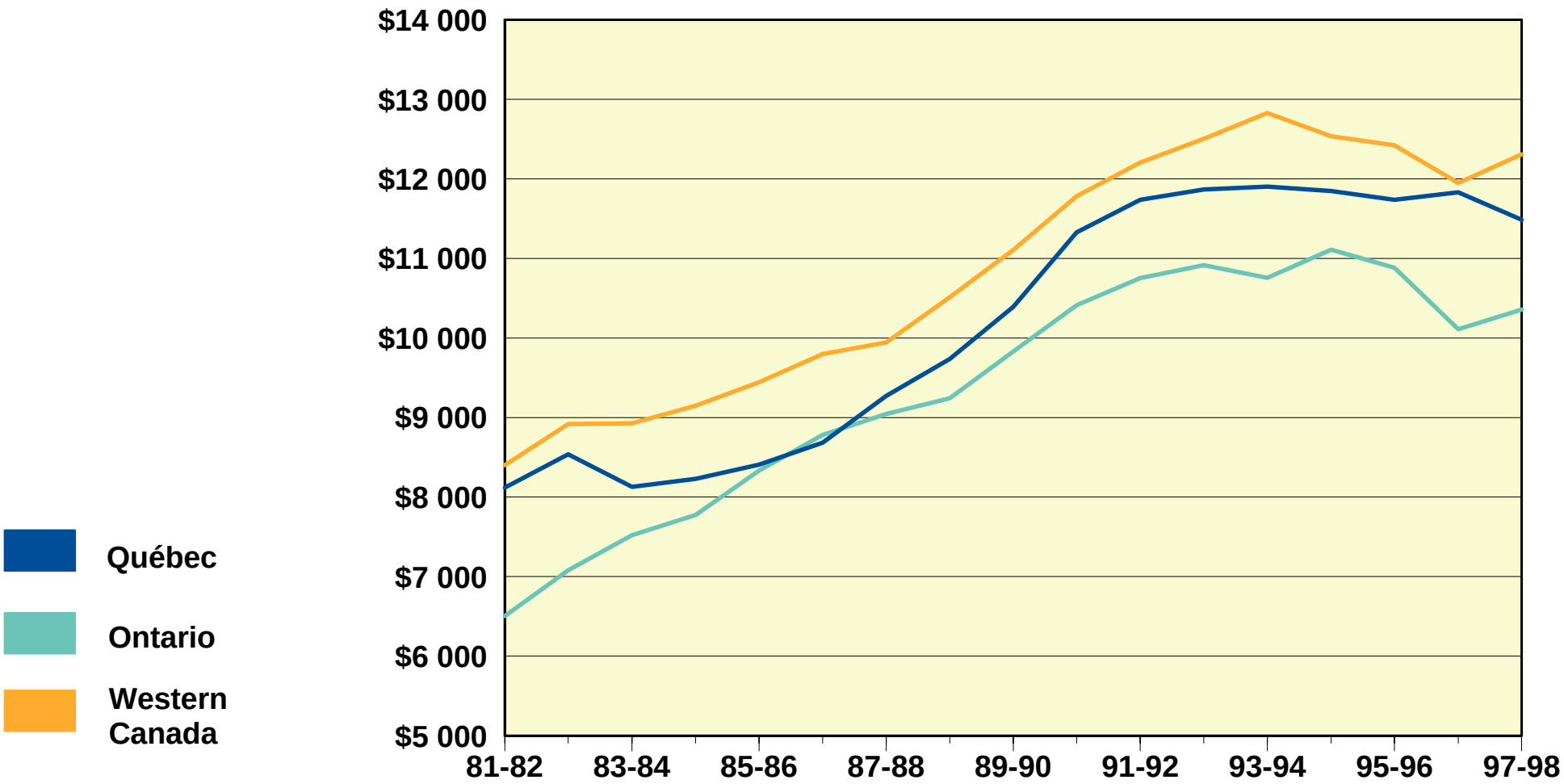
| | 1981-82 | 1986-87 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **8 118** | **8 682** | **10 393** | **11 904** | **11 832** | **11 489** |
| **Canada, excluding Québec** | **7 305** | **9 167** | **10 359** | **11 429** | **10 860** | **11 082** |
| Atlantic Provinces | 7 979 | 9 099 | 10 621 | 10 756 | 10 910 | 10 711 |
| Ontario | 6 505 | 8 782 | 9 832 | 10 756 | 10 111 | 10 356 |
| Western Canada | 8 400 | 9 798 | 11 108 | 12 830 | 11 949 | 12 308 |
| **Canada** | **7 512** | **9 036** | **10 368** | **11 552** | **11 099** | **11 181** |

e: Estimates

1. These figures refer to the universities' general operating expenses, which exclude funded research, the donations and endowments fund, as well as expenses for ancillary enterprises. Statistics Canada's basic data is used to calculate university spending per student.

Graph 1.12

# University spending per student: Québec, Ontario and Western Canada (in current dollars)



# 1.13 University Spending per Student in Relation to per Capita GDP

Per-student spending[1] is an indicator of financial investment in education, and the per capita gross domestic product (GDP) is an indicator of collective wealth. Relating the two provides an indicator of the relative financial investment in education.[2] In 1997-98, university spending per student (excluding sponsored research) is estimated to be $11 489 and the per capita GDP, $24 524; the former represents 46.8% of the latter.

***In 1997-98, university spending per student in Québec is estimated to represent 46.8% of the per capita GDP, while the corresponding figure for the rest of Canada is 38.5%. In recent years, this ratio has dropped both in Québec and in the rest of Canada.***

A comparison of this proportion with that for the other regions of Canada reveals that the relative financial investment in university education is higher in Québec than in Ontario and Western Canada, but lower than in the Atlantic Provinces. This situation has prevailed since the beginning of the observation period (1981-82), and only the gap between educational spending at the university level in Québec and in the other regions of Canada has changed over the years.

Changes in the ratio of per-student spending to per capita GDP can be classified into three periods. Between 1981 and 1989, spending per student rose less rapidly than the per capita GDP, resulting in a significant decrease in the ratio of per-student spending to per capita GDP, which went from 66% in 1981-82 to 48.3% in 1989-90. A sharp decline was also observed in the Atlantic Provinces, whereas in Ontario and Western Canada, a less marked decline occurred.

Between 1989 and 1993, per-student spending by Québec universities rose by 15%, while the per capita GDP increased by only 4% during the economic recession. The ratio of per-student spending to per capita GDP

1. Per-student spending refers to the universities' general operating expenses, which exclude funded research, the donations and endowments fund and expenses for ancillary enterprises.
2. Data on the universities has not been adjusted to take into account organizational differences in education systems.

climbed from 48.3% to 53.2%. An increase in the relative financial investment in education was also observed in Ontario and Western Canada, while it continued to decrease in the Atlantic Provinces.

Between 1993 and 1997, budget cuts and a reduction in labour costs in Québec universities meant that per-student spending dropped, while the per capita GDP rose and the ratio between them went from 53.2% to 46.8%. This ratio also fell in other regions of Canada.

In 1997-98, the ratio of per-student spending by universities to per capita GDP is estimated to be 46.8% in Québec, 34.7% in Ontario, 51.5% in the Atlantic Provinces and 41.6% in Western Canada. The gap between the relative financial investment in Québec and in Ontario can be explained by higher per-student spending in Québec as well as by the fact that Québec's collective wealth is relatively lower than Ontario's.

## Table 1.13

# University spending per student in relation to per capita GDP[1]: Québec and other regions of Canada (%)

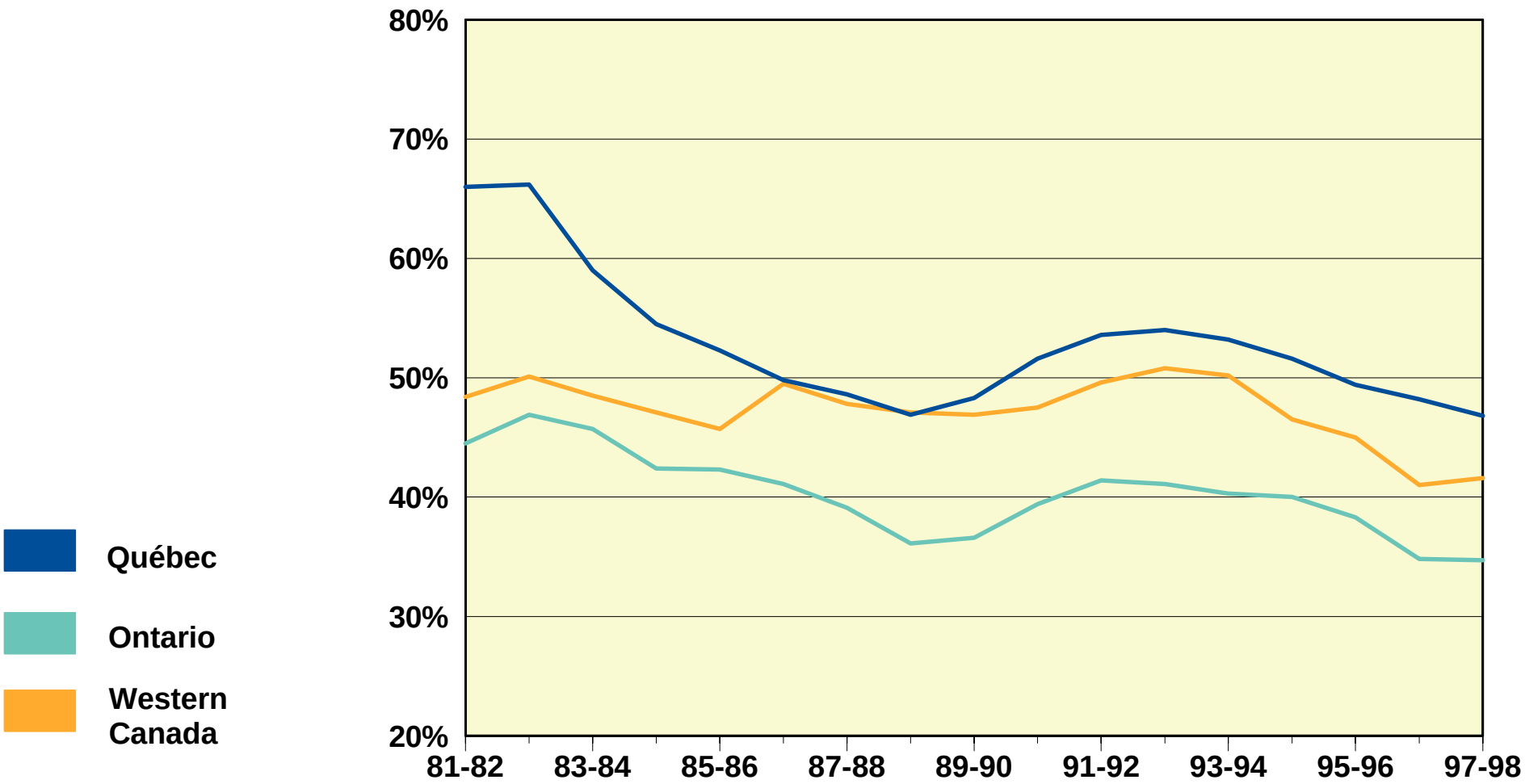
| | 1981-82 | 1986-87 | 1989-90 | 1993-94 | 1996-97[e] | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Québec** | **66.0** | **49.8** | **48.3** | **53.2** | **48.2** | **46.8** |
| **Canada, excluding Québec** | **48.8** | **46.2** | **42.3** | **45.1** | **38.6** | **38.5** |
| Atlantic Provinces | 92.3 | 67.5 | 64.0 | 58.3 | 53.5 | 51.5 |
| Ontario | 44.5 | 41.1 | 36.6 | 40.3 | 34.8 | 34.7 |
| Western Canada | 48.4 | 49.5 | 46.9 | 50.2 | 41.0 | 41.6 |
| **Canada** | **52.5** | **46.8** | **43.7** | **46.9** | **40.7** | **40.3** |

e: Estimates

1. Statistics Canada's basic data has been used to calculate the ratio of university spending per student to per capita GDP.

Graph 1.13

## University spending per student in relation to per capita GDP: Québec, Ontario and Western Canada (%)



# 1.14 Student Financial Assistance and Tuition Fees

In Québec, financial assistance is available to students in full-time postsecondary studies as well as students in secondary vocational education. The loans and bursaries awarded under Québec's Student Financial Assistance Program are intended to supplement the contribution of the student and, where applicable, his or her parents, sponsor or spouse: responsibility for the cost of education lies with them first and foremost. Government assistance covers the difference between this contribution and the student's allowable expenses.

***In spite of increases at the beginning of the 1990s, tuition fees in Québec are still considerably lower than in the rest of Canada, with the gap widening even further in the last few years.***

In 1996-97, of those persons eligible for financial assistance, 25.5% of students in secondary vocational education, 33.2% of college students and 47.1% of university students received assistance. It should be noted that the financial assistance awarded to students in vocational education falls under a new program implemented in 1994-95. A total of 166 651 students benefited from the Student Financial Assistance Program. Of these, 94 475 received only a loan, 71 602 received a loan and a bursary and 574 received only a bursary. Loans totalled $571 million and bursaries, $254.6 million.

In 1996-97, of the university students who received financial assistance, 54.8% obtained only a loan, which averaged $3 543, whereas 45.2% obtained a loan and a bursary totalling an average of $7 727. Those who received a loan and a bursary obtained on average slightly more than half of the assistance in the form of a bursary.

Table 1.14b presents historical data on the breakdown of financial assistance awarded to Québec students attending university. In 1996-97, loans represented 67.8% of the total assistance awarded and bursaries, 32.2%. In 1984-85, the corresponding percentages were 53.6% and 46.4%, respectively. This trend towards increasing the portion of assistance that is granted in the form of loans and decreasing the portion given in bursaries has also been observed in the other provinces, in the United States and elsewhere in the world.

In Canada, excluding Québec, only New Brunswick and British Columbia continue to offer assistance in the form of loans and bursaries. The other provinces offer only loans combined with various debt remission programs. These provinces may award bursaries in special cases; however, these are granted under specific programs that do not involve large sums.

In 1996-97, upon completion of their undergraduate studies, Québec students who had received loans owed an average of $11 261. The average debt for graduate studies was $14 737 and for postgraduate studies, $16 859.

Student loans contracted for college and undergraduate studies averaged $14 196 in 1996-97; for college through to graduate studies, $21 592; and for college to postgraduate studies, $25 896.

University tuition fees are still lower in Québec despite increases at the beginning of the 1990s. Between 1989 and 1993, the average tuition fee almost tripled in Québec, whereas it rose by 43% in the rest of Canada. Even though the gap is smaller, tuition fees in Québec are still lower. In 1993-94, the average tuition fee was 35% higher in the rest of Canada than in Québec. Since 1993-94, tuition fees have remained at approximately the same level in Québec, whereas they continue to climb in the other regions of Canada. The gap between Québec and the rest of Canada once again began widening, and in 1997-98, tuition fees in the rest of Canada ($3 181) are 88% higher than in Québec ($1 690).

## Table 1.14a

## Average tuition fees for full-time students in undergraduate university studies: Québec and other regions of Canada (in current dollars)

| | 1989-90 | 1990-91 | 1991-92 | 1993-94 | 1996-97 | 1997-98[p] |
|---|---|---|---|---|---|---|
| **Québec** | **581** | **948** | **1 350** | **1 630** | **1 690** | **1 690[1]** |
| **Canada, excluding Québec** | **1 541** | **1 662** | **1 852** | **2 202** | **2 921** | **3 181** |
| Atlantic Provinces | 1 689 | 1 802 | 2 023 | 2 446 | 3 127 | 3 434 |
| Ontario | 1 561 | 1 684 | 1 819 | 2 076 | 2 973 | 3 286 |
| Western Canada | 1 440 | 1 562 | 1 828 | 2 298 | 2 740 | 2 893 |

## Table 1.14b

## Proportion of financial assistance awarded to Québec university students in the form of loans and bursaries (%)

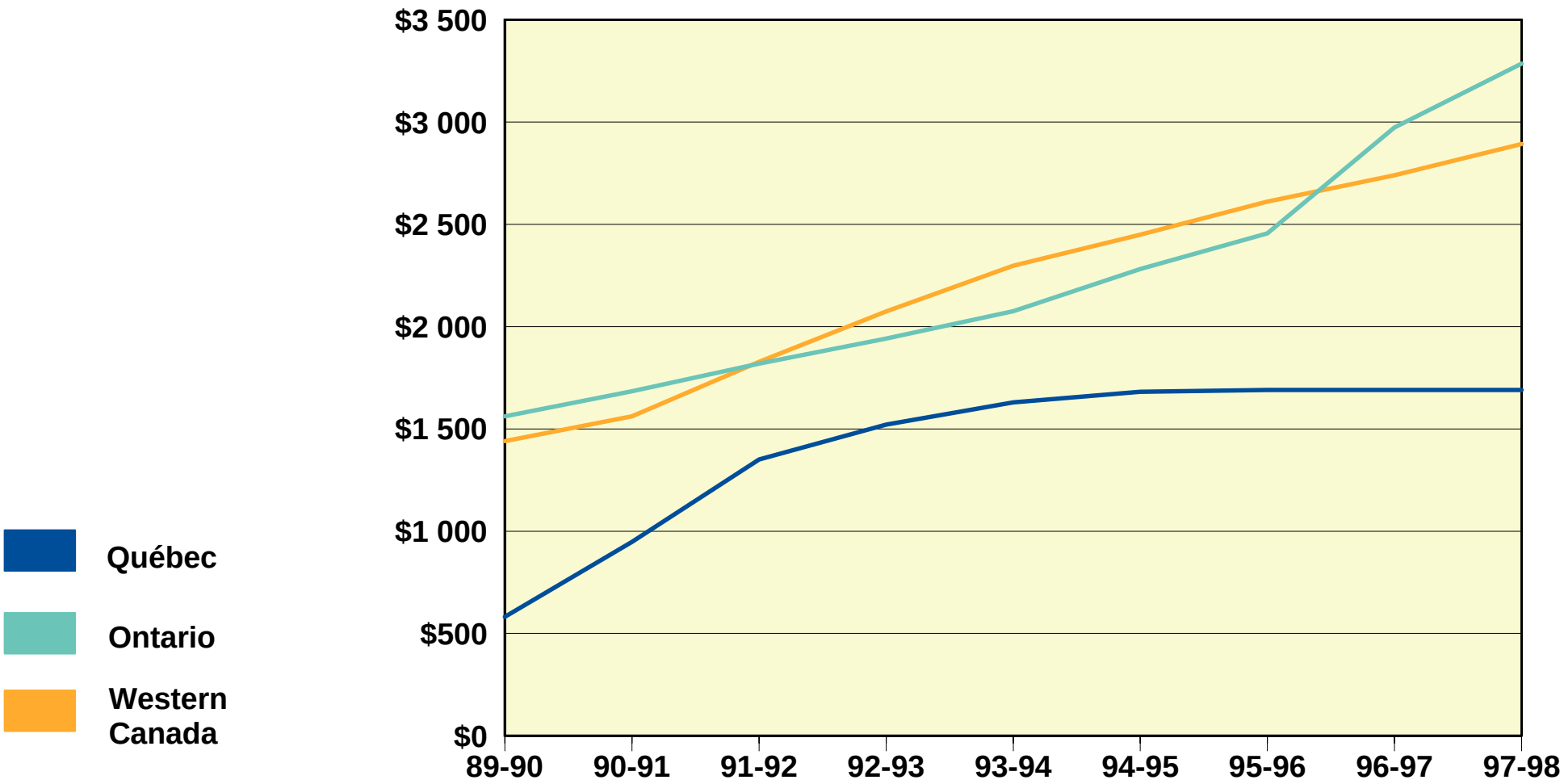
| | 1984-85 | 1989-90 | 1991-92 | 1993-94 | 1995-96 | 1996-97 |
|---|---|---|---|---|---|---|
| Loans | 53.6 | 64.5 | 60.5 | 63.0 | 66.4 | 67.8 |
| Bursaries | 46.4 | 35.5 | 39.5 | 37.0 | 33.6 | 32.2 |

p: Preliminary figures

1. In Québec, as of the fall of 1997, non-resident Canadian students must pay an additional amount that has not been taken into account in the calculation of the average tuition fee for 1997-98.

Graph 1.14

## Average tuition fees for full-time undergraduate university students: Québec, Ontario and Western Canada (in current dollars)



# 1.15 Funded and Sponsored Research in Universities

The amount of grants and research contracts allocated to universities has increased significantly in recent years, rising from $259.7 million in 1986-87 to $655 million in 1992-93. Since 1992-93, however, the amount of grants and research contracts awarded to universities has dropped from $655 million to $587.3 million in 1995-96.

***Although federal and provincial government contributions continued to grow, the total amount of grants and contracts awarded for university research has dropped since 1992-93, primarily because of the decline in the private sector's contribution.***

The amount of grants and research contracts per research professor rose from $38 331 in 1986-87 to $75 300 in 1995-96, representing an average annual increase of 8%. In comparison, the consumer price index (CPI) rose at an average of 3% per year. However, since 1992-93, this amount has gone from $84 283 to $75 300 in 1995-96, for an average annual drop of 4%. In comparison, the CPI increased on average less than 1% per year during this period. Therefore, from 1986-87 to 1992-93, an increase was observed, and for the last three years, a decline. Trends with respect to amounts allocated to university research are closely tied to private-sector funding. Private-sector funding peaked in 1992-93 ($30 162 per research professor) as a result of tax incentives introduced in 1991 designed to encourage businesses to have their research conducted in universities. Once these incentives were abolished, funding from the private sector decreased by more than $94 million in 1995-96 and dropped to $17 985 per research professor during this period. Consequently, despite an annual decrease of 0.4% in the sums granted to research (per research professor) by the federal government and an increase of 4% in the sums granted by the provincial government, the decrease in the private sector's contribution (16%) resulted in an average annual decline of 4% in the total amount allocated to university research since 1992-93.

Over the last nine years, the direct contribution to research by the Canadian and Québec governments also increased steadily (5% and 8%, respectively) but, given the exceptional growth in the private sector's participation between 1986-87 and 1992-93, the governments' relative contribution decreased during this period. However, the direct contribution of governments does not take into account the cost of tax incentives for encouraging industry

to have its research done by university research departments. Moreover, the Québec government assumes a large share of the funding of indirect research costs via the universities' general operating budget envelope.[1]

The significant rise in the federal government's contribution to university research can be largely explained by the ability of Québec universities to obtain more funds from federal research councils. In 1980, Québec universities received only 22% of the amounts allocated by the three main federal research councils,[2] whereas in 1993, they were granted 29% of the available funding. The latter percentage is higher than the ratio of the number of research professors in Québec to the total number in Canada.

In 1995-96, 79% of the grants and research contracts were awarded in the fields of health sciences, pure sciences and applied sciences; grants and research contracts in health sciences accounted for 35% of the total funding. Research in education grew on average 11% per year from 1989-90 to 1994-95, going from $9 million to $15.1 million. In 1995-96, it dropped and stood at $8.8 million.

1. Within the scope of university operating grants, the Ministère de l'Éducation assumes the major share of the following indirect costs: salaries paid to research professors, infrastructure services (e.g. heating, lighting, water, telephone), the salaries of administrative support staff and secretarial staff, services related to the purchase and maintenance of office furniture and equipment, and so forth.
2. The Medical Research Council of Canada (MRC), the National Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council of Canada (SSHRCC).

## Table 1.15
# Funded and sponsored research per research professor, by source of funding

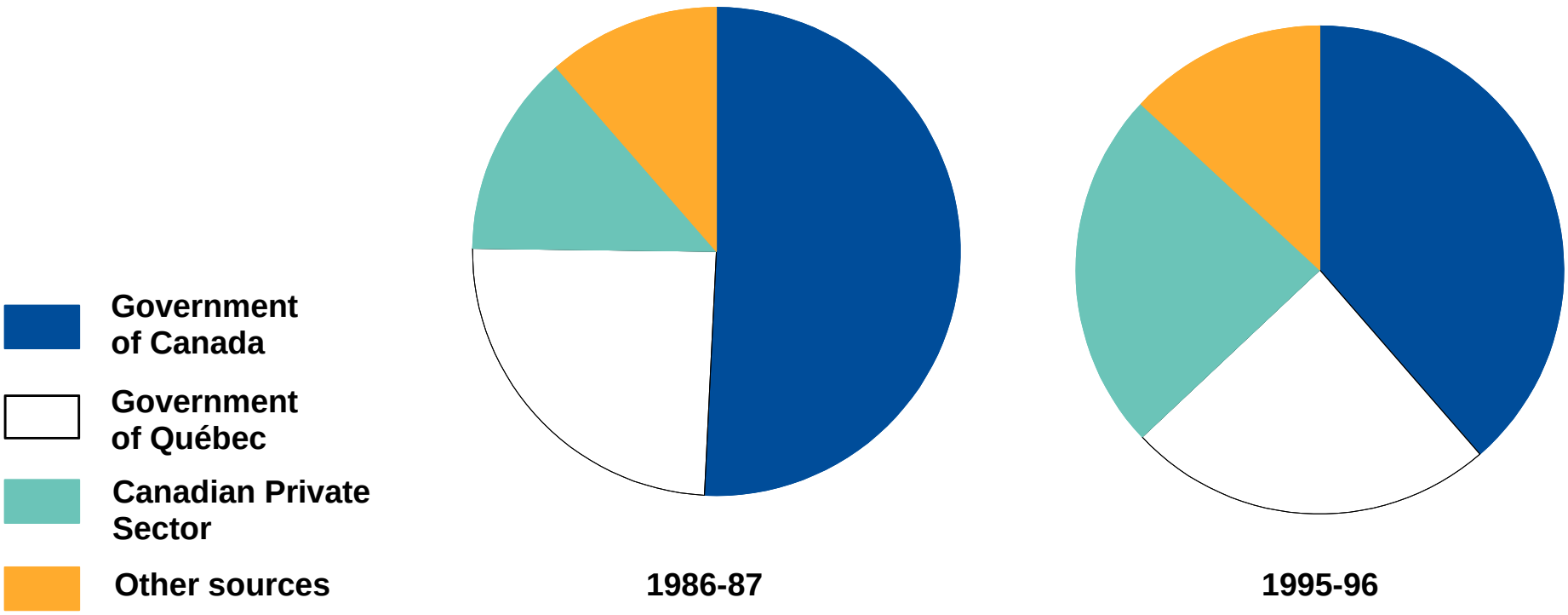
| | 1986-87 | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 |
|---|---|---|---|---|---|---|---|
| **Funded and sponsored research**[1] | | | | | | | |
| Grants and research contracts (in millions of dollars) | 259.7 | 456.2 | 566.4 | 655.0 | 632.9 | 586.4 | 587.3 |
| Number of research professors[2] | 6 775 | 7 266 | 7 556 | 7 771 | 7 852 | 7 945 | 7 799 |
| Amount per research professor (in dollars) | 38 331 | 62 789 | 74 962 | 84 283 | 80 597 | 73 803 | 75 300 |
| **Amount per research professor, by source of funding (in dollars)** | | | | | | | |
| Government of Canada | 19 484 | 27 915 | 28 143 | 29 474 | 28 814 | 29 463 | 29 092 |
| Government of Québec | 9 357 | 14 645 | 14 941 | 16 174 | 16 926 | 17 808 | 18 347 |
| Canadian private sector | 5 130 | 12 423 | 24 253 | 30 162 | 25 416 | 16 626 | 17 985 |
| Other sources | 4 360 | 7 806 | 7 626 | 8 474 | 9 441 | 9 906 | 9 877 |

1. This refers to all research receiving direct assistance (e.g. grants, contracts, commissions) from either the university itself or from external organizations. Included are research projects conducted under the supervision of a university's research professors for which funds have been put into specific accounts managed by the financial services or accounting department of a university, hospital or university-affiliated centre (according to the definition of the *Système d'information sur la recherche universitaire*–SIRU).

2. This refers to the number of full-time research professors in Québec universities. Professors in management positions are excluded (source: Ministère de l'Éducation and Conference of Rectors and Principals of Quebec Universities, *Enquête sur le personnel enseignant*).

## Graph 1.15

# Distribution of grants and research contracts, by source of funding



# 2.1 School Life Expectancy

A child who began elementary school in 1996-97 could expect to spend 15.4 years in the education system.[1] Since 1988-89, 0.9 years of schooling have been added for boys and one year for girls. Over the last three years, school life expectancy has not improved in terms of the duration of 15.5 years observed in 1993-94. At 15.4 years in 1995-96, students from Québec spent fewer years in school than the 15.7 years for students in France[2] at the same time.

***From elementary to university education, in 1996-97, school-aged Quebecers could expect to stay in school for an average of 15.4 years.***

A breakdown by level of education reveals that all recent increases are attributable to either adult education or postsecondary education. Half of the additional schooling is a result of elementary and secondary studies in the adult sector.[3] The remainder is divided equally between the college and university levels.

For elementary and secondary school, the actual duration of schooling corresponds to the projected length of studies. This is not surprising given that enrolment in these levels of education is virtually universal and almost compulsory until the end of secondary school. The reason that at the college and university levels the average duration of schooling is less than the length of programs is primarily because not everyone goes on to postsecondary education.

School life expectancy does not necessarily correspond to the number of years of study begun and successfully completed because grades repeated are included in the average duration. The very slight decline since 1992-93

1. Technically, school life expectancy for a school year is equal to the sum of the schooling rates (or school attendance rates) for full-time studies (or the equivalent) per year of age. A schooling rate is equivalent to the average number of years of schooling per person. The sum of the rates per age indicates the hypothetical duration of studies for a child who begins elementary school and who, throughout his or her progression through school, is in the schooling situation observed for a given year at various ages.
2. Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche et de la Technologie, Direction de l'évaluation et de la prospective, *L'état de l'École*, Paris, No. 7 (October 1997).
3. Part of the schooling in the adult sector is, however, a result of students transferring early into this sector (see Section 2.6).

in the duration of schooling at the elementary and secondary levels can be explained simply by the decrease in the number of years that are repeated (see Section 2.8). At the elementary and secondary levels, boys attend school slightly longer than girls precisely because they have more difficulties. At the college and university levels, women tend to stay in school longer because more of them enrol in postsecondary education than men (see sections 2.9 and 2.11).

## Table 2.1

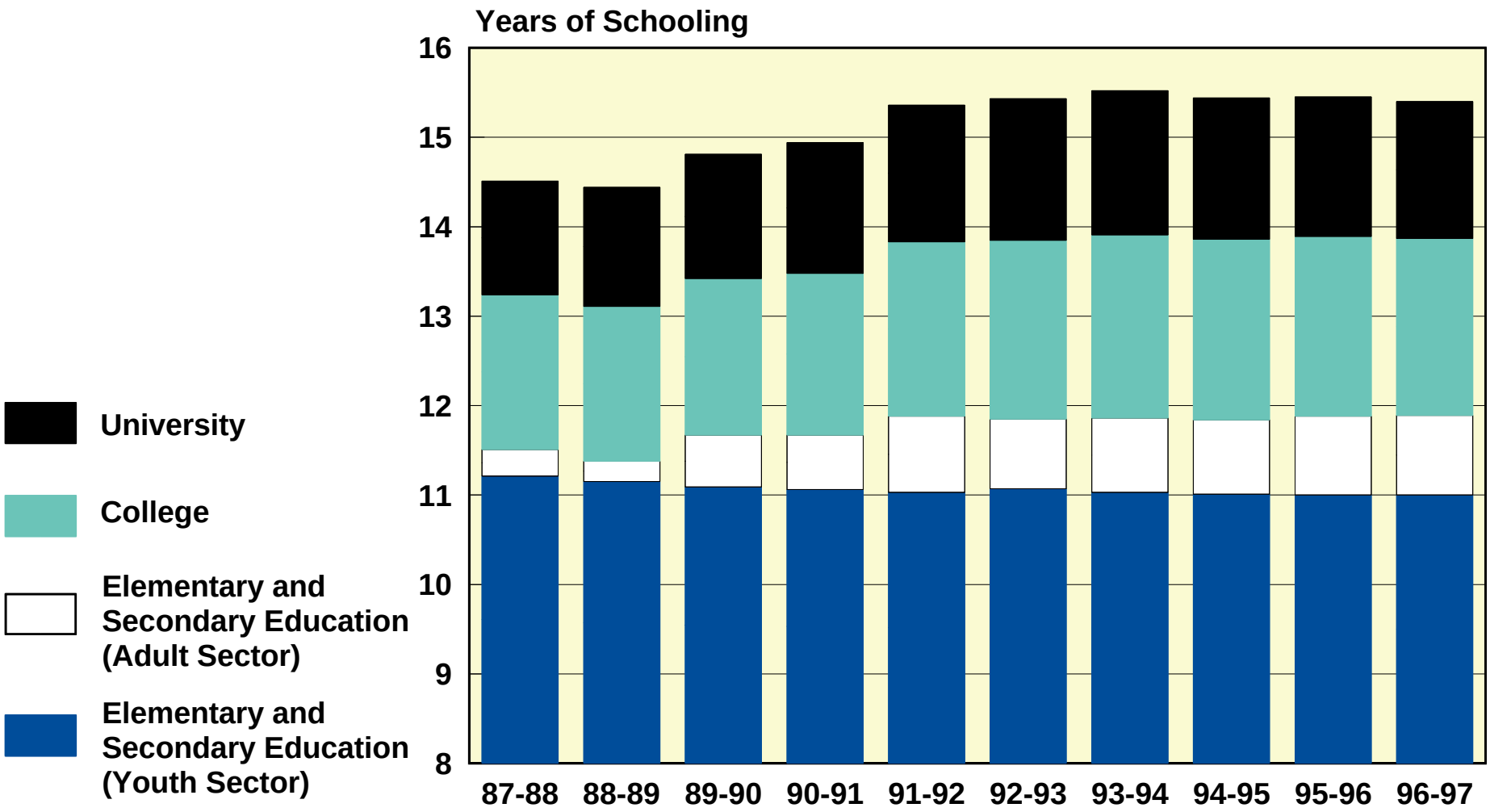
# School life expectancy for a child entering elementary school, by gender and level of instruction (in years)

| | 1988-89 | 1991-92 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|---|---|---|---|---|---|---|
| **All levels of instruction by gender** | | | | | | |
| Male | 14.2 | 15.0 | 15.3 | 15.2 | 15.2 | 15.1 |
| Female | 14.7 | 15.7 | 15.8 | 15.7 | 15.7 | 15.7 |
| **Both** | **14.5** | **15.4** | **15.5** | **15.4** | **15.4** | **15.4** |
| **Both according to level of instruction** | | | | | | |
| Elementary (youth sector) | 6.12 | 6.10 | 6.05 | 6.04 | 6.05 | 6.05 |
| Secondary (youth sector) | 5.03 | 4.93 | 4.97 | 4.96 | 4.95 | 4.95 |
| Elementary and secondary (adult sector) | 0.23 | 0.85 | 0.83 | 0.83 | 0.88 | 0.89 |
| College[1] | 1.73 | 1.95 | 2.05 | 2.02 | 2.01 | 1.98 |
| University | 1.33 | 1.53 | 1.61 | 1.58 | 1.56 | 1.53 |

1. In this edition, full-time and part-time enrolments in all services have been taken into account.

## Graph 2.1

# School life expectancy for a child entering elementary school (in years)



## 2.2 Employment Trends by Level of Instruction

Since the early 1990s, changes in the structure of employment have been occurring in Québec and in Canada as a whole that benefit workers with higher education. Indeed, the employment situation has been more favourable for those with a postsecondary diploma or university degree,[1] both during the recession of the early 1990s and in the period since 1993, when employment has been on the rise. The data presented in this section is from Statistics Canada. The levels of instruction considered here correspond to the highest level of instruction attained by employed workers in a given year.[2]

***The increase of 90 000 jobs in 1997 over 1990 is the net result of a growth of 463 000 jobs, filled by persons with a postsecondary or university education, combined with a loss of 373 000 jobs for those who had not completed postsecondary or university studies.***

In Québec, it was only in 1995 that the job losses suffered in the last recession were absorbed. In 1997, there were 90 000 more jobs than in 1990.[3] However, although there may have been an overall increase of 90 000 jobs, this growth in employment did not benefit all workers. Those who did not complete postsecondary or university studies suffered job losses, while those who did made gains. Thus, employed individuals with a university education were more numerous (by 204 000) in 1997 than in 1990, for an increase of 48.5%. Those with a postsecondary diploma held 259 000 more jobs (28.1%) in 1997 than in 1990. In short, those with a postsecondary or university education held 463 000 more jobs in 1997 than in 1990.

The situation was different for those without a postsecondary or university education. Fewer people who had begun postsecondary studies without completing them held jobs in 1997 than in 1990 (7 000 fewer), representing

1. According to Statistics Canada terminology, elementary school includes the first two years of secondary education. Postsecondary studies include all programs leading to diplomas and certificates in the trades (including the Secondary School Vocational Diploma) and exclude university studies. University education begins with programs that lead to at least a bachelor's degree.
2. The level of instruction attained by a person may increase over time. It is therefore possible that the same job, held by the same person, will be considered to be held by a person with a higher level of instruction in a given year than in an earlier year.
3. The figures presented here are yearly averages, except for 1997, which is the average for the first nine months.

a decrease of 2.7%. Secondary school graduates who did not pursue a postsecondary education held 85 000 fewer jobs (13.3%) in 1997 than in 1990. The number of persons who were employed and whose highest level of instruction fell short of a secondary school diploma declined in 1997 by 142 000 compared with 1990, for a decrease of 25.1%. Finally, in the case of employed individuals who had not gone beyond elementary school, 139 000 job losses (38.2%) were recorded in 1997, compared with 1990. Overall, those who did not complete postsecondary studies held 373 000 fewer jobs in 1997 than in 1990.

## Table 2.2
# Employment trends in Québec, by level of instruction[1] (in thousands)

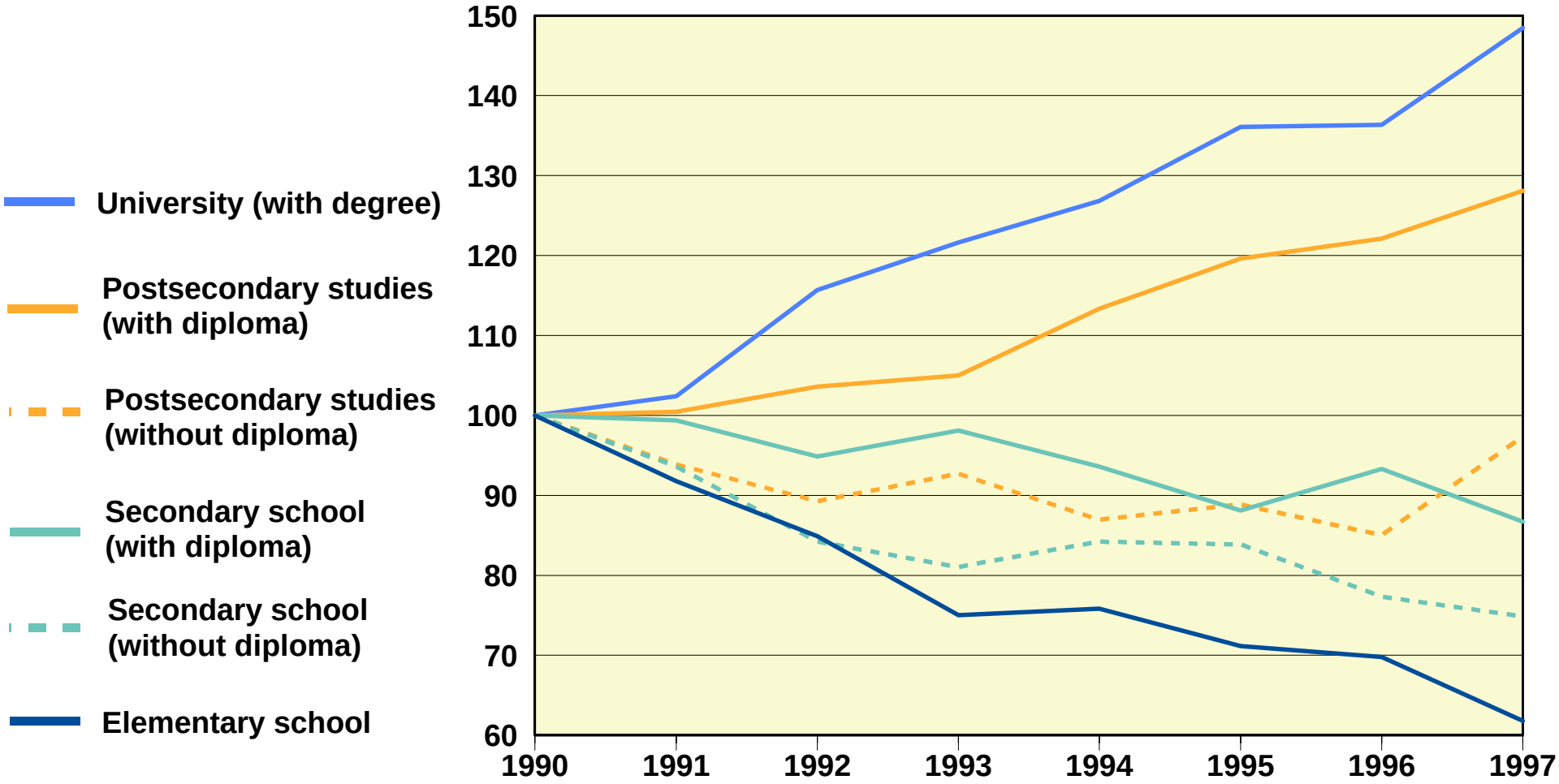
| Year | Elementary School (successfully completed) | Secondary School (without diploma) | Secondary School (with diploma) | Postsecondary Studies (without diploma) | Postsecondary Studies (with diploma) | University (with degree) | Total |
|---|---|---|---|---|---|---|---|
| 1990 | 364 | 565 | 639 | 261 | 922 | 421 | 3 172 |
| 1992 | 309 | 476 | 606 | 233 | 955 | 487 | 3 066 |
| 1994 | 276 | 476 | 598 | 227 | 1 045 | 534 | 3 156 |
| 1996 | 254 | 437 | 600 | 222 | 1 126 | 574 | 3 213 |
| 1997 | 225 | 423 | 554 | 254 | 1 181 | 625 | 3 262 |
| Change from 1990 to 1997 (%) | -38.2 | -25.1 | -13.3 | -2.7 | 28.1 | 48.5 | 2.8 |

Source: Statistics Canada

1. According to Statistics Canada terminology, elementary school includes the first two years of secondary education. Postsecondary studies include all programs leading to diplomas and certificates in the trades (including the Secondary School Vocational Diploma) and exclude university studies. University education begins with programs that lead to at least a bachelor's degree. The figures presented here are yearly averages, except for 1997, which is the average for the first nine months.

## Graph 2.2

# Employment trends in Québec, by level of schooling (1990 = 100)



# 2.3 Enrolments in Preschool Education

Enrolments in kindergarten for 5-year-olds[1] has varied between 96% and 99% for numerous years. There is no difference between the enrolment of boys and girls in either kindergarten for 5-year-olds or kindergarten for 4-year-olds. Until recent years, enrolment in kindergarten for 4-year-olds varied between 6% and 9%; this rate has been increasing since 1994-95 and stood at 17.7% in 1996-97.

***The reform of kindergarten for 5-year-olds has not had an impact on the number of children enrolled, but almost all students now attend on a full-time basis.***

Children enrolled in part-time kindergarten[2] have always accounted for approximately 90% of all students in kindergarten for 5-year-olds, and there have been no differences between boys and girls. In 1997-98, with the recent kindergarten reform, the situation has become completely reversed because almost all boys and girls enrolled in kindergarten for 5-year-olds attend on a full-time basis. For kindergarten for 4-year-olds, statistics on full-time and part-time attendance are available for 1992-93 and 1993-94 only. It would seem that approximately 30% of the children attended on a full-time basis, which is higher than the rate for kindergarten for 5-year-olds at the time. This can be explained by the fact that kindergarten for 4-year-olds is specifically designed for children who require more support: students with handicaps or learning or adjustment difficulties, allophone children who need to improve their knowledge of French and children from economically disadvantaged homes. However, at five half-days a week, full-time kindergarten for 4-year-olds features a relatively light program.

1. This refers to the number of children enrolled in kindergarten for 5-year-olds (regardless of their age) in proportion to the population of 5-year-olds, or 4-year-olds in the case of kindergarten for 4-year-year-olds. Very few children who are not 5 years of age on September 30 are enrolled in kindergarten for 5-year-olds, and even fewer children in kindergarten for 4-year-olds are not 4 years of age. Variations in the estimates of the population aged 4 or 5 may affect the calculation of these rates, probably more so than any other factor.
2. In kindergarten for 5-year-olds, part-time attendance refers to five half-days per week and full-time attendance refers to five full days per week. In kindergarten for 4-year-olds, part-time attendance refers to one to four half-days per week and full-time attendance refers to five half-days per week.

Students with handicaps or learning or adjustment difficulties account for less than 2% of preschool enrolments.[3] There are marked differences between boys and girls. Approximately 1.2% of girls in kindergarten for 4-year-olds and 5-year-olds are students with handicaps or learning or adjustment difficulties, compared with 2.3% of the boys, or almost double. In kindergarten for 4-year-olds, children with learning or adjustment difficulties account for 10% to 15% of all children with handicaps or learning or adjustment difficulties. In kindergarten for 5-year-olds, this proportion is 40% (45% for boys and 34% for girls). Not only are the overall proportions of children with handicaps or learning or adjustment difficulties higher for boys than for girls, but more of these boys experience learning or adjustment difficulties.

In comparison with the various OECD countries,[4] 5-year-olds in Québec have about the same probability of attending school, be it at the kindergarten or elementary level. There are very few countries (such as Germany or Sweden) where enrolment is not universal, or almost, at 5 years of age. In the case of 4-year-olds, of the OECD countries for which data was available, only Turkey has a net schooling rate lower than Québec. Of the 26 OECD countries for which data is available, 11 have a schooling rate for 3-year olds that is higher than 50%. In Canada and Québec, 3-year-olds are not schooled; this is unique among the OECD countries. Countries use daycare centres, kindergartens and regular schools to varying degrees for the education of young children. In Québec, daycare centres are entrusted with a relatively large share of educational activities, while the official school system plays a greater role in children's lives later on.

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3. This analysis uses data from 1995-96 and 1996-97.
4. The Organisation for Economic Co-operation and Development (OECD) calculates the net schooling rate, which is the proportion of children of a given age who attend preschool or elementary school. Preschool and elementary school are considered as one category because of significant differences among the various countries. In the United Kingdom, for example, attendance in kindergarten for 4-year-olds is marginal because most children are already enrolled in elementary school. In theory, a net schooling rate should never exceed 100%; however, this does occur in some of the OECD tables, given the various technical constraints and the quality of the statistical data provided by certain countries. In Graph 2.3, the differences should not be examined too closely. It should be understood that the eight countries listed are approximately all at the same level: virtually all 5-year-olds attend school. Furthermore, this net schooling rate does not differentiate between the type of attendance. Full-time and part-time attendance, as well as hours and days of attendance per week are not taken into consideration. Here too, differences among the various countries may also be quite significant.

## Table 2.3

# Proportion of children enrolled in kindergarten for 4-year-olds and 5-year-olds and breakdown (for kindergarten for 5-year-olds) by type of attendance (%)

| | 1981-82 | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98[e] |
|---|---|---|---|---|---|---|
| **Kindergarten for 4-year-olds** | **7.3** | **8.8** | **14.4** | **17.4** | **17.7** | **17.1** |
| **Kindergarten for 5-year-olds** | **97.1** | **97.0** | **97.4** | **98.0** | **96.8** | **96.8** |
| Full time[1] | – | 9.5 | 10.1 | 11.0 | 10.2 | 96.1 |
| Part time[2] | – | 87.5 | 87.2 | 87.0 | 86.6 | 0.7 |

–: Not applicable

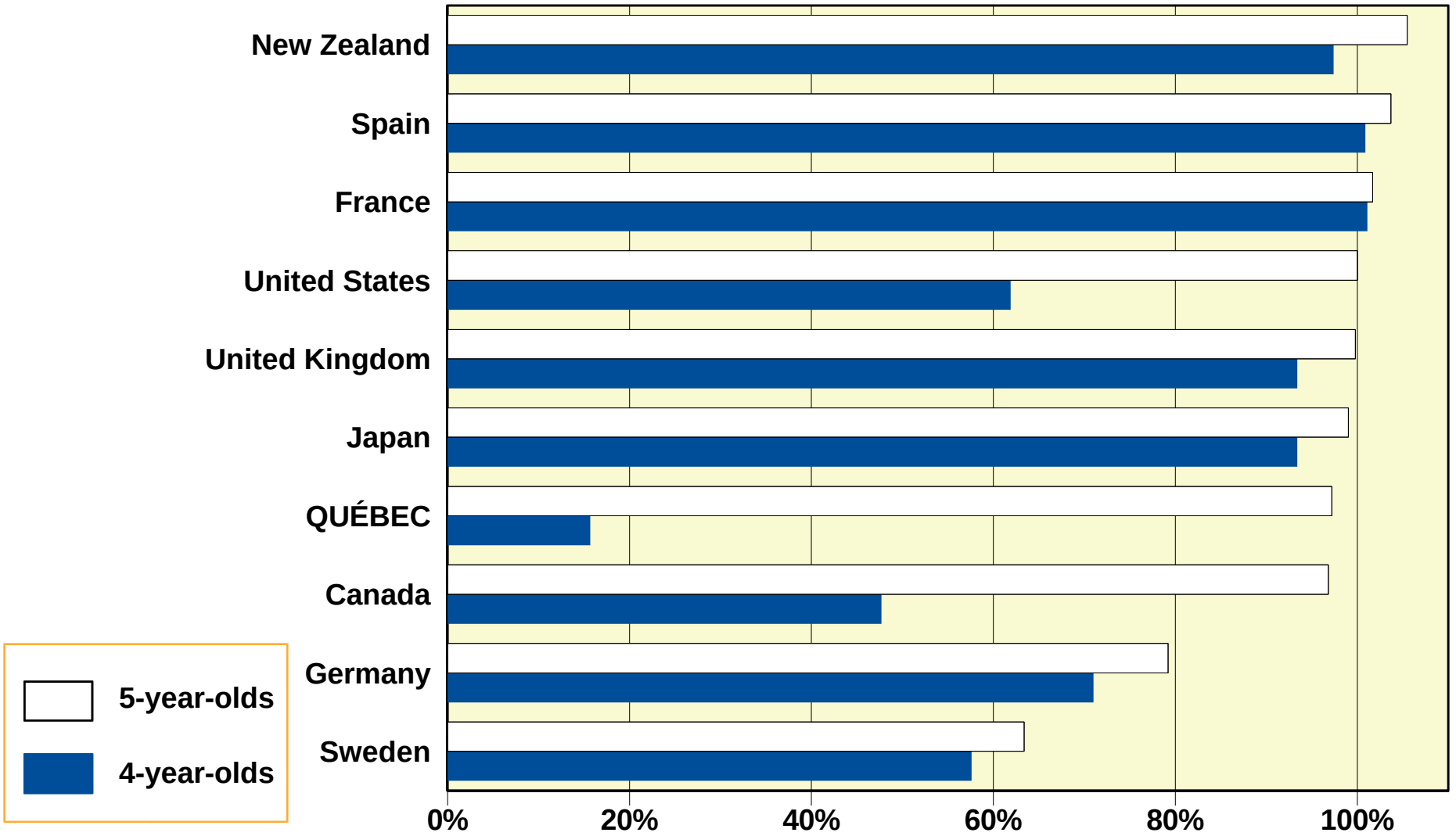
e: Estimates

1. Full time: five full days

2. Part time: five half-days

Graph 2.3

# Net schooling rate of 4- and 5-year-olds: Québec, Canada, and various countries, 1994-95 (%)



# 2.4 Enrolments in Secondary IV and V, General Education–Youth Sector

In 1994-95, enrolments in Secondary IV[1] reached an all-time high (see Graph 2.4). The following year, the same cohort of students set another record for enrolments in Secondary V.[2] A more regular cohort followed, resulting in a drop in Secondary IV enrolments in 1995-96 and a drop in Secondary V enrolments in 1996-97. Section 5.2 demonstrates that the record-breaking cohort had a particularly high graduation rate in 1995-96, and that the graduation rates dropped in 1996-97 for the subsequent cohort.

***In 1996-97, in general education in the youth sector, enrolments in Secondary V reached 74.6%, representing a drop of close to 4 percentage points compared with 1995-96 and a return to the level observed in 1994-95.***

Moreover, Section 2.5 reveals that enrolments in vocational education are on the rise; this may have contributed to the decline in the enrolments in the final years of general education, or at the very least, slowed down the rate of enrolment.

In a more historical perspective, Graph 2.4 shows that enrolments in Secondary IV and V increased appreciably in the 1980s. This trend can be explained by the fact that admission to vocational education was delayed to ensure that students spent an extra year in general education. On the other hand, the drop observed in 1985-86 (in Secondary IV) and in 1986-87 in Secondary V was due to the raising of the pass mark.[3] There was a temporary decline in student retention, but it was not long before an upward trend took hold once again.

For the past several years, virtually all young Quebecers (99%) have enrolled in Secondary I.[4] In 1996-97, 95% entered Secondary II and 91% enrolled in Secondary III. The figures for these three levels have been relatively stable for the last 10 years.

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1. This indicator concerns only general education. Vocational education is dealt with in Section 2.5.
2. This cohort also had the highest enrolment in Secondary III in 1993-94, and in Secondary II in 1992-93.
3. The higher pass mark was applicable to students who entered secondary school in 1982-83.
4. Some young people are not educated in the official education system. They may receive their schooling in reception centres, in schools not legally recognized or at home.

Differences in enrolment between girls and boys appear in Secondary III, where girls are ahead of the boys by more than 2 percentage points. The gap widens in Secondary IV to 6 percentage points in favour of the girls and to 10 percentage points in Secondary V.

## Table 2.4

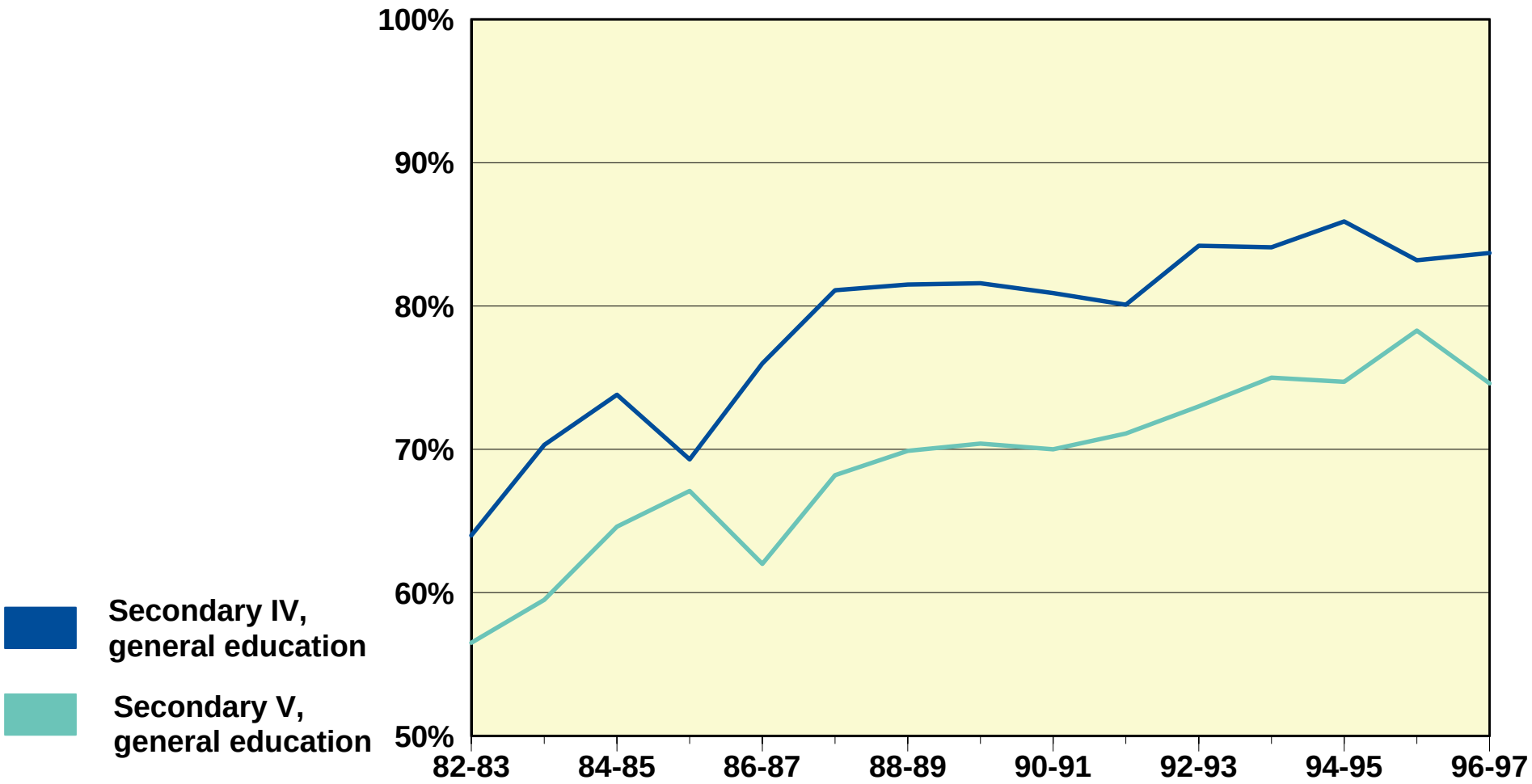
# Proportion of young people enrolling in Secondary IV and V in general education, in the public and private systems, by gender (%)

| | 1982-83 | 1987-88 | 1992-93 | 1994-95 | 1995-96 | 1996-97 |
|---|---|---|---|---|---|---|
| **Secondary IV** | | | | | | |
| Male | 59.7 | 76.9 | 81.4 | 83.2 | 80.2 | 80.5 |
| Female | 68.4 | 85.4 | 87.1 | 88.8 | 86.3 | 86.9 |
| Both | 64.0 | 81.1 | 84.2 | 85.9 | 83.2 | 83.7 |
| **Secondary V** | | | | | | |
| Male | 53.3 | 63.5 | 68.5 | 69.7 | 73.7 | 69.7 |
| Female | 59.8 | 73.1 | 77.7 | 80.1 | 83.0 | 79.7 |
| Both | 56.5 | 68.2 | 73.0 | 74.7 | 78.3 | 74.6 |

Note: Students enrolled in vocational education are not included.

Graph 2.4

## Proportion of young people enrolling in Secondary IV and V in general education in the public and private systems (%)



# 2.5 Enrolments in Secondary Vocational Education–Youth and Adult Sectors

***In 1996-97, 17.1% of young people enrolled in vocational education, 63% of whom already held an SSD.***

The proportion of students under the age of 20 enrolling in vocational education programs was 17.1% in 1996-97. This is the highest level since the reform of vocational education at the end of the 1980s. Since 1984-85, enrolments of students already holding a Secondary School Diploma (SSD) have been on the rise and stood at 10.8% in 1996-97.

As short vocational programs were phased out, most students who would normally have opted for these programs in the past are now enrolled in individualized paths for learning, more specifically in work skills and life skills education programs, which are part of general education. Enrolment of students without diplomas was 6.3% in 1995-96 and represented only 37% of all vocational education enrolments.

Vocational education programs have traditionally attracted more boys than girls. In 1996-97, 20.3% of boys opted for this path, compared with 13.7% of girls. This situation applies equally to students who had a diploma and to those who did not. This is the opposite of what has been occurring in general education in the youth sector (see Section 2.4), where girls tend to stay in school longer. Boys, who are more likely to enrol in vocational education programs than girls, more often leave general education and the youth sector.

## Table 2.5

# Probability of students under the age of 20 enrolling in vocational education, youth and adult sectors combined (%)

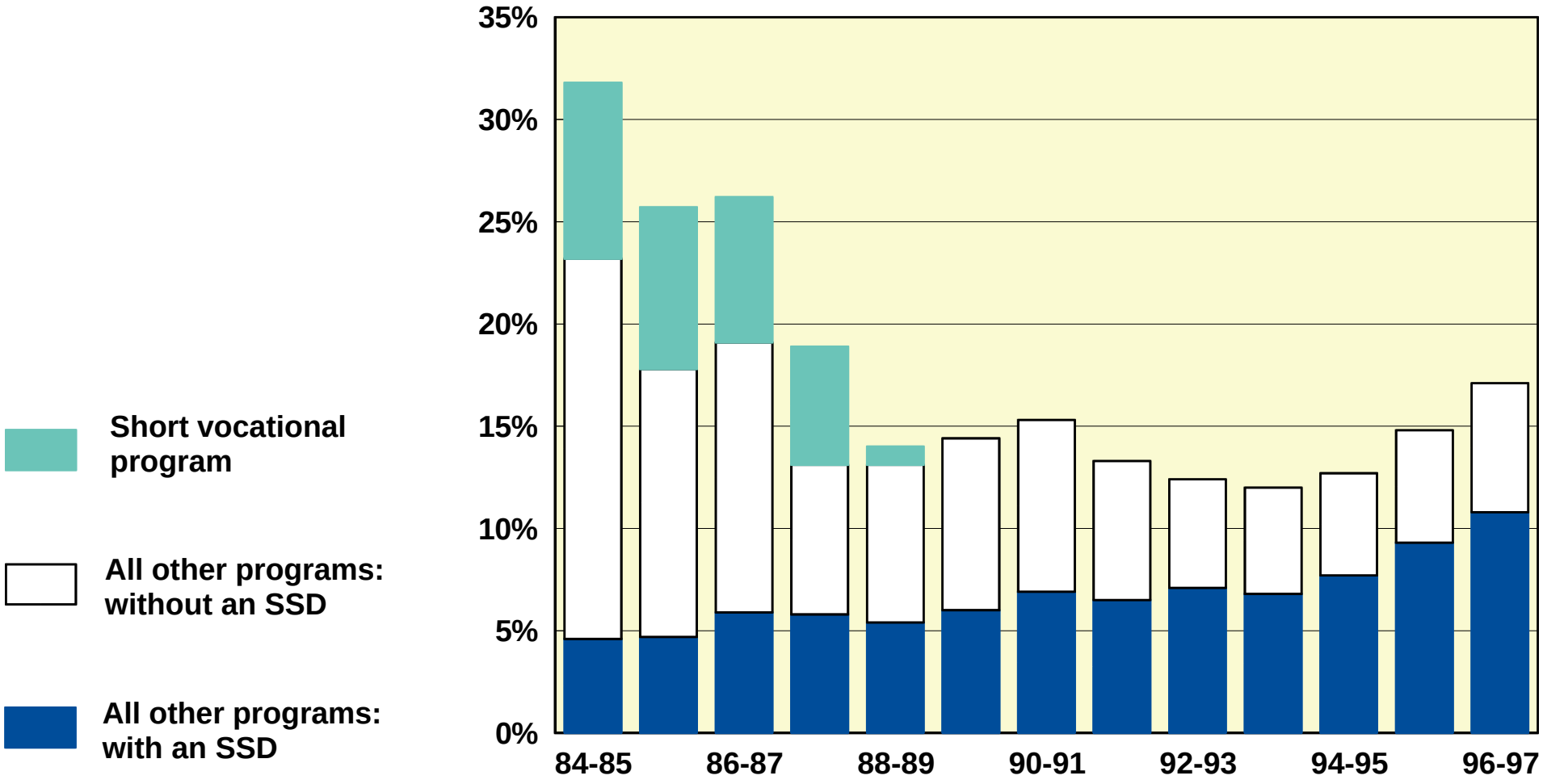
| | 1984-85 | 1988-89 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|---|---|---|---|---|---|---|
| **Male** | | | | | | |
| Short vocational programs[1] | 11.8 | 1.2 | – | – | – | – |
| **All other programs** | **21.7** | **15.5** | **14.1** | **14.9** | **17.3** | **20.3** |
| Without an SSD | 18.1 | 9.8 | 6.8 | 6.5 | 7.2 | 8.5 |
| With an SSD | 3.6 | 5.7 | 7.3 | 8.4 | 10.1 | 11.8 |
| **Female** | | | | | | |
| Short vocational programs[1] | 5.2 | 0.5 | – | – | – | – |
| **All other programs** | **24.8** | **10.6** | **9.8** | **10.3** | **12.1** | **13.7** |
| Without an SSD | 19.1 | 5.4 | 3.5 | 3.4 | 3.6 | 3.9 |
| With an SSD | 5.7 | 5.2 | 6.3 | 7.0 | 8.5 | 9.8 |
| **Both** | | | | | | |
| Short vocational programs[1] | 8.6 | 0.9 | – | – | – | – |
| **All other programs** | **23.2** | **13.1** | **12.0** | **12.7** | **14.8** | **17.1** |
| Without an SSD | 18.6 | 7.7 | 5.2 | 5.0 | 5.5 | 6.3 |
| With an SSD | 4.6 | 5.4 | 6.8 | 7.7 | 9.3 | 10.8 |

–: Not applicable

1. Young people without a diploma primarily enrol in short vocational programs.

Graph 2.5

## Probability of students under the age of 20 enrolling in vocational education, youth and adult sectors combined (%)



# 2.6 Enrolments in Secondary General Education in the Adult Sector

***In 1996-97, 11.5% of students under the age of 20 transferred directly from the youth sector to the adult sector.***

Students who do not obtain a secondary school diploma in the youth sector are not all dropouts. Many of them choose to pursue their studies in the adult sector.

In 1996-97, 11.5% of a school-aged generation under the age of 20 went directly from the youth sector to the adult sector in general education without interrupting their studies. In 1984-85, such students accounted for only 1.3%; there has therefore been a ninefold increase. In view of this, the relatively low rate of 5% observed in 1992-93 can be attributed to the changes made in the funding of educational activities for adult students in eneral education; at the time, this funding was part of a restricted envelope.[1] The increase observed in 1993-94 (9%) was due in large part to the fact that the envelope was once again opened for students 16 to 18 years of age.

An additional number of students re-enrol in general education in the adult sector after having interrupted their studies. Until 1986-87, among students aged 15 to 19, returning students registering in the adult sector were always more numerous than those going directly from the youth sector to the adult sector. Since then, however, the latter path has grown in popularity, and in 1996-97, accounted for over two thirds of all new enrolments of students under the age of 20.

The adult sector does not limit its services to providing students leaving the youth sector with the opportunity to earn their diploma. Adult education is also open to those who already have a secondary school diploma, but who wish to add to their initial education. Of those students without a diploma who enrol in the adult sector, some simply wish to meet a short-term need, such as acquiring the knowledge or skills taught in a specific course.

1. As a result, the school boards had to encourage students to stay in the youth sector (whose envelope was still open), since there were no financial resources to accommodate them in the adult sector in 1992-93.

## Table 2.6

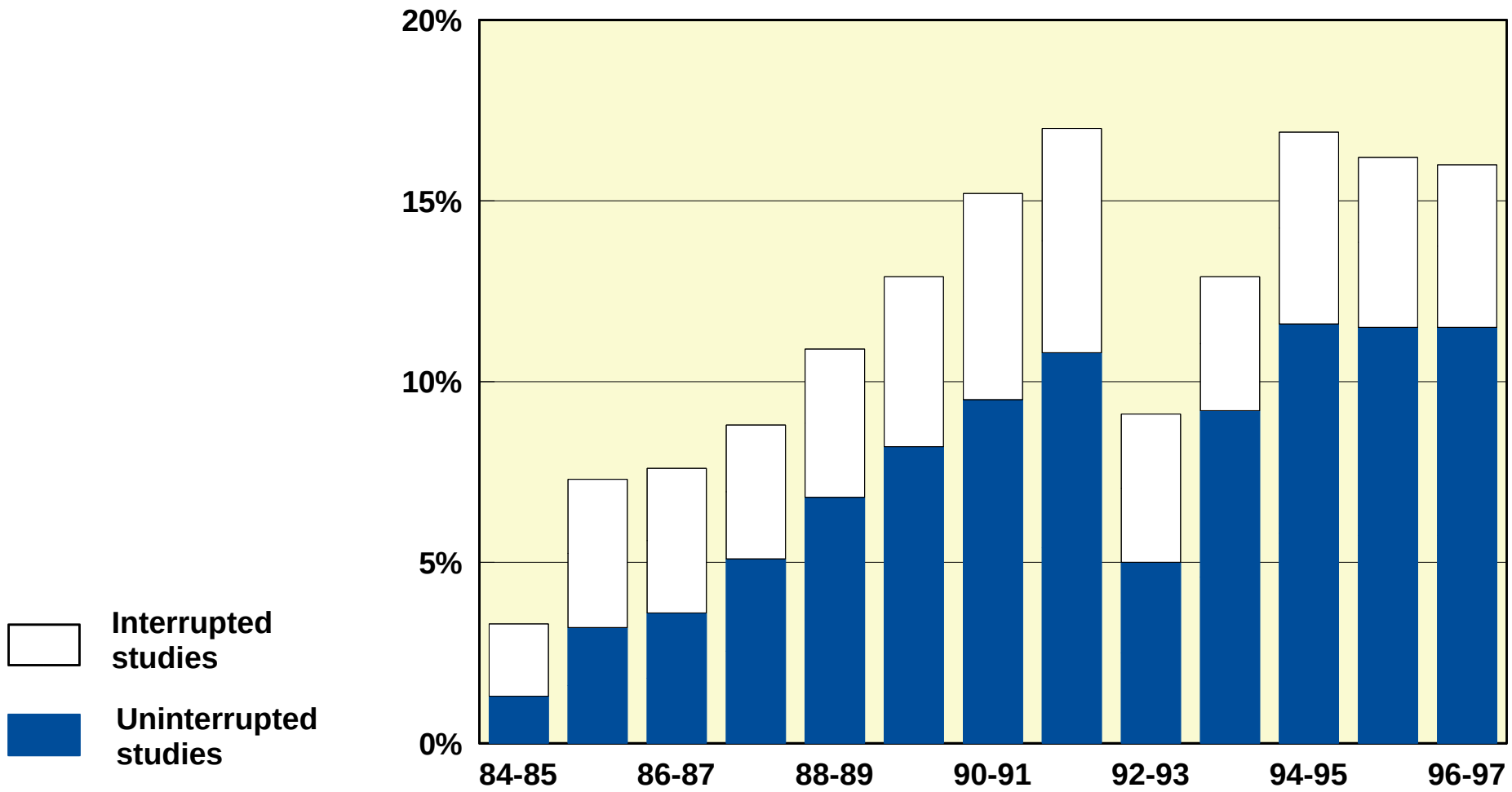
# Probability of students under the age of 20 and without a secondary school diploma enrolling in general education in the adult sector, by gender (%)

| | 1984-85 | 1989-90 | 1992-93 | 1994-95 | 1995-96 | 1996-97 |
|---|---|---|---|---|---|---|
| **Male** | | | | | | |
| Uninterrupted studies[1] (directly from the youth sector) | 1.4 | 9.2 | 5.8 | 13.6 | 13.6 | 13.4 |
| Interrupted studies | 1.9 | 4.5 | 4.4 | 5.7 | 5.2 | 5.1 |
| Total (both categories) | 3.3 | 13.7 | 10.2 | 19.3 | 18.7 | 18.5 |
| **Female** | | | | | | |
| Uninterrupted studies[1] (directly from the youth sector) | 1.1 | 7.1 | 4.2 | 9.6 | 9.3 | 9.4 |
| Interrupted studies | 2.0 | 4.9 | 3.9 | 4.8 | 4.3 | 3.9 |
| Total (both categories) | 3.1 | 12.0 | 8.1 | 14.4 | 13.6 | 13.4 |
| **Both** | | | | | | |
| Uninterrupted studies[1] (directly from the youth sector) | 1.3 | 8.2 | 5.0 | 11.6 | 11.5 | 11.5 |
| Interrupted studies | 2.0 | 4.7 | 4.1 | 5.3 | 4.7 | 4.5 |
| Total (both categories) | 3.2 | 12.9 | 9.1 | 16.9 | 16.2 | 16.0 |

1. Refers to students enrolled in the youth sector on September 30 of the preceding year.

Graph 2.6

## Probability of students under the age of 20 enrolling in general education for adults before obtaining a secondary school diploma (%)



# 2.7 Early School Leavers–Youth and Adult Sectors

In 1996-97, 33.4% of students left school without obtaining a diploma in the youth sector.[1] In the mid-1970s, this rate fluctuated between 45% and 50%, but then began to slide and dropped to under 30% by the mid-1980s. The subsequent increase was caused by several factors, including the stricter graduation requirements stipulated in the basic school regulation[2] and certain measures that stimulated the growth of the adult sector.

***At 17.6%, the early school-leaving rate was 5 percentage points higher in 1996-97 than in 1995-96***.

The number of students who leave school without a diploma is lower if the graduation rate of adults is considered. For example, taking into account the number of adults who obtained a diploma before the age of 20 in 1996-97 reduces the early school-leaving rate for the youth sector by almost 3 percentage points. If both the youth sector and the adult sector (all ages) are taken into account, the probability of not obtaining a diploma is 17.6%.

The increase in the early school-leaving rate in 1996-97 is a result of a drop in the enrolment of young people in Secondary V (see Section 2.4), a decline in the success rate on the ministry examinations (see Section 4.2) and a decline in the graduation rate for general education in the adult sector. Section 5.2 provides more details on how these factors brought about a drop in the probability of obtaining a first secondary school diploma. A decrease in the graduation rate by definition results in a corresponding increase in the early school-leaving rate.

Some students with mental handicaps leave secondary school without a diploma after having attended school until the age of 21. Other students enrolled in continuous individualized paths for learning enter life skills and work skills education programs at the age of 16. The latter students may then obtain an attestation of skills issued by the school board. Although this certificate recognizes that the student has attained a certain level of achievement, it

1. The diplomas considered here are the Secondary School Diploma (SSD), the Short Vocational Diploma, the Long Vocational Diploma, the Secondary School Vocational Certificate (SSVC), the Secondary School Vocational Diploma (SSVD), the Attestation of Vocational Specialization (AVS), the Vocational Education Certificate (VEC) and certification for on-the-job training in a recycling facility.
2. This refers primarily to the raising of the secondary school pass mark from 50% to 60% and the introduction of an extra year of study in general education as a requirement for admission to vocational education.

is not considered a diploma in the strict sense of the word. Strictly speaking, these students cannot be considered dropouts. The same holds true for students who transfer from the youth sector to the adult sector without interrupting their studies.

The early school-leaving rate for girls was 12% in 1996-97; the rate was almost twice as high for boys, at 23%.

## Table 2.7

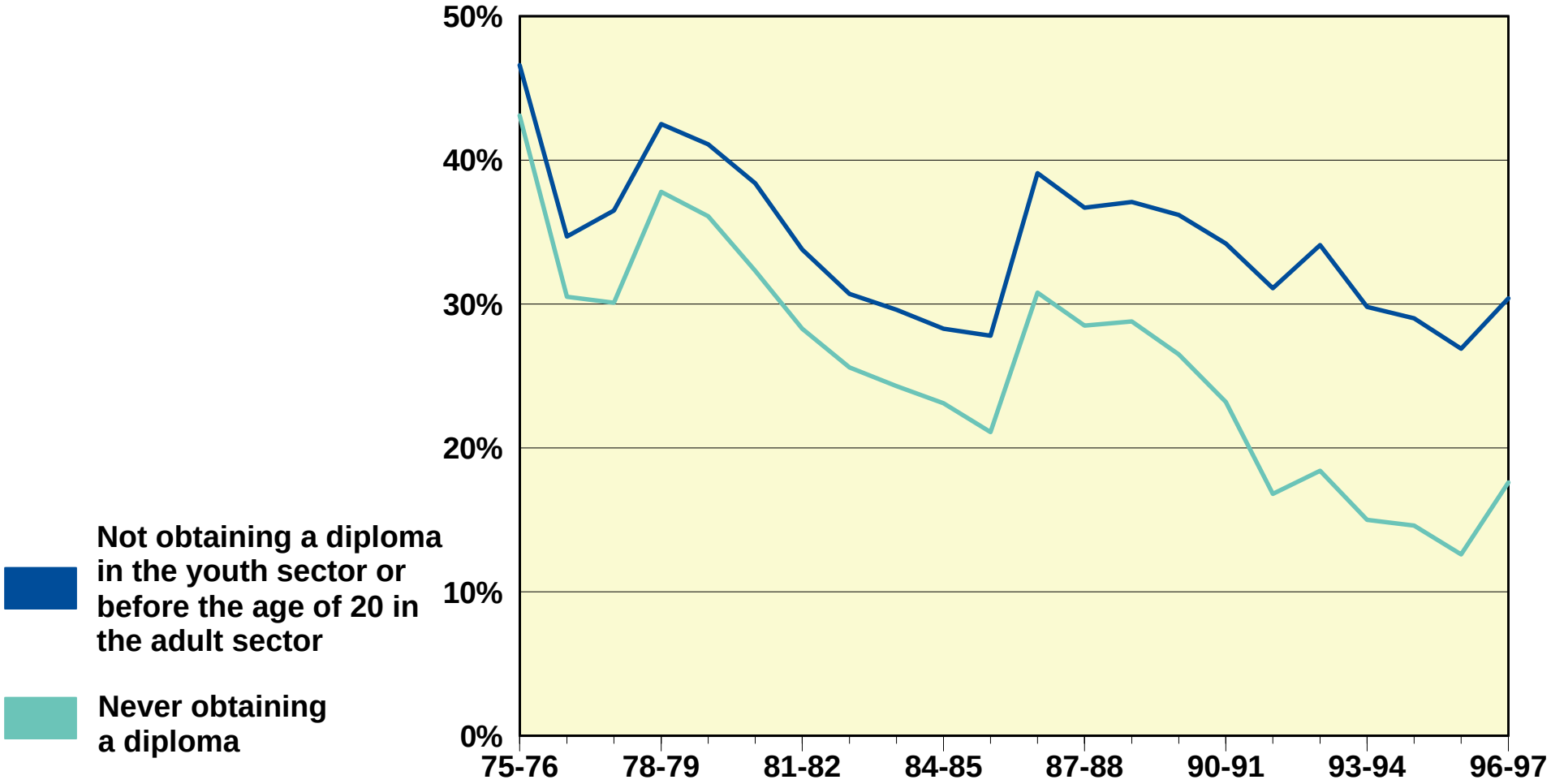
# Proportion of a generation of students leaving secondary school without a diploma, by gender (%)

| | 1975-76 | 1985-86 | 1994-95 | 1995-96 | 1996-97[e] |
|---|---|---|---|---|---|
| **Male** | | | | | |
| Proportion of a generation: | | | | | |
| – not obtaining a diploma in the youth sector | 52.8 | 33.6 | 38.3 | 36.0 | 38.8 |
| – not obtaining a diploma in the youth sector or before the age of 20 in the adult sector | 52.0 | 33.1 | 35.5 | 33.1 | 35.7 |
| – never obtaining a diploma | 49.0 | 27.1 | 21.9 | 19.0 | 23.0 |
| **Female** | | | | | |
| Proportion of a generation: | | | | | |
| – not obtaining a diploma in the youth sector | 41.7 | 22.9 | 25.4 | 23.5 | 27.6 |
| – not obtaining a diploma in the youth sector or before the age of 20 in the adult sector | 41.2 | 22.2 | 22.1 | 20.3 | 24.8 |
| – never obtaining a diploma | 37.2 | 14.7 | 7.0 | 5.8 | 12.0 |
| **Both** | | | | | |
| Proportion of a generation: | | | | | |
| – not obtaining a diploma in the youth sector | 47.3 | 28.4 | 32.0 | 29.9 | 33.4 |
| – not obtaining a diploma in the youth sector or before the age of 20 in the adult sector | 46.6 | 27.8 | 29.0 | 26.9 | 30.4 |
| – never obtaining a diploma | 43.1 | 21.1 | 14.6 | 12.6 | 17.6 |

e: Estimates

Graph 2.7

## Proportion of a generation of students leaving secondary school without a diploma (%)



# 2.8 Students Repeating a Year in Elementary School and in Secondary General Education–Youth Sector

Since 1990-91, the proportion of students repeating a year[1] has been steadily dropping and was 6% in 1996-97. A record-high number of students repeated a year in 1990-91.

***Despite a decline in grade repeating at the elementary and secondary levels, more than one out of six boys repeated Secondary I in 1996-97.***

The number of boys who repeat a given year is always higher than the number of girls, regardless of the school year or the grade level. The proportion of boys who repeat a year is at least one and one half times higher than the proportion of girls in the same situation. There are twice as many repeaters in secondary school as there are in elementary school, and the probability of repeating a year is always significantly higher in Secondary I. This situation is not surprising, considering that all elementary school students, including those with difficulties, are sooner or later promoted to secondary school, if only because they have turned 13 years of age.

The rate of repeating Secondary I has stayed high since 1983-84, when it was already at 13.7%. That was the year in which the effects of raising the secondary school pass mark from 50% to 60% were first felt.[2]

In both elementary and secondary school, the first year is always the most difficult to pass. The rate of repeaters dwindles as the grade level increases. Even if the proportion of students who repeat a year is relatively low in the final years of secondary school, that does not necessarily mean that students' performance has improved. Indeed, at this point many students have reached the age where school attendance is no longer compulsory and they either drop out of school or continue their studies in vocational education or in the adult sector.

---

1. Repeaters are those students who were in the same grade or a higher grade the preceding year. For our purposes, students in Elementary 7 and Secondary VI are considered repeaters.
2. The new higher pass mark was applied to students entering secondary school in 1982-83. Despite incomplete data, it can be established that, in 1982-83, the proportion of repeaters was 9.2% in Secondary I. Thereafter, between 1983-84 and 1984-85, this proportion jumped from 7% to 9.3% in Secondary II. In 1985-86, this figure increased again in Secondary III, and it continued to rise in the subsequent grades until 1987-88.

Obviously, the cumulative effect of repeating a year is to delay students in their schooling. Thus, in 1996-97, at the end of the normal six-year period of elementary school, 23.9% of 12-year-olds had not reached secondary school.

Grade repeating lengthens the duration of studies, but early school leaving shortens it. While the average duration of secondary studies is 5 years, it is 5.2 years or so for students leaving with a diploma, but only 4.2 years for those leaving without one.

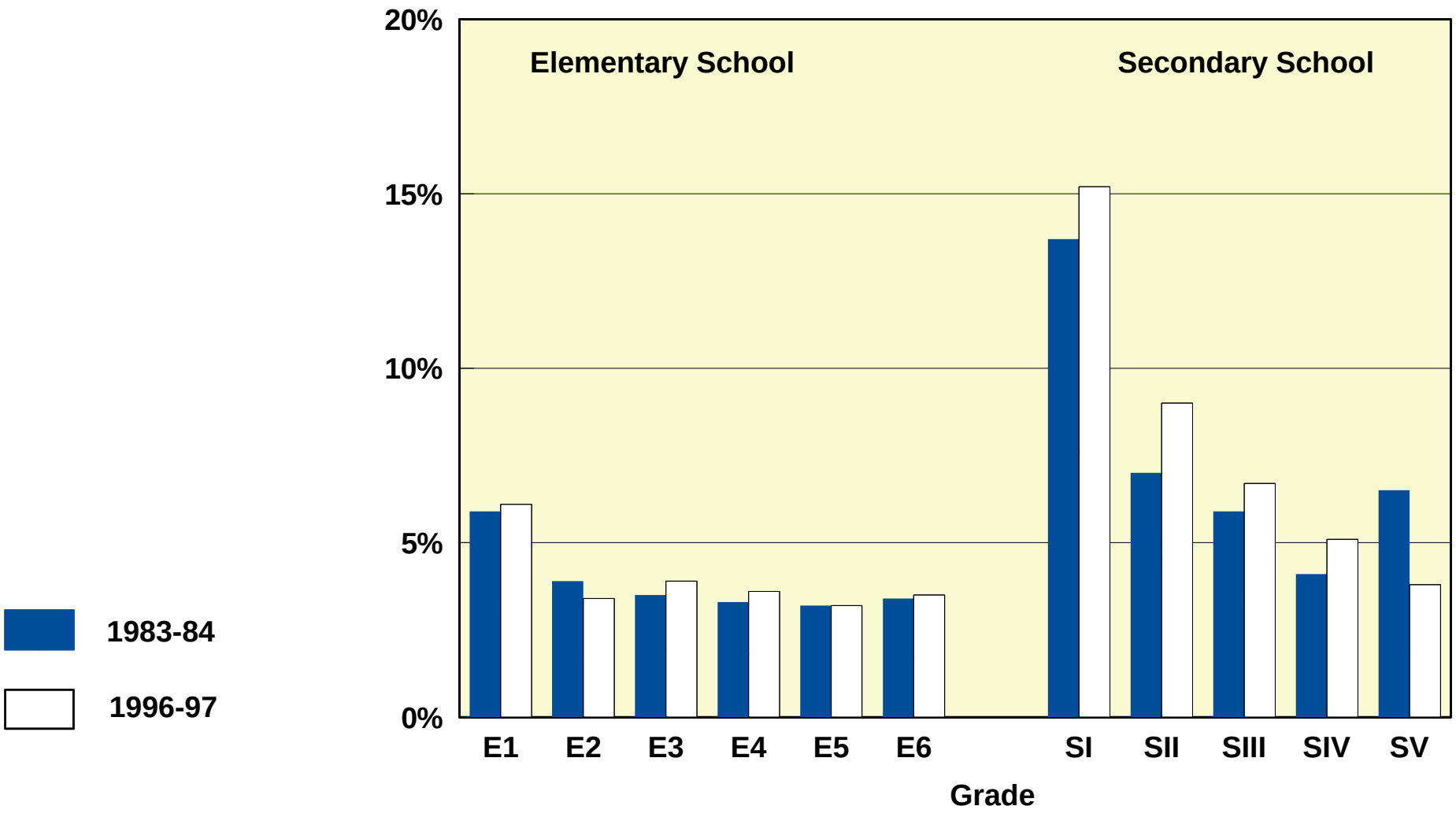
## Table 2.8

# Proportion of students repeating a year, by level of instruction and gender (%)

| | 1983-84 | 1990-91 | 1993-94 | 1994-95 | 1995-96 | 1996-97 |
|---|---|---|---|---|---|---|
| **Elementary school** | | | | | | |
| Male | 5.9 | 7.0 | 5.9 | 5.5 | 5.4 | 4.8 |
| Female | 3.5 | 4.4 | 3.7 | 3.6 | 3.5 | 3.1 |
| Both | 4.7 | 5.7 | 4.9 | 4.6 | 4.5 | 4.0 |
| **Secondary school (general education)** | | | | | | |
| Male | 11.0 | 12.1 | 11.5 | 11.3 | 10.5 | 10.4 |
| Female | 6.4 | 7.8 | 6.9 | 6.8 | 6.5 | 6.3 |
| Both | 8.7 | 10.0 | 9.3 | 9.1 | 8.5 | 8.4 |
| **Secondary I** | | | | | | |
| Male | 16.9 | 18.6 | 19.8 | 20.2 | 20.1 | 18.4 |
| Female | 10.1 | 12.4 | 12.4 | 12.9 | 12.7 | 11.6 |
| Both | 13.7 | 15.7 | 16.3 | 16.8 | 16.6 | 15.2 |
| **Total** | | | | | | |
| Male | 8.1 | 9.2 | 8.5 | 8.2 | 7.8 | 7.4 |
| Female | 4.8 | 5.9 | 5.2 | 5.1 | 4.9 | 4.6 |
| Both | 6.5 | 7.6 | 6.9 | 6.7 | 6.4 | 6.0 |

Graph 2.8

## Proportion of students repeating a year, by level of instruction and grade (%)



# 2.9 Going on to College[1] in Regular Education

***More than one out of ten new students enrolling in a program leading to a DEC in regular education started their studies in an Explorations program.***

In 1996-97, 63.2% of a generation of young Quebecers went on to college. Enrolment in college (regular education) rose by almost 20 percentage points between 1975-76 and 1986-87 (from 39.1% to 61%), followed by a drop of almost 4.5 percentage points in 1987-88. In the six years thereafter, it rose by 10 percentage points, reaching a new high of 66.4% in 1993-94. Since then, enrolments have dropped by 3.2 percentage points for all young Quebecers.

Since the late 1970s, changes in the college entrance rate can be largely explained by trends observed at the secondary level in the youth sector: first, the growth in the secondary school graduation rate in general education until 1985-86; then, from 1986-87 on, the decline in the secondary school graduation rate because of the introduction of more stringent graduation requirements; and, finally, an upward swing in the graduation rate, starting in 1990-91, albeit at a slower pace.

There is a close correlation between obtaining a secondary school diploma in general education in the youth sector or before the age of 20 in the adult sector and enrolling in college. This correlation would seem to indicate that the majority of general education graduates eventually go on to college, along with a certain number of graduates in vocational education.

Over a period of 15 years or so, the gap between men and women going on to college widened steadily. Although rather negligible in the late 1970s, the difference was 16.6 percentage points in favour of women in 1990-91, and 16.4 percentage points in 1996-97.

---

1. The figures mentioned here include only students enrolled for the first time in programs leading to a Diplôme d'études collégiales (DEC–diploma of college studies) in regular education. In this edition, the method used to calculate the rates has been changed and the rates may differ from those already published.

College enrolment also varies with the type of education involved. Since 1985-86, the probability of enrolling in pre-university education has dropped slightly, going from 37.3% to 36.8% in 1996-97, after having reached a high of 43.7% in 1992-93. The probability of enrolling in technical education at college declined from 21.3% to 18.1% from 1986-87 to 1989-90, to return to 21.2% in 1992-93 and then settle at 19.8% in 1996-97.

In recent years, only enrolment in Explorations programs in regular education has increased. In 1993-94, 4.9% of students began their college studies in this type of program; in 1996-97, the figure was 6.6%, which, of a total of 63.2%, represents more than one out of ten new enrolments. A slight majority of first-time college students who enrol in this type of program pursue studies leading to a DEC in pre-university education in the fall of the following year.

## Table 2.9

# Probability of enrolling full or part time in regular education in private or public colleges, by gender and type of education (%)

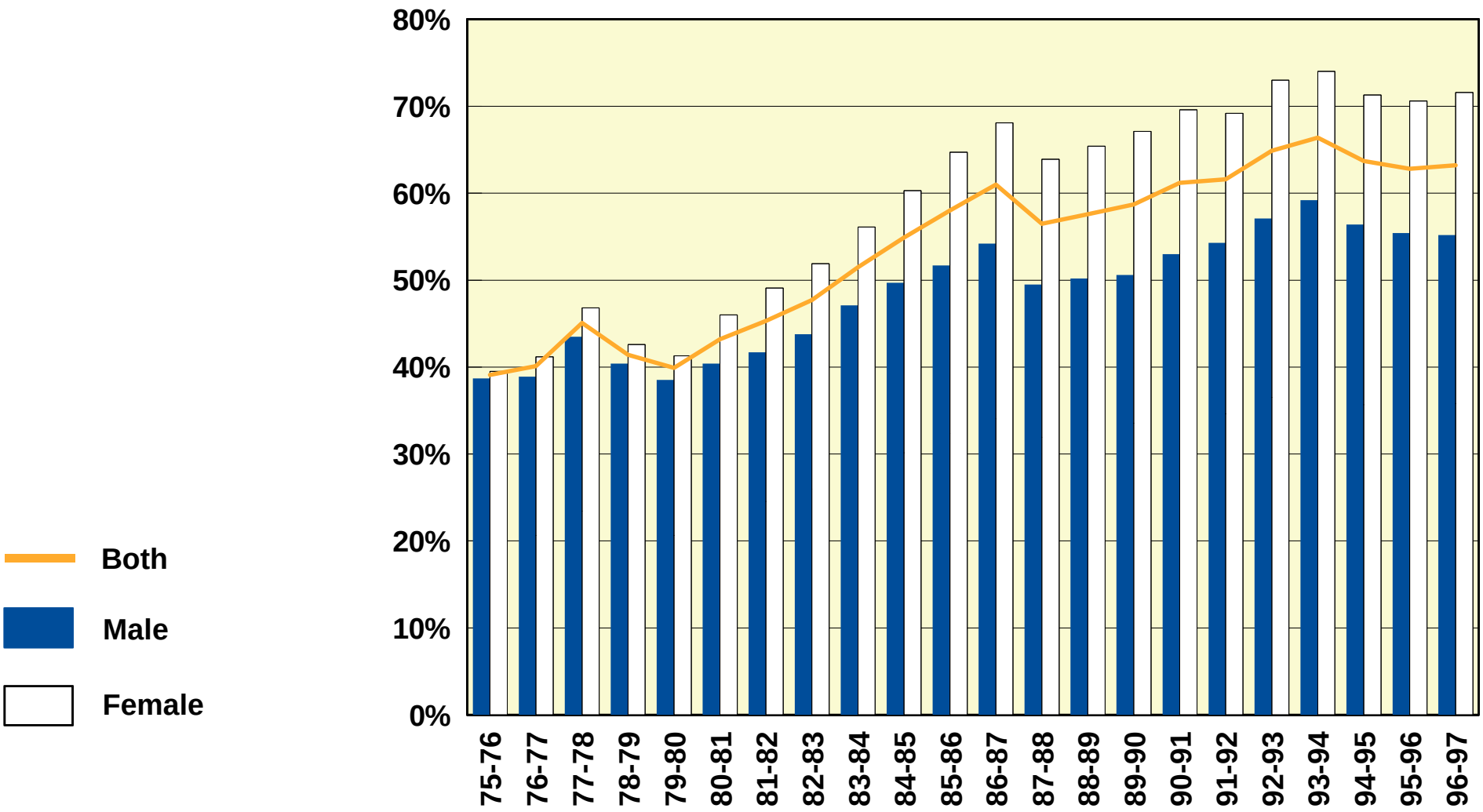
| | 1975-76 | 1980-81 | 1985-86 | 1990-91 | 1995-96 | 1996-97[e] |
|---|---|---|---|---|---|---|
| **Male** | **38.7** | **40.4** | **51.7** | **53.0** | **55.4** | **55.2** |
| Pre-university education | 25.3 | 25.8 | 34.0 | 36.9 | 31.2 | 29.7 |
| Technical education | 13.4 | 14.8 | 17.6 | 18.1 | 18.3 | 18.7 |
| Explorations | – | – | – | – | 5.9 | 6.8 |
| **Female** | **39.5** | **46.0** | **64.7** | **69.6** | **70.6** | **71.6** |
| Pre-university education | 22.4 | 26.7 | 40.8 | 46.7 | 44.4 | 44.3 |
| Technical education | 17.1 | 19.3 | 23.8 | 22.9 | 20.1 | 20.9 |
| Explorations | – | – | – | – | 6.0 | 6.4 |
| **Both** | **39.1** | **43.2** | **58.0** | **61.2** | **62.8** | **63.2** |
| Pre-university education | 23.9 | 26.1 | 37.3 | 41.7 | 37.6 | 36.8 |
| Technical education | 15.2 | 17.0 | 20.7 | 19.5 | 19.2 | 19.8 |
| Explorations | – | – | – | – | 6.0 | 6.6 |

e: Estimates

–: Not applicable

Graph 2.9

## Probability of enrolling full or part time in regular education in private or public colleges, by gender (%)



# 2.10 Going Directly from College to University

***In 1995-96, 78.6% of pre-university program graduates and 18.9% of technical program graduates went on to university.***

The main objective of pre-university college studies is to prepare students for university. In 1995-96, 78.6% of pre-university program graduates aged 24 and under enrolled in university; this proportion was 79.2% in 1994-95. Even though more pre-university program graduates found employment, the proportion of employed graduates remained at 13.7%. More pre-university program graduates also continued their studies other than at university.

Since the early 1980s, the proportion of pre-university program graduates[1] going on to university has fluctuated between 78% and 87%, except in 1987-88, when it fell to 73.1%.

In technical education, more graduates aged 24 and under opted for the job market, which is in fact the aim of this type of education. The proportion of these graduates going on to university was 18.9% in 1995-96 (19.2% the previous year). Since the early 1980s, the highest proportion of technical program graduates pursuing their studies in university has been 19.8% in 1990-91.

In technical education, more men than women aged 24 and under pursued university studies. This situation is in fact a consequence of the propensity of women in technical programs to enter the job market sooner. More women find employment when they leave college. However, the gap observed since the beginning of the 1980s between the number of men and women pursuing their studies at university has been on the decline. In 1982-83, the gap was 7.5 percentage points, whereas it was only 4.1 percentage points in 1995-96.

1. This refers to students who between the months of September and August of a given school year were enrolled in the last year of a college program and who have successfully completed their studies. Furthermore, these students did not attend a CEGEP, private college or government institution during the fall term following the completion of their studies.

## Table 2.10

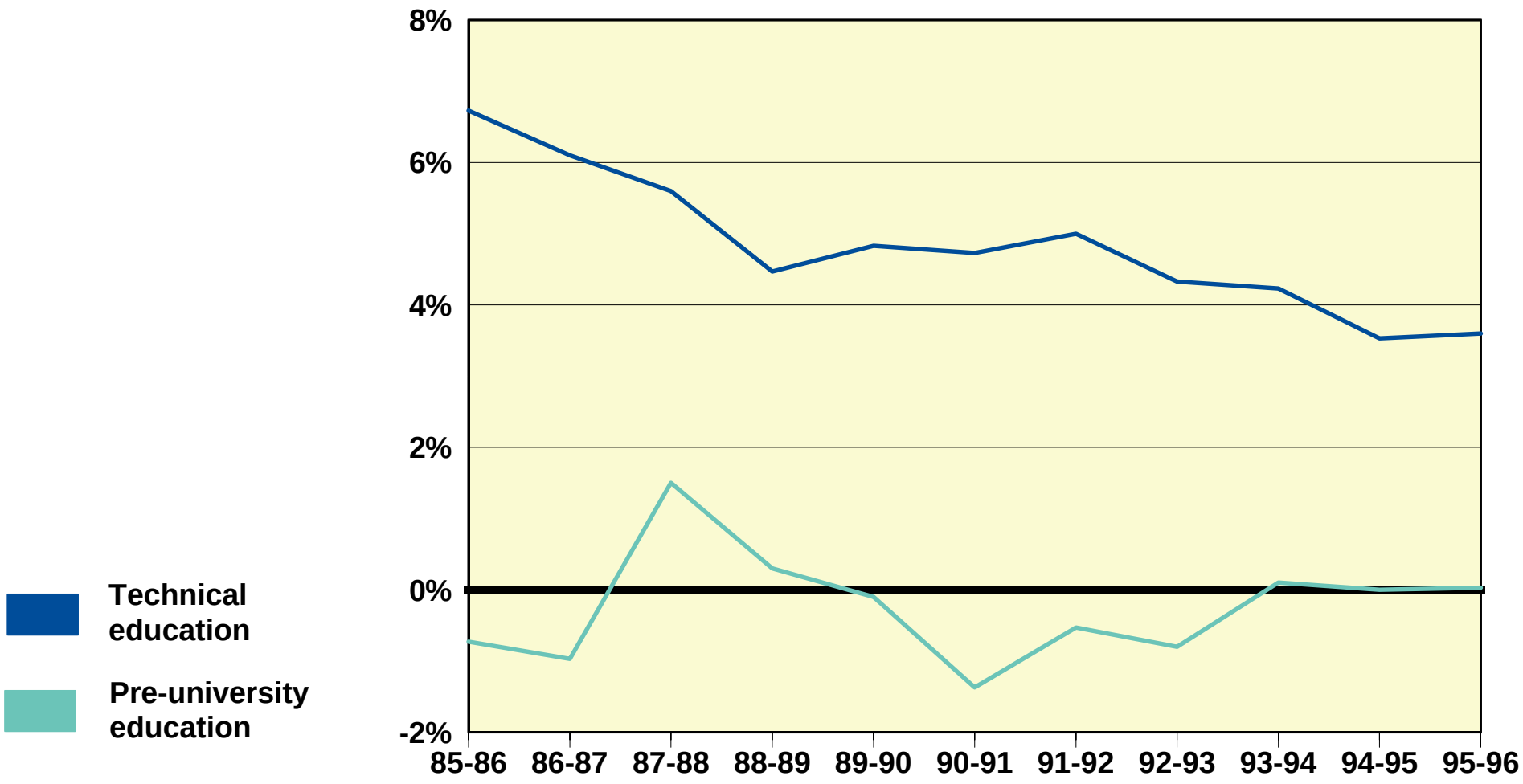
# Proportion of college graduates (24 years old and under) going on to university without interrupting their studies, by type of education and gender (%)

| | 1982-83[1] | 1990-91 | 1992-93 | 1993-94 | 1994-95 | 1995-96 |
|---|---|---|---|---|---|---|
| **Pre-university education** | | | | | | |
| Male | 87.7 | 86.1 | 79.0 | 81.4 | 78.4 | 77.7 |
| Female | 84.3 | 86.3 | 80.5 | 78.9 | 79.8 | 79.3 |
| **Both** | **86.0** | **86.2** | **79.9** | **80.0** | **79.2** | **78.6** |
| **Technical education** | | | | | | |
| Male | 21.9 | 22.0 | 21.0 | 20.1 | 21.2 | 21.4 |
| Female | 14.4 | 18.5 | 17.1 | 16.9 | 17.7 | 17.3 |
| **Both** | **17.4** | **19.8** | **18.6** | **18.1** | **19.2** | **18.9** |

1. Year in which the diploma was obtained.

Graph 2.10

## Going directly from college to university: gap between men and women (three-year moving average)



# 2.11 University Enrolments

***In 1996-97, among a university-aged generation of Quebecers, slightly more than one in three persons (34%) could expect to undertake studies leading to a bachelor's degree.***

This section concerns only enrolments in programs leading to university degrees at the bachelor's, master's or doctoral levels. Enrolments in studies leading to certificates and enrolments in non-program studies are not measured here.

The proportion of a generation enrolling for the first time in a program leading to a bachelor's degree increased by one third over an eight-year period, climbing to 39.5% in 1992-93 from 29.9% in 1984-85. In the last four years, there has been a decline of more than 5.5 percentage points in enrolments in programs leading to a bachelor's degree, lowering the probability of enrolling in university to 34% in 1996-97, below the level of 1987-88. A similar decline was observed in enrolments in college pre-university programs after 1992-93 (see Section 2.9).

Gains for women over the 12-year period were much more considerable than for men (7.7 percentage points compared with 0.8 percentage points). In 1996-97, the probability of enrolling in a bachelor's program was 38.8% for women and 29.5% for men. The gap between the sexes was 9.3 percentage points, whereas it had been 2.4 percentage points 12 years earlier.

More women were also enrolling in master's programs, the proportion reaching 9.2% in 1996-97, compared with 8.8% for men; in 1984-85, the difference was 1.4 percentage points in favour of men. Between 1984-85 and 1996-97, the increase in enrolments at the master's level was relatively higher (2.3 percentage points) than at the bachelor's level, where there has in fact been a decrease in enrolments over the past four years.

The growing interest in doctoral studies is significant even though it applies to only a small portion of the population. Enrolments rose from 1.1% in 1984-85 to 1.8% in 1996-97. Men (2.1%) continue to enrol in doctoral studies in greater numbers than women (1.6%), but the number of women has increased considerably since 1984-85.

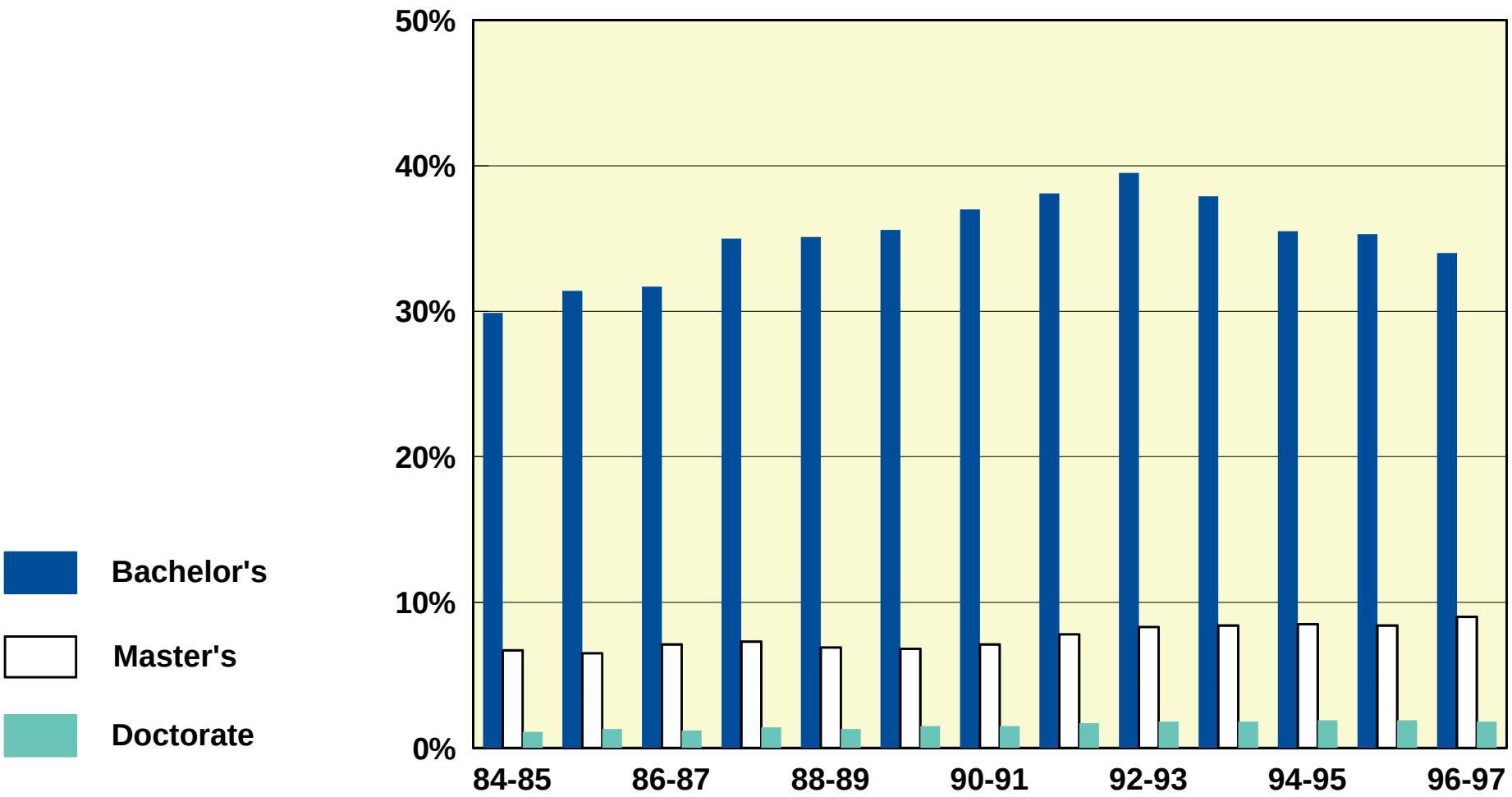
## Table 2.11
# Probability of enrolling in a program leading to a university degree, by gender (%)

| | 1984-85 | 1989-90 | 1992-93 | 1994-95 | 1995-96 | 1996-97[p] |
|---|---|---|---|---|---|---|
| **Bachelor's programs** | | | | | | |
| Male | 28.7 | 31.8 | 34.6 | 30.4 | 30.6 | 29.5 |
| Female | 31.1 | 39.7 | 44.6 | 40.8 | 40.3 | 38.8 |
| **Both** | **29.9** | **35.6** | **39.5** | **35.5** | **35.3** | **34.0** |
| **Master's programs** | | | | | | |
| Male | 7.4 | 7.0 | 8.4 | 8.2 | 8.1 | 8.8 |
| Female | 6.0 | 6.6 | 8.2 | 8.8 | 8.8 | 9.2 |
| **Both** | **6.7** | **6.8** | **8.3** | **8.5** | **8.4** | **9.0** |
| **Doctoral programs** | | | | | | |
| Male | 1.4 | 1.8 | 2.2 | 2.2 | 2.1 | 2.1 |
| Female | 0.8 | 1.1 | 1.4 | 1.6 | 1.6 | 1.6 |
| **Both** | **1.1** | **1.5** | **1.8** | **1.9** | **1.9** | **1.8** |

p: Preliminary figures

## Graph 2.11

# Probability of enrolling in a program leading to a university degree (%)



# 2.12 Training of Researchers

Students enrolled in a program leading to a doctorate are probably the most representative of those who will go into university research. In the fall of 1996, these students numbered 9 247. From 1990 to 1996, this number increased by 5% a year on average.

***In the fall of 1996, 33% of doctoral students were enrolled in the pure and applied sciences, 31% in the social sciences and 11% in the health sciences.***

Enrolments in doctoral programs are mainly concentrated in the pure and applied sciences, social sciences and health sciences. In 1996, 33% of doctoral candidates were enrolled in the pure and applied sciences, 31% in the social sciences and 11% in the health sciences. Men accounted for most of the students enrolled in a program leading to a doctorate (58% in the fall of 1996). From 1990 to 1996, the increase in the number of women enrolled in doctoral programs (8%) was greater than it was for men (3%).[1]

In 1996, more than 80% of the men in doctoral programs were enrolled in the social sciences (26%), the applied sciences (24%), the pure sciences (20%) and the health sciences (10%). The number of men enrolled in business administration has increased the most since 1990, that is, an average of 11% per year.[2]

The distribution of enrolments in doctoral programs differs for women and men. In the fall of 1996, 37% of the women students were in the social sciences, 13% were in the health sciences, 12% were in the arts, 9% were in the pure sciences and 9% were in the applied sciences. The fields of applied sciences and health sciences have experienced the largest increase in terms of female enrolments, with an annual average growth of 13% and 9%, respectively.[3]

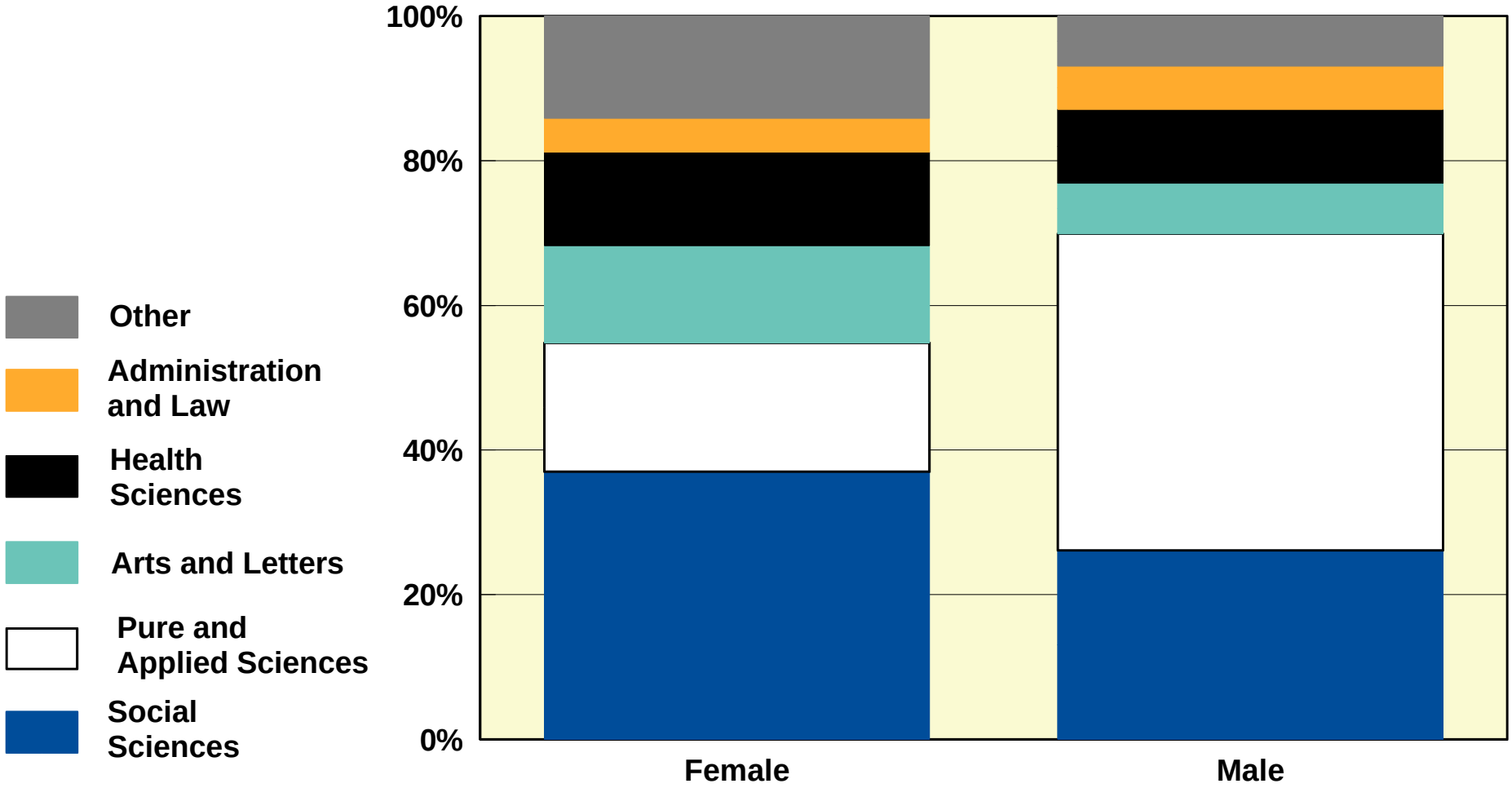
1. See Section 2.11.
2. Male enrolments in interdisciplinary studies, which went from 39 in 1990 to 71 in 1995, are not taken into consideration.
3. Female enrolments in interdisciplinary studies, which went from 21 in 1990 to 51 in 1996, are not taken into consideration.

## Table 2.12
# Enrolments in doctoral programs, by field of study, 1990 to 1996 (fall term)

| | 1990 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|
| Arts | 96 | 109 | 101 | 108 | 120 | 132 |
| Letters | 666 | 700 | 715 | 729 | 774 | 765 |
| Business administration | 240 | 281 | 308 | 339 | 358 | 401 |
| Law | 58 | 73 | 79 | 86 | 103 | 103 |
| Education | 549 | 547 | 547 | 539 | 587 | 629 |
| Social sciences | 2 174 | 2 406 | 2 578 | 2 696 | 2 764 | 2 834 |
| Pure sciences | 1 229 | 1 400 | 1 516 | 1 530 | 1 506 | 1 410 |
| Applied sciences | 1 277 | 1 535 | 1 709 | 1 758 | 1 716 | 1 634 |
| Health sciences | 662 | 761 | 798 | 866 | 958 | 1 047 |
| Interdisciplinary studies | 60 | 93 | 101 | 112 | 127 | 134 |
| Not applicable | 26 | 46 | 40 | 195 | 164 | 158 |
| **Total** | **7 037** | **7 951** | **8 492** | **8 958** | **9 177** | **9 247** |

Graph 2.12

# Breakdown of enrolments in doctoral programs, by gender and field of study, fall 1996



# 3.1 Success in Secondary General Education[1] in the Adult Sector

***For students under the age of 20 who were enrolled in Secondary Cycle Two in the adult sector in 1995-96, the probability of obtaining a diploma was 64.8%.***

Of the students in general education in the adult sector who left secondary school in 1995-96, 17.6% obtained a diploma. If only students in Cycle Two are considered, the proportion almost triples, to 52.9%. Of the various instructional services offered,[2] only Secondary Cycle Two usually leads to a diploma. Figures for new enrolments broken down according to instructional service are available as of 1988-89 only. These figures show that the proportion of graduates was 23.2% for students leaving Secondary Cycle Two; the rate has therefore more than doubled since that time because the graduation rate for 1995-96 was 52.9%.

Although the attainment of a diploma is not the most appropriate criterion for measuring success in the other instructional services, it can nevertheless be observed that the proportion of graduates is on the rise among students from all the instructional services in the adult sector. Since 1980-81, this proportion has risen from 11.5% to 17.6%. This increase is primarily due to the fact that fewer students are dropping out of instructional services that do not lead directly to a diploma. Instead of quitting school, students pursue their studies in another instructional service and thus enter Cycle Two and eventually earn a secondary school diploma.

Among students leaving school, the proportion who hold a diploma is higher for those under the age of 20 than that for all ages combined. Thus, in Secondary Cycle Two, 64.8% of the students leaving before the age of 20 did so with a diploma; progress has been considerable in this respect, because the corresponding proportion for 1988-89

1. Success in general education is measured here by the proportion of new holders of a diploma among all students leaving secondary school with or without a diploma. The diplomas counted are those obtained during or at the end of the last year of enrolment or the following year, when the student has not re-enrolled. Students are considered to have left school without a diploma when they have been absent for a period of at least two years following the last year of enrolment.
2. The following instructional services are offered, or were offered in the past, in general education for adults: Integration into Community Life Program (ICLP), sociovocational integration, preemployment training activities (PTA), literacy, francization, adults educated in the youth sector, study skills and career planning, presecondary education, secondary cycle one, secondary cycle two, vocational education preparation, postsecondary education preparation and preparation for higher education.

was 36.3%. With respect to instructional services as a whole, the proportion of those leaving under the age of 20 with a diploma went from 22% to 27.1% between 1980-81 and 1995-96.

In 1980-81, the success rate was slightly higher for men than for women, but the situation has since reversed. In 1995-96, the success rate for women exceeded that of men by 5.2 percentage points, and this difference was 11 percentage points for those under 20 years of age.

## Table 3.1

# Proportion of students leaving general education in the adult sector with a diploma,[1] by gender, instructional service, age and last year of enrolment (%)

| | 1980-81 | 1988-89 | 1990-91 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| **Male** | | | | | | |
| Secondary Cycle Two | N/A | 22.7 | 36.2 | 44.7 | 49.1 | 49.5 |
| Before the age of 20 | N/A | 36.2 | 44.0 | 50.3 | 60.0 | 60.8 |
| All instructional services | 13.1 | 13.2 | 12.6 | 20.9 | 15.8 | 15.1 |
| Before the age of 20 | 23.1 | 22.4 | 22.9 | 26.0 | 23.8 | 22.5 |
| **Female** | | | | | | |
| Secondary Cycle Two | N/A | 23.6 | 40.4 | 51.7 | 55.9 | 55.9 |
| Before the age of 20 | N/A | 36.4 | 49.2 | 59.1 | 68.7 | 68.8 |
| All instructional services | 10.3 | 15.3 | 16.1 | 28.2 | 21.6 | 20.3 |
| Before the age of 20 | 20.8 | 25.8 | 29.9 | 38.7 | 35.9 | 33.5 |
| **Both** | | | | | | |
| Secondary Cycle Two | N/A | 23.2 | 38.6 | 48.4 | 52.7 | 52.9 |
| Before the age of 20 | N/A | 36.3 | 46.7 | 54.6 | 64.4 | 64.8 |
| All instructional services | 11.5 | 14.4 | 14.4 | 24.6 | 18.6 | 17.6 |
| Before the age of 20 | 22.0 | 24.1 | 26.1 | 31.4 | 28.9 | 27.1 |

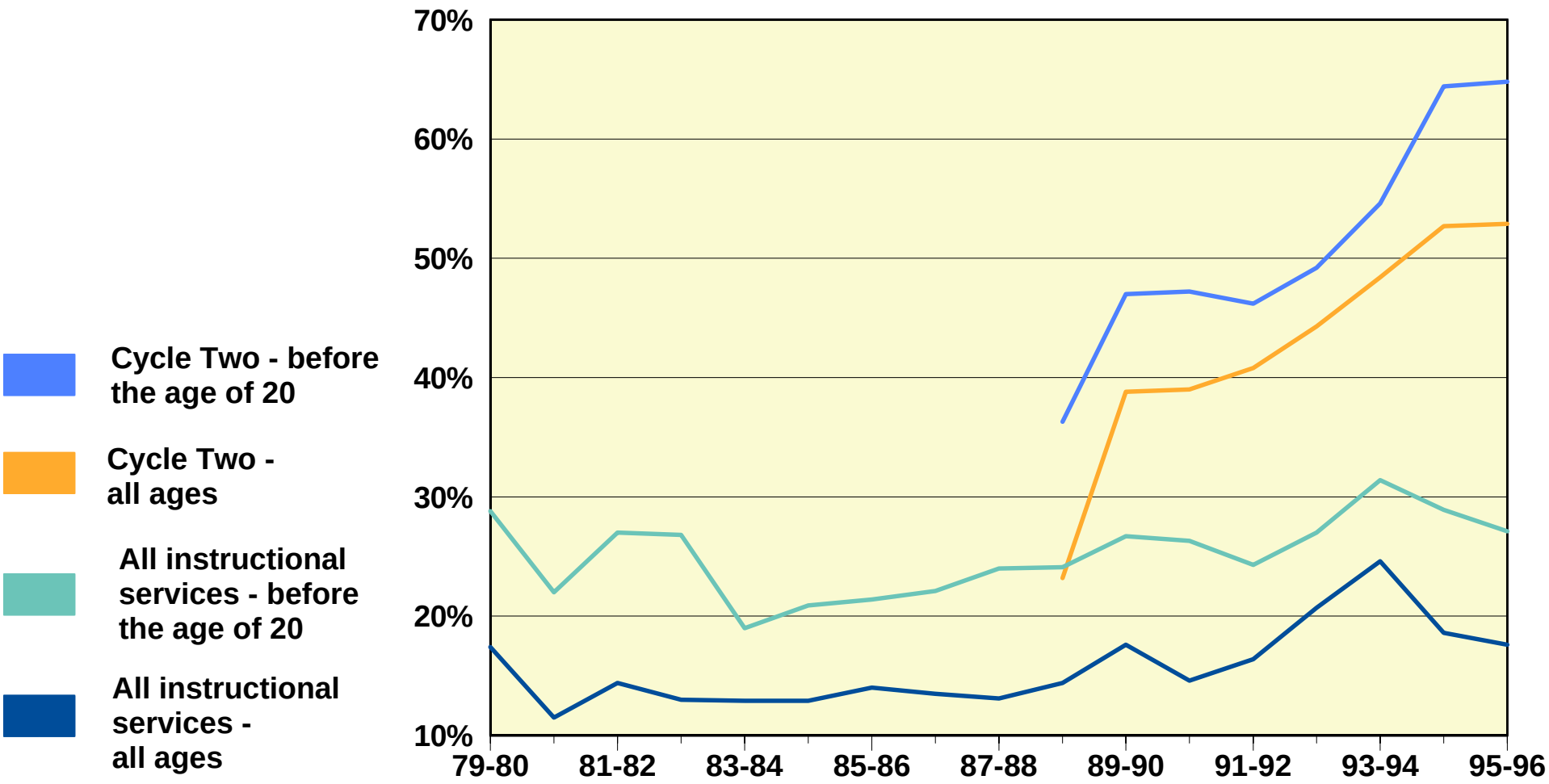
N/A: Data not available

e: Estimates

1. All secondary school diplomas are taken into account.

## Graph 3.1

# Proportion of students leaving general education in the adult sector with a diploma, by last year of enrolment (%)



## 3.2 Success in Secondary Vocational Education[1]

***At the end of 1995-96, the success rate for students enrolled in a program leading to an SSVD was 65.9%; this rate has risen steadily since 1988-89 and is now higher than the rate for long vocational programs in the youth sector at the beginning of the 1980s.***

Of the students in vocational education who left secondary school in 1995-96, 48.8% obtained a diploma. If only full-time students[2] are considered, the proportion of graduates climbs to 79.1%.

Since the beginning of the vocational education reform in 1987-88, the percentage of students who obtain a diploma has increased appreciably. For example, at the end of 1995-96, the proportion of students graduating from programs leading to a Secondary School Vocational Diploma (SSVD) was 65.8%, compared with 43.4% in 1988-89. The graduation rate for long vocational programs has not increased since the beginning of the 1980s, but data on long vocational programs concerned only the youth sector. If only full-time students are considered,[2] progress is more evident. As noted earlier, the proportion of graduates among students enrolled for the last time in 1995-96 was 79.1%, compared with 56.3% for students enrolled for the last time in 1980-81.

However, considering all school leavers, without taking into account the sector or whether students are enrolled full time or part time, the proportion of diplomas has increased very little since the early 1980s. This is due to the fact that enrolments in vocational education were mainly concentrated in categories (youth sector, full-time studies) with a higher success rate. Thus, the graduation rate of persons enrolled in vocational education for the last time in 1980-81 was 46.6%. This overall proportion rose to only 48.8% in 1995-96, despite perceptible increases in the success rate for major categories of students, as mentioned above. This can be explained by the stronger presence in recent years of categories of students whose success rate, as measured here, is lower. Increasing

1. Success in vocational education is measured here by the proportion of new holders of a diploma among all vocational education students leaving secondary school with or without a diploma. The diplomas counted are those obtained during or at the end of the last year of enrolment or the following year, when the student has not re-enrolled. Students are considered to have left school without a diploma when they have been absent for a period of at least two years following the last year of enrolment.
2. Students enrolled for 270 course hours or more per year are considered to be full-time.

numbers of students are enrolling part time in vocational education or using it as a form of academic upgrading without necessarily working towards a diploma. These factors should be taken into account when considering the overall success rates for all programs and sectors.

There was a significant decline in the number of new enrolments in vocational education during the 1980s (see Section 2.5). Students are now required to spend more time in general education before being admitted into vocational education. General education graduates still have higher success rates in vocational education than students who do not already have a diploma. This explains in large part the higher success rate observed for all school leavers in recent years.

In terms of the successful completion of a vocational education program, there have been only slight differences between boys and girls in the youth sector in recent years. If the adult sector is included, however, the results differ. In programs leading to an SSVD, the success rate for males was 4 to 10 percentage points higher than for females.

## Table 3.2

# Proportion of students leaving secondary vocational education with a diploma,[1] by gender, category and last year of enrolment (%)

| | 1980-81 | 1985-86 | 1990-91 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| **Male** | | | | | | |
| Long vocational or SSVD[2] | 57.1 | 58.3 | 59.2 | 65.0 | 65.9 | 67.3 |
| Full-time[3] | 51.8 | 51.4 | 80.4 | 78.6 | 78.7 | 79.4 |
| All school leavers | 48.3 | 28.7 | 21.2 | 35.3 | 36.7 | 44.9 |
| **Female** | | | | | | |
| Long vocational or SSVD[2] | 65.5 | 69.5 | 49.7 | 61.4 | 63.9 | 64.5 |
| Full-time[3] | 61.3 | 62.0 | 79.4 | 77.6 | 77.8 | 78.7 |
| All school leavers | 45.2 | 36.2 | 38.8 | 47.1 | 50.2 | 54.0 |
| **Both** | | | | | | |
| Long vocational or SSVD[2] | 61.7 | 64.1 | 53.7 | 63.1 | 64.9 | 65.8 |
| Full-time[3] | 56.3 | 56.6 | 79.9 | 78.1 | 78.3 | 79.1 |
| All school leavers | 46.6 | 32.1 | 27.4 | 40.3 | 42.4 | 48.8 |

e: Estimates

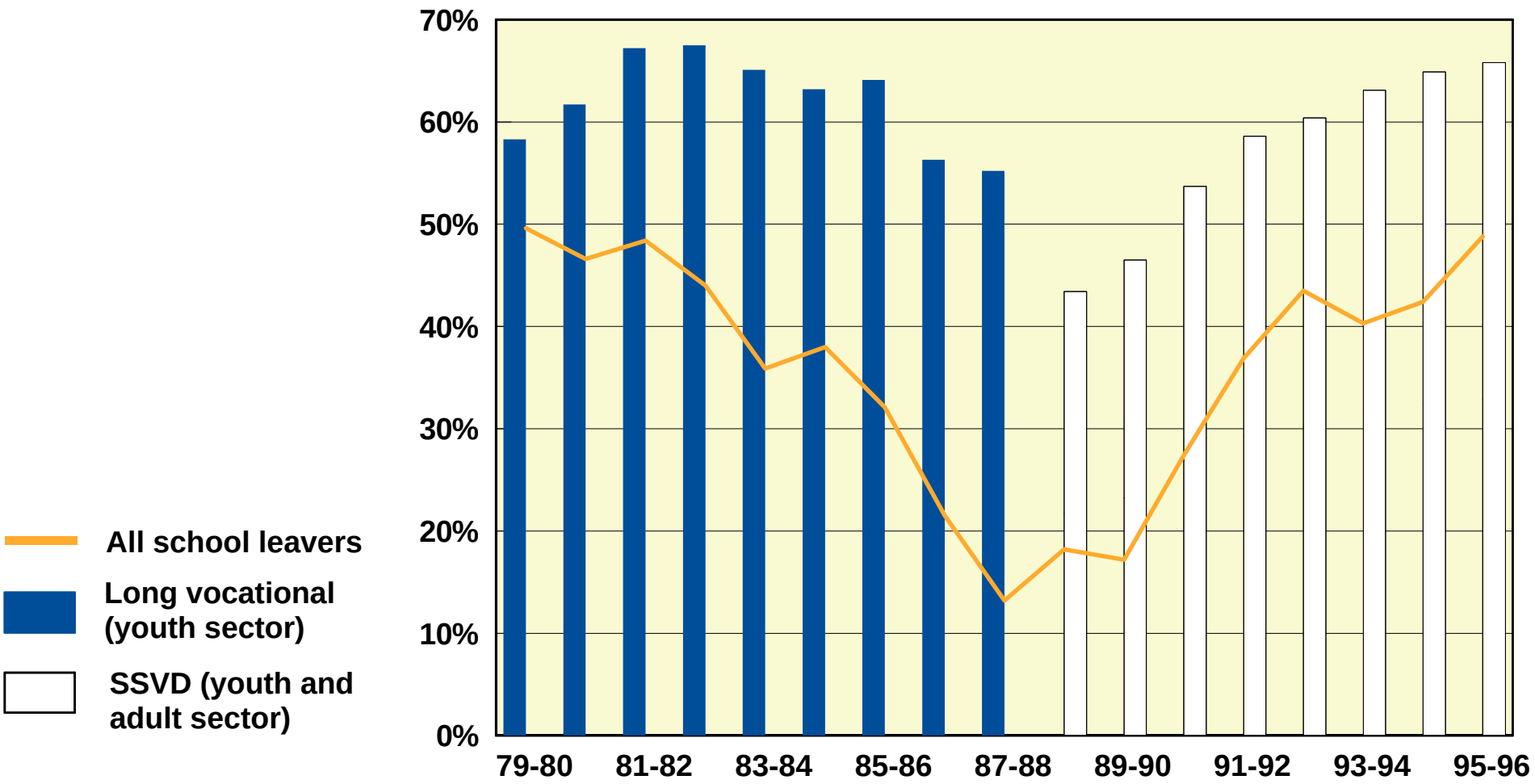
1. All secondary school diplomas are taken into account.

2. Figures for 1980-81 and 1985-86 cover enrolments in long vocational programs in the youth sector. After 1988-89, figures take into account SSVDs in the youth and adult sectors.

3. Refers to students enrolled for 270 course hours or more per year.

Graph 3.2

## Proportion of students leaving secondary vocational education with a diploma, by last year of enrolment (%)



# 3.3 Success in Pre-university Programs in Regular College Education[1]

Of the students in pre-university programs who left regular college education at the end of the 1995-96 school year, 63.6% obtained a Diplôme d'études collégiales (DEC–diploma of college studies). In the past 15 years, this graduation rate has fluctuated between 63.6% and 71.3%.

***Of the students enrolled in pre-university education who left college at the end of 1995-96, 63.6% obtained a DEC; this figure has dropped by almost 8 percentage points since 1990-91.***

In this area, women tend to do better than men and the gap in their favour has grown over the years. In 1980-81, the proportion of women finishing their pre-university education with a DEC surpassed that of men by 3.9 percentage points. In 1995-96, the gap was 10.9 percentage points in favour of women. This phenomenon, coupled with the fact that more women than men enrol in college (see Section 2.9), explains the difference between the sexes with respect to their obtaining a diploma (see Section 5.5).

When the type of program in which students begin their college education is taken into account, the success rate (65.5% in 1995-96) is slightly higher than the average for those who began in pre-university programs. Students who began in technical programs had markedly lower success rates (52.6% in 1993-94). Given that, since 1994-95, some graduates also began in Explorations programs (introduced the previous year), the success rates dropped once again for pre-university program students who came from another type of program. These rates were only approximately 46% in 1994-95 and 1995-96.

1. Success in pre-university programs in regular college education is measured here by the proportion of new holders of a DEC among all students in pre-university programs in regular college education who leave programs leading to a DEC, with or without a diploma. DECs of all types are counted, whether they were obtained during or at the end of the school year in which the student was last enrolled, or the following year, when the student has not re-enrolled in a program leading to a DEC. Students are considered to have left school without a diploma when they have been absent for a period of at least two school years following the last year of enrolment.

In theory, it takes two years to obtain a DEC from a pre-university program, but very few students do so within this time period. In fact, the success rate for two years or less (that is, the time elapsed from when a student first enrols in a program leading to a DEC) was 33.3% in 1995-96 and has varied between 32.8% and 40.1% in recent years. These figures reflect the situation of all pre-university program graduates, regardless of the type of programs in which these students were first enrolled. Generally, those transferring from other programs spend more time in school. If only those who began their college studies in pre-university programs are taken into account, the success rate for two years or less was 36.4% in 1995-96 and varied between a minimum of 35% in 1985-86 and a maximum of 40.8% in 1993-94.

## Table 3.3

# Proportion of students leaving a pre-university program with a DEC, by last year of enrolment in regular college education, gender, type of initial program, and time elapsed since first enrolment[1] (%)

| | 1980-81 | 1985-86 | 1990-91 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| **Male and female** | | | | | | |
| Same type of initial program | | | | | | |
| 2 years or less[1] | N/A | 36.3 | 40.5 | 40.8 | 37.9 | 36.4 |
| All durations | N/A | 65.3 | 72.0 | 68.5 | 66.6 | 65.5 |
| Other type of initial program[2] | | | | | | |
| All durations | N/A | 63.8 | 61.3 | 52.6 | 45.9[2] | 45.8[2] |
| All types of initial programs | | | | | | |
| 2 years or less[1] | N/A | 33.8 | 38.4 | 40.1 | 35.5 | 33.3 |
| **All durations** | **66.8** | **65.1** | **71.3** | **67.5** | **65.0** | **63.6** |
| **Male** | **64.9** | **60.9** | **66.1** | **61.3** | **58.8** | **57.6** |
| **Female** | **68.8** | **69.3** | **75.8** | **72.4** | **70.0** | **68.5** |

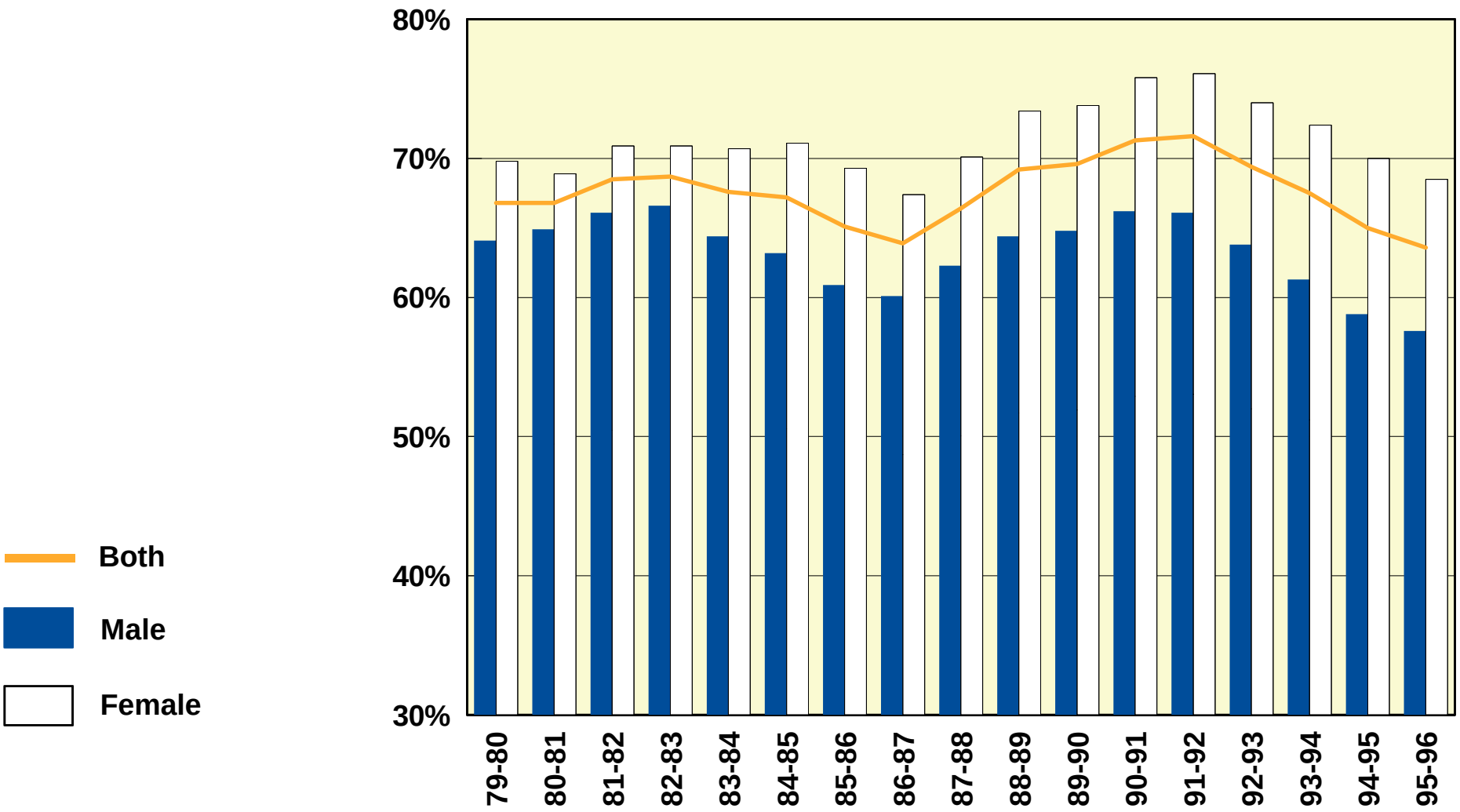
e: Estimates
N/A: Data not available

1. The time elapsed since the first enrolment is not necessarily the same as the duration of studies, because the studies may have been interrupted at some point.

2. Until 1993-94, this category referred to students who began their studies in technical programs. As of 1994-95, this category also includes students who have left their pre-university programs (with or without a diploma) after having been in an Explorations program the previous year.

## Graph 3.3

# Proportion of students leaving a college pre-university program with a DEC, by gender and last year of enrolment in regular college education (%)



# 3.4 Success in Technical Programs in Regular College Education[1]

Of the students in regular college education who left technical programs at the end of 1995-96, 52.3% obtained a Diplôme d'études collégiales (DEC–diploma of college studies). In the past 15 years, this graduation rate has fluctuated between 52.3% and 60.6%.

***Of the students enrolled in technical education who left college in 1995-96, 52.3% obtained a DEC; this figure has dropped by more than 6 percentage points since 1990-91.***

In this area, women still do better than men, with the difference being at its highest in 1995-96. The graduation rate for women was 59.3% compared with 44.7% for men, for a gap of 14.6 percentage points in favour of the women. This phenomenon, coupled with the fact that more women than men enrol in college (see Section 2.9), explains the difference between the sexes with respect to their obtaining a diploma (see Section 5.5).

When the type of program in which students begin their college education is taken into account, the success rate is slightly lower than the average for those who began their studies in technical programs (51.6% in 1995-96). Moreover, students who began in pre-university programs and who transferred to technical programs had markedly higher success rates (more than 60% until 1993-94). Since 1994-95, the success rates of students who began their college studies in programs other than technical programs remained higher than the average (54% in 1995-96), but were brought down by the rates of students in Explorations programs (introduced the previous year). Students who began elsewhere than in technical programs accounted for roughly one quarter of these graduates; they accounted for close to 30% of technical DECs in 1995-96.

1. Success in technical programs in regular college education is measured here by the proportion of new holders of a DEC among all students in technical programs in regular college education who leave programs leading to a DEC, with or without a diploma. DECs of all types are counted, whether they were obtained during or at the end of the school year in which the student was last enrolled, or the following year, when the student has not re-enrolled in a program leading to a DEC. Students are considered to have left school without a diploma when they have been absent for a period of at least two school years following the last year of enrolment.

In theory, it takes three years to earn a DEC in a technical program, but very few students do so within this time period. In fact, the success rates for three years or less (that is, the time elapsed from when a student first enrolled in a program leading to a DEC) was on average slightly higher than 20% for all students leaving technical programs; in 1995-96, this rate was only 19.7%. If those students who began their college studies in another type of program and who necessarily took longer to obtain a DEC are not taken into account, the success rate for students who began and finished in technical programs in three years or less is 4 to 6.5 percentage points higher than for all students in technical programs. In 1995-96, the success rate for these students was 26.2%.

Thus, students who began their college studies directly in technical programs obtain a DEC in a shorter time period, but students who transfer from pre-university programs are more likely to earn a DEC in a technical program, if the time elapsed since their first enrolment is not taken into account.

## Table 3.4

# Proportion of students leaving a college technical program with a DEC, by last year of enrolment in regular college education, gender, type of initial program, and time elapsed since the first enrolment[1] (%)

| | 1980-81 | 1985-86 | 1990-91 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| **Male and female** | | | | | | |
| Same type of initial program | | | | | | |
| 3 years or less[1] | N/A | 28.7 | 29.6 | 26.2 | 26.1 | 26.2 |
| All durations | N/A | 53.7 | 56.6 | 51.5 | 51.7 | 51.6 |
| Other type of initial program[2] | | | | | | |
| All durations | N/A | 61.1 | 64.3 | 60.5 | 54.8[2] | 54.0[2] |
| All types of initial programs | | | | | | |
| 3 years or less[1] | N/A | 24.6 | 23.7 | 20.3 | 19.9 | 19.7 |
| **All durations** | **59.0** | **55.1** | **58.6** | **53.9** | **52.5** | **52.3** |
| **Male** | **53.9** | **49.2** | **54.7** | **47.1** | **46.1** | **44.7** |
| **Female** | **63.0** | **59.8** | **61.3** | **59.6** | **58.0** | **59.3** |

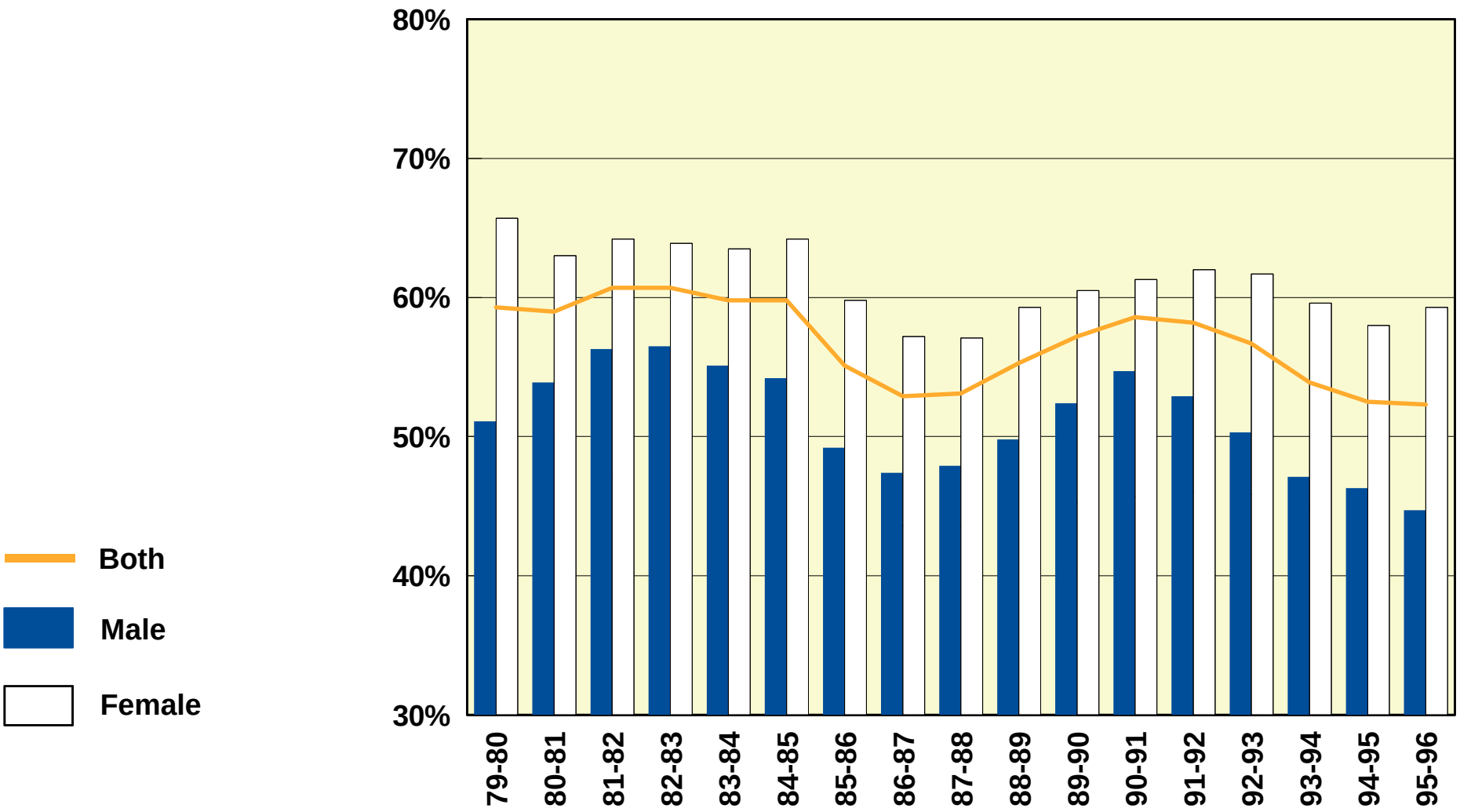
e: Estimates
N/A: Data not available

1. The time elapsed since the first enrolment is not necessarily the same as the duration of studies, because the studies may have been interrupted at some point.

2. Until 1993-94, this category referred to students who began their studies in pre-university programs. As of 1994-95, this category also includes students who have left their studies in technical programs (with or without a diploma) after having been in an Explorations program the previous year.

## Graph 3.4

# Proportion of students leaving a college technical program with a DEC, by gender and last year of enrolment in regular college education (%)



# 3.5 Duration of Studies in Regular College Education

The duration of studies for holders of a Diplôme d'études collégiales (DEC–diploma of college studies) and for all students (regardless of whether or not they obtain a DEC) has changed very little over the years.[1]

***On average, a DEC in pre-university education is obtained after 2.4 years equivalent to full-time study, and a DEC in technical education, after 3.8 years.***

Holders of a DEC who graduate from pre-university education have studied for an average of 2.4 years. For those who leave without a diploma, the total duration of studies is still an average of 1.4 years. The average duration of studies, whether students leave with or without a diploma, is 2.1 years.[2] For most students, that is, those who began their college studies directly in pre-university programs, the corresponding durations are less than 0.1 year. Students who transferred from another type of program take 3 years to obtain their DEC in pre-university education.

Students in technical programs take an average of 3.8 years to earn a DEC, while those who leave without a diploma do so after 2.1 years. Given the success rate (see Section 3.4), students leaving technical programs study for 2.9 years. Here too, those students who had been enrolled in technical programs right from the beginning of their college studies leave in a shorter time: those obtaining a DEC did so in 3.5 years and those leaving without a diploma did so after 1.7 years. However, students who had initially enrolled in pre-university programs (and who have a higher success rate) or in Explorations programs take 4.3 years to obtain a DEC in technical education.

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1. This is why the results of this section are the averages for college leavers for the last 5 years observed (that is, the averages for students enrolled for the last time from 1991-92 to 1995-96). However, in the case of students leaving without a diploma, over a 10-year period, the duration of studies before dropping out has lengthened, by 0.25 full-time terms for pre-university education and 1 full-time term for technical education.
2. The duration of studies for all college leavers depends, on the one hand, on the respective duration of studies of students with a DEC and college leavers without a diploma, and on the other hand, on the weighting of these two categories of students, that is, the success rate. This explains why the duration of studies for all students, whether or not they leave with a diploma, has remained stable, even though the success rates have been dropping and the duration of studies for those leaving without a diploma has been getting longer.

A very slight difference in the duration of studies is apparent in the figures for men and women and for students leaving with or without a diploma. Female graduates study 0.2 years less than their male counterparts. Similarly, those who leave their studies before obtaining a diploma do so sooner (0.1 year). This difference disappears, however, when college leavers overall are considered by gender because more women than men obtain a diploma, which raises the average duration of studies for women overall.

## Table 3.5

# Average number of years[1] of study completed before leaving regular college education (average for all college leavers after 1991-92), by gender and type of program enrolled in at the start and finish of the studies

| | With Diploma | | Without Diploma[2] | | Total | |
|---|---|---|---|---|---|---|
| | Pre-university education | Technical education | Pre-university education | Technical education | Pre-university education | Technical education |
| Male | 2.5 | 3.9 | 1.5 | 2.1 | 2.1 | 2.9 |
| Female | 2.3 | 3.7 | 1.4 | 1.9 | 2.1 | 2.9 |
| **Both[3]** | **2.4** | **3.8** | **1.4** | **2.0** | **2.1** | **2.9** |
| Type of initial program | | | | | | |
| Same | 2.3 | 3.5 | 1.3 | 1.7 | 2.0 | 2.7 |
| Different[3] | 3.0 | 4.3 | 2.1 | 2.8 | 2.6 | 3.7 |

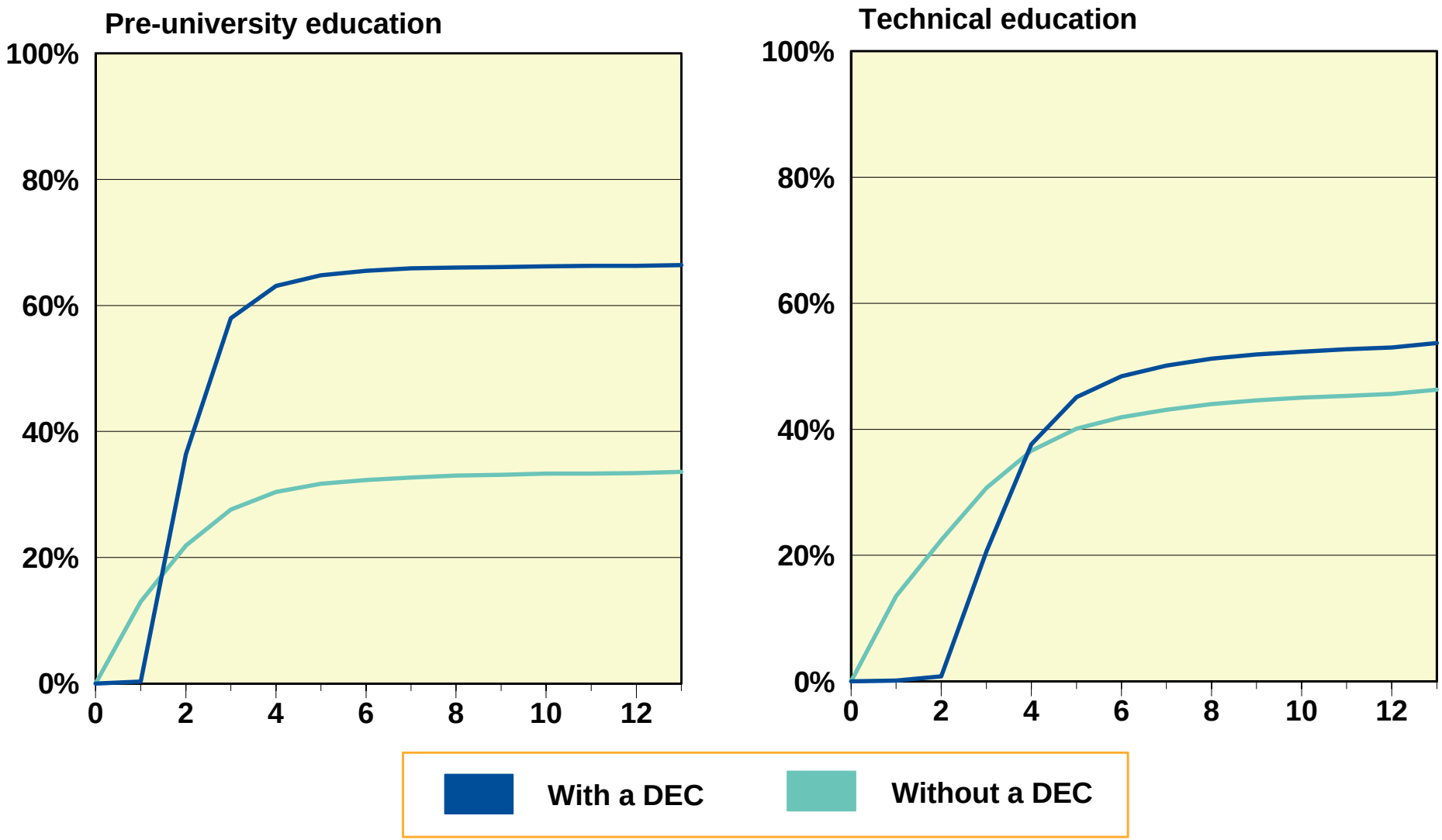
1. One year of full-time study is equivalent here to 2 full-time terms or 8 part-time terms.

2. Refers to students who have interrupted their studies for at least six consecutive terms.

3. Refers to the total duration, including studies undertaken previously in other types of programs.

Graph 3.5

## Cumulative school-leaving rates for regular college education between 1991-92 and 1995-96, by number of years elapsed since the first enrolment in a program leading to a DEC (%)



# 3.6 Success in University Programs Leading to a Bachelor's Degree[1] and Duration of Studies

At the end of 1995-96, 65.8% of students leaving university programs leading to a bachelor's degree obtained their degree. In the nine-year period observed, the graduation rate increased, for it had been 55.9% for students enrolled for the last time in 1987-88.

***Of 100 students enrolled in a program leading to a bachelor's degree and leaving their program at the end of 1995-96, 66 obtained a degree after an average of 6.3 full-time terms and 2.3 part-time terms.***

From the beginning of the period under observation, female students have had a higher success rate than male students, with the difference rising from 0.7 to 7.7 percentage points between 1987-88 and 1995-96. In the last year observed, 69.1% of female students who left a bachelor's program did so with a degree, compared with 61.4% of their male counterparts. This phenomenon, coupled with the fact that more women than men enrol in bachelor's programs (see Section 2.11), explains the difference between the sexes with respect to their obtaining a degree (see Section 5.6).

Graduates of bachelor's programs have studied for an average of 6.3 full-time terms, or for 8.6 terms if no consideration is given to whether they studied full time or part time.[2] Those who leave without a degree spend an average of 2.3 terms full time, or approximately one third of the duration of full-time studies for graduates. For all students leaving bachelor's programs, the average duration of studies is 6.9 terms, of which 4.8 terms are full time.

1. Success in university programs leading to a bachelor's degree is measured here by the proportion of new holders of a bachelor's degree among all students who leave programs leading to a bachelor's, with or without a degree. The degrees taken into account are bachelor's degrees obtained during or at the end of the school year in which the student was last enrolled, or the following year, when the student has not re-enrolled in an undergraduate program leading to a bachelor's degree. Students are considered to have left school without a degree when they have been absent for a period of at least two school years following the last year of enrolment.
2. A portion of the studies is done part time and is added to the average duration of full-time studies. The duration of part-time studies is from 2 to 2.4 terms for graduates. For those who leave without a degree, the duration of part-time studies is from 1.5 to 2 terms. For all school leavers, the duration of part-time studies varies from 1.9 to 2.3 terms.

When the duration of studies is examined by gender and by whether students leave with or without a degree, differences are readily apparent. Whether women obtain a bachelor's degree or give up their studies without a degree, they do so sooner than men. Women who obtain a bachelor's degree spend 0.7 fewer terms in full-time studies than men, while women who leave their program without a degree do so 0.5 terms sooner than men. Nevertheless, when the duration of studies is considered, regardless of full- or part-time status, the differences between the sexes are not as pronounced, for more women than men study part time. For all students leaving bachelor's programs, the difference between the sexes is less evident, mainly because more women than men obtain a degree, which raises the average duration of studies for women overall.

## Table 3.6a

# Proportion of students leaving a university program leading to a bachelor's degree with such a degree, by gender and last year of enrolment (%)

| | 1987-88 | 1990-91 | 1992-93 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| Male | 55.5 | 59.7 | 58.0 | 57.7 | 59.5 | 61.4 |
| Female | 56.2 | 63.1 | 63.8 | 63.9 | 66.5 | 69.1 |
| **Both** | **55.9** | **61.5** | **61.2** | **61.1** | **63.4** | **65.8** |

e: Estimates

## Table 3.6b

# Average number of terms completed before leaving a program leading to a bachelor's degree (average for all leavers after 1991-92), by gender

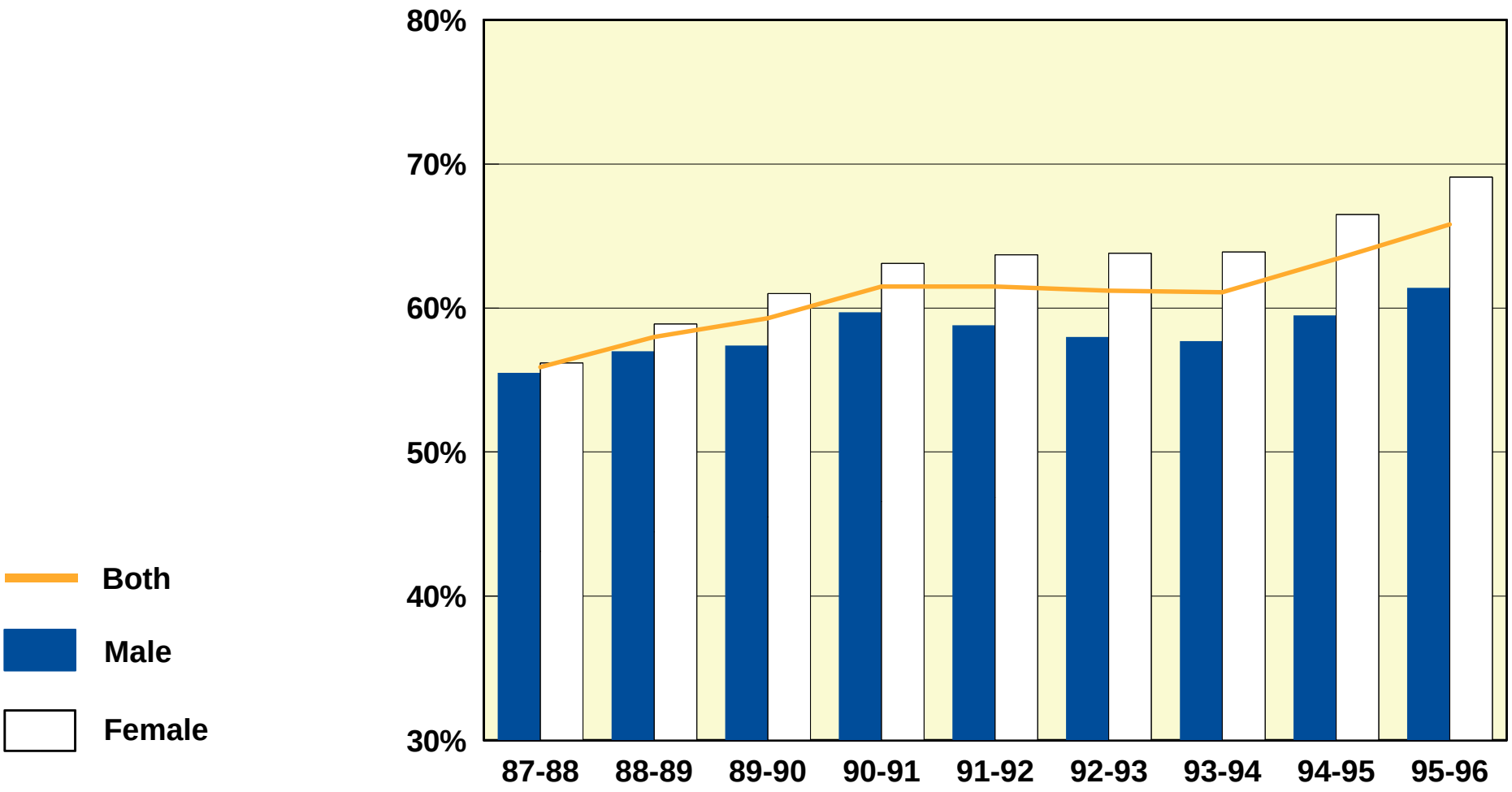
| | With Degree | | Without Degree[1] | | Total | |
|---|---|---|---|---|---|---|
| | Full-time | All attendance statuses[2] | Full-time | All attendance statuses[2] | Full-time | All attendance statuses[2] |
| Male | 6.7 | 8.9 | 2.6 | 4.2 | 5.0 | 6.9 |
| Female | 6.0 | 8.4 | 2.1 | 4.1 | 4.6 | 6.9 |
| **Both** | **6.3** | **8.6** | **2.3** | **4.1** | **4.8** | **6.9** |

1. Refers to students who have interrupted their studies for at least six consecutive terms.

2. Refers to the total duration of full- and part-time studies.

Graph 3.6

# Proportion of students leaving a university program leading to a bachelor's degree with such a degree, by gender and last year of enrolment (%)



# 3.7 Success in University Programs Leading to a Master's Degree[1] and Duration of Studies

At the end of 1995-96, 65.3% of students leaving programs leading to a master's degree obtained their degree. Until 1993-94, this proportion had grown by 9.6 percentage points, to reach a high of 65.7%, compared with 56.1% in 1987-88. The 1995-96 result therefore represents a drop of 0.4 percentage points from 1993-94.

***Of 100 students enrolled in a program leading to a master's degree and leaving their program at the end of 1995-96, 65 obtained a degree, after an average of 7.9 terms of study.***

In 1987-88, relatively fewer women than men seeking a master's degree pursued their studies to graduation. Since then, women have taken the lead and now have a higher success rate than men. In 1995-96, 67% of women leaving a master's program did so with a degree, for an increase of 12 percentage points since 1987-88. The corresponding change for men was 6.6 percentage points; in 1995-96, 63.6% of men leaving a master's program did so with a degree. This phenomenon, coupled with the fact that more women than men enrol in master's programs (see Section 2.11), explains the difference between the sexes with respect to their obtaining a degree (see Section 5.6).

Graduates of master's programs are enrolled for an average of 7.9 terms, regardless of whether they study full or part time.[2] On average, students spend 4.1 terms in full-time studies. The total average duration of studies for students who leave without a degree is 5.1 terms, whether full time or part time. For all students leaving master's

1. Success in university programs leading to a master's degree is measured here by the proportion of new holders of a master's degree among all students who leave programs leading to a master's, with or without a degree. The degrees taken into account are master's degrees obtained during or at the end of the school year in which the student was last enrolled, or the following year, when the student has not re-enrolled in a graduate program leading to a master's degree. Students are considered to have left school without a degree when they have been absent for a period of at least two school years following the last year of enrolment.
2. A portion of the studies is done part time and is added to the average duration of full-time studies. The duration of part-time studies is from 3.4 to 4.4 terms for graduates. For those who leave without a degree, the duration of part-time studies is from 2.9 to 3.4 terms. For all school leavers, the duration of part-time studies varies from 3.3 to 3.9 terms.

programs, the average duration of studies is 6.9 terms, 3.4 of which are full time. The duration of studies referred to here is the actual duration and not the standardized duration used to calculate full-time equivalents (FTEs) for funding purposes. In most cases, the “funded” duration is a maximum of 4 terms (1.5 years in FTEs) for master’s programs, whereas the actual duration of studies exceeds this standardized period for all types of leavers. This means that students who leave without a master’s degree are in practice fully funded, with the exception of a supplementary amount of $600 that is allocated to universities when the degree is awarded.

When the duration of studies is examined by gender and by whether students leave with or without a degree, differences are readily apparent. Contrary to what was observed at the college level and in programs leading to a bachelor’s degree, women enrolled in master’s programs do not take less time than men to obtain their degree. If full-time enrolment only is considered, women finish sooner than men, but women with a master’s degree have studied part time for a half term longer than men; women who leave without a degree have been enrolled part time for 3.3 terms, compared with 3 terms for men in the same situation. For all students leaving master’s programs, there is no discernible difference by gender between those leaving with a degree and those leaving without a degree.

## Table 3.7a

# Proportion of students leaving a university program leading to a master's degree with such a degree, by gender and last year of enrolment (%)

| | 1987-88 | 1990-91 | 1992-93 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| Male | 57.0 | 64.4 | 64.3 | 64.4 | 63.0 | 63.6 |
| Female | 55.0 | 64.5 | 65.9 | 67.0 | 66.2 | 67.0 |
| **Both** | **56.1** | **64.5** | **65.1** | **65.7** | **64.6** | **65.3** |

e: Estimates

## Table 3.7b

# Average number of terms completed before leaving a program leading to a master's degree (average for all leavers after 1991-92), by gender

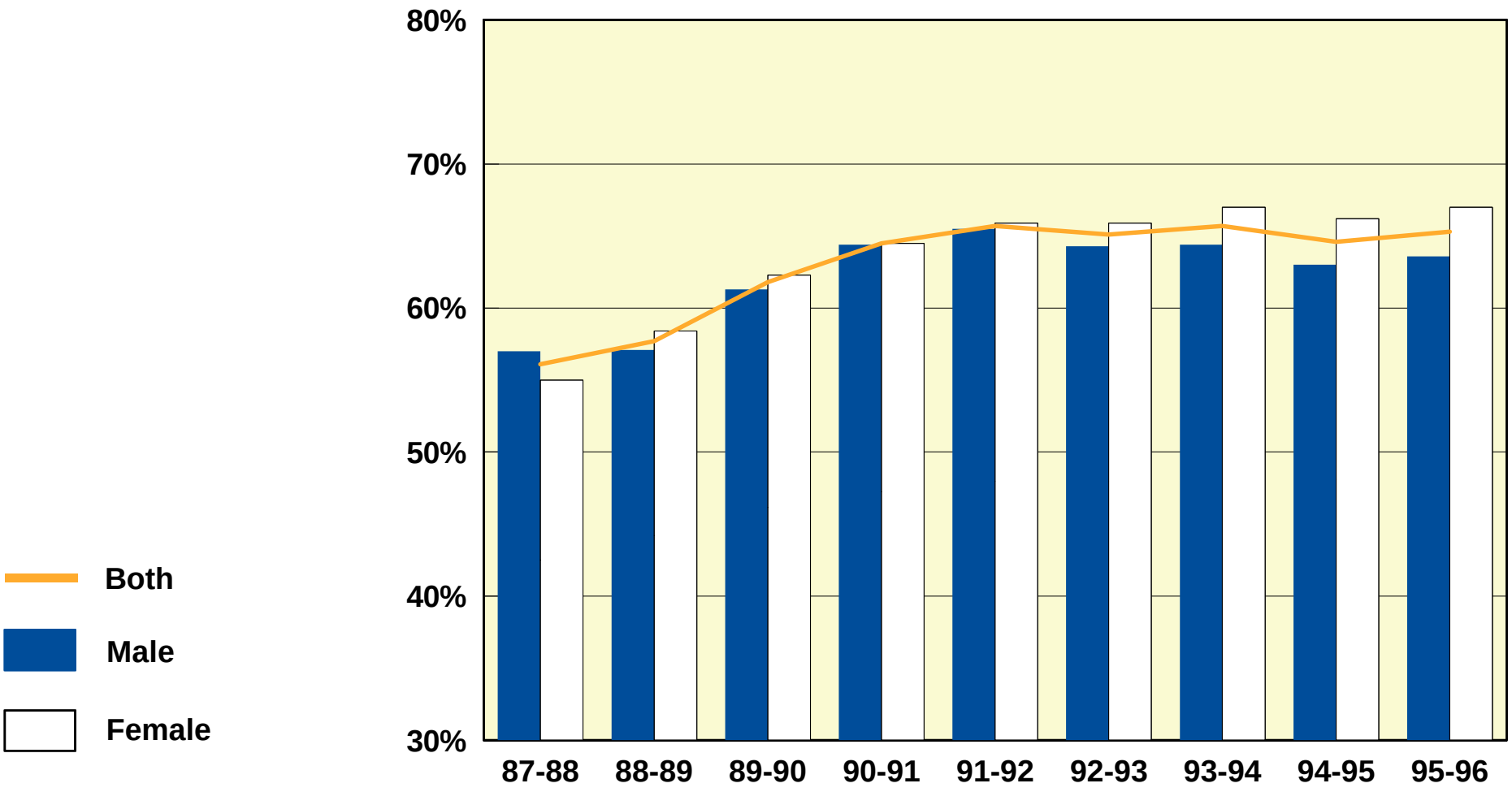
| | With Degree | | Without Degree[1] | | Total | |
|---|---|---|---|---|---|---|
| | Full-time | All attendance statuses[2] | Full-time | All attendance statuses[2] | Full-time | All attendance statuses[2] |
| Male | 4.3 | 7.8 | 2.2 | 5.2 | 3.5 | 6.8 |
| Female | 4.0 | 8.0 | 1.8 | 5.1 | 3.2 | 7.0 |
| **Both** | **4.1** | **7.9** | **2.0** | **5.1** | **3.4** | **6.9** |

1. Refers to students who have interrupted their studies for at least six consecutive terms.

2. Refers to the total duration of full- and part-time studies.

Graph 3.7

## Proportion of students leaving a university program leading to a master's degree with such a degree, by gender and last year of enrolment (%)



# 3.8 Success in University Programs Leading to a Doctorate[1] and Duration of Studies

At the end of 1995-96, 57% of students leaving programs leading to a doctorate obtained their degree. From 1987-88 to 1993-94, the graduation rate increased by 6.2 percentage points, from 48.7%; the figure for 1994-95 represents a decline of 0.4 percentage points. In 1995-96, there was an increase of 2.5 percentage points, which brought the total growth since 1987-88 up to 8.3 percentage points.

***Of students enrolled in a program leading to a doctorate and leaving their program at the end of 1995-96, 57% obtained a doctorate after an average of 15.1 terms.***

There are still relatively fewer women than men with doctorates. Of the women enrolled in 1995-96 who left doctoral programs, 48.9% obtained their degree, for an increase of 8.6 percentage points compared with the situation of eight years earlier. For men, the graduation rate increased by 8.6 percentage points in the same period and the proportion of male candidates who completed their studies in 1995-96 with a degree was 61.7%, or 12.8 percentage points more than for female candidates. This phenomenon, coupled with the fact that more men than women enrol in doctoral programs (see Section 2.11), explains the difference between the sexes with respect to their obtaining a degree (see Section 5.6).

Graduates of doctoral programs are enrolled for an average of 15.1 terms, regardless of whether they study full or part time.[2] On average, students spend 11.2 terms in full-time studies. Those who leave without a degree study

1. Success in university programs leading to a doctorate is measured here by the proportion of new holders of a doctorate among all students who leave programs leading to a doctorate, with or without a degree. The degrees taken into account are doctorates obtained during or at the end of the school year in which the student was last enrolled, or the following year, when the student has not re-enrolled in a postgraduate program leading to a doctorate. Students are considered to have left school without a degree when they have been absent for a period of at least two school years following the last year of enrolment.
2. A portion of the studies is done part time and is added to the average duration of full-time studies. The duration of part-time studies is from 3.3 to 5.4 terms for holders of a doctorate. For those who leave without a degree, the duration of part-time studies is from 2.3 to 3.3 terms. For all school leavers, the duration of part-time studies varies from 3 to 4.2 terms.

for 8.3 terms, whether full time or part time. For candidates overall, whether they leave with or without a degree, they do so after 12 terms, of which 8.5 are full time. The duration of studies referred to here is the actual duration and not the standardized duration used to calculate full-time equivalents (FTEs) for funding purposes. In most cases, the “funded” duration is a maximum of 8 terms (3 years in FTEs) for doctoral programs, whereas the actual duration of studies exceeds this standardized period for all types of leavers. This means that students who leave without a doctorate are in practice fully funded, with the exception of a supplementary amount of $1 000 that is allocated to universities when the degree is awarded.

When the duration of studies is examined by gender and by whether students leave with or without a degree, differences are readily apparent. Contrary to what was observed at the college level and in programs leading to a bachelor’s degree, women enrolled in doctoral programs do not take less time than men to obtain their degree or to give up their studies. If full-time enrolment only is considered, women leave sooner than men (with or without a degree), but women with a doctorate have studied part time for 1.1 terms longer than men; women who leave without a degree have been enrolled part time for 3.2 terms, compared with 2.6 terms for men in the same situation. For all students leaving doctoral programs, the difference between the sexes is less evident, mainly because more men than women obtain a degree, which raises the average duration of studies for men overall.

## Table 3.8a

# Proportion of students leaving a university program leading to a doctorate with such a degree, by gender and last year of enrolment (%)

| | 1987-88 | 1990-91 | 1992-93 | 1993-94 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| Male | 53.1 | 55.5 | 55.0 | 57.3 | 57.8 | 61.7 |
| Female | 40.3 | 46.9 | 51.9 | 50.1 | 49.1 | 48.9 |
| **Both** | **48.7** | **52.4** | **53.9** | **54.9** | **54.5** | **57.0** |

e: Estimates

## Table 3.8b

# Average number of terms completed before leaving a program leading to a doctorate (average for all leavers after 1991-92), by gender

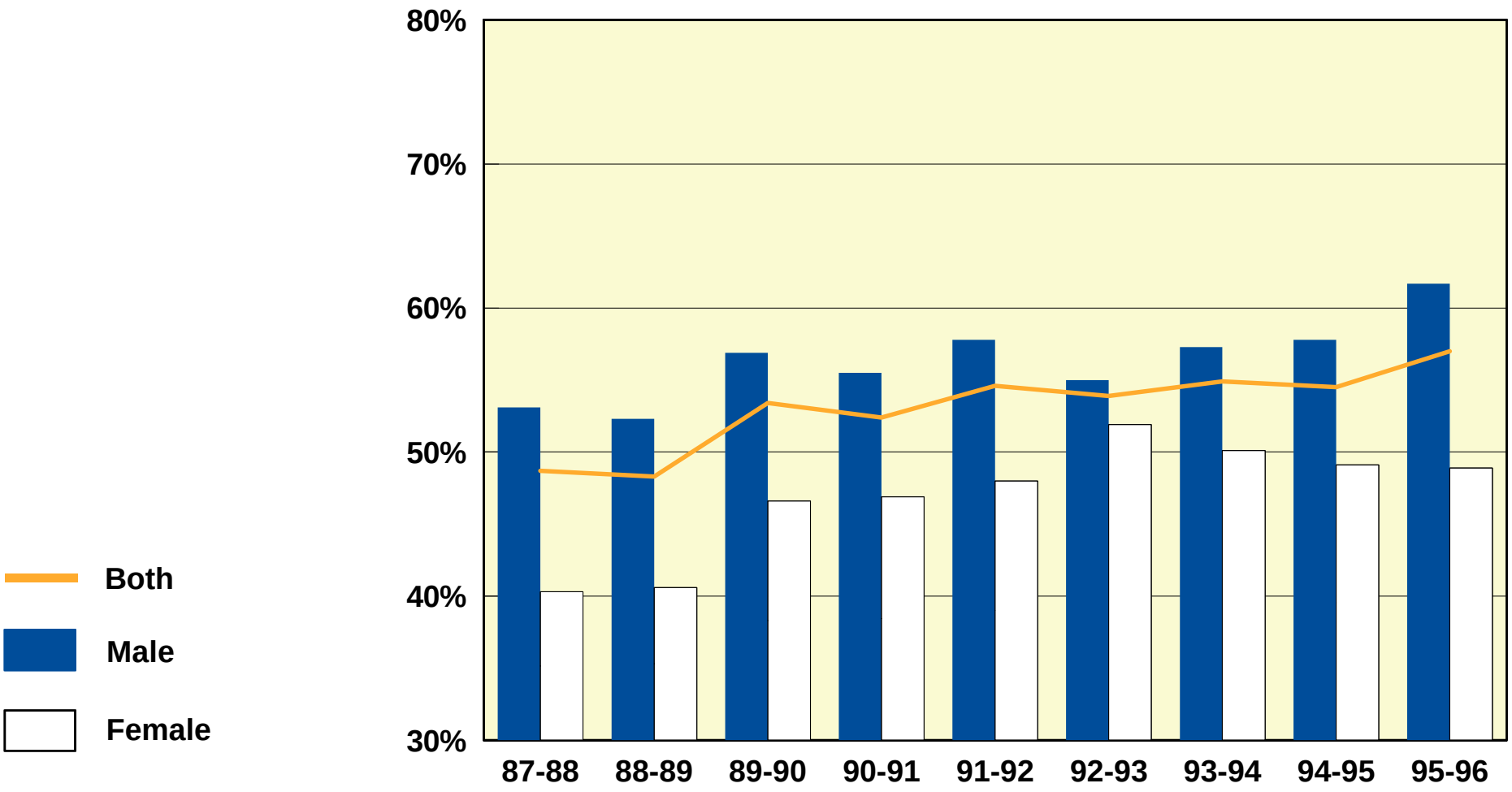
| | With Degree | | Without Degree[1] | | Total | |
|---|---|---|---|---|---|---|
| | Full-time | All attendance statuses[2] | Full-time | All attendance statuses[2] | Full-time | All attendance statuses[2] |
| Male | 11.2 | 14.9 | 5.7 | 8.3 | 8.8 | 12.1 |
| Female | 10.9 | 15.7 | 5.2 | 8.4 | 8.0 | 12.0 |
| **Both** | **11.1** | **15.1** | **5.5** | **8.3** | **8.5** | **12.0** |

1. Refers to students who have interrupted their studies for at least six consecutive terms.

2. Refers to the total duration of full- and part-time studies.

## Graph 3.8

# Proportion of students leaving a university program leading to a doctorate with such a degree, by gender and last year of enrolment (%)



# 4.1 Entry into the Job Market

Upon completing their studies, secondary school, college and university graduates who do not pursue their education arrive on the job market.[1] Data obtained through Québec government studies provides a picture of the placement and unemployment of graduates a few months after they obtain their diploma.[2]

***College graduates have lower unemployment rates than secondary school graduates. Similarly, university graduates have lower unemployment rates than college graduates.***

In 1997, 24.2% of the students who graduated in 1995-96 with a Secondary School Vocational Diploma (SSVD) were unemployed, a decrease of 2.8 percentage points from 1996. Of the employed SSVD graduates, 81.9% worked full time; 68% of these were employed in their field of study. Placement rates have been on the rise since 1994.

According to the most recent statistics available on entry into the job market, 11.1% of students who obtained a diploma in a college technical program in 1995-96 were unemployed on March 31, 1997. This represents a drop of 2.2 percentage points from 1996. Of those who were employed, 78.6% worked full time and slightly more than 70% of these individuals were employed in their field. Placement rates for full-time employment have risen since 1994, whereas the placement rate for employment in the field of study has been in the neighbourhood of 71% since 1994.

As at March 31, 1997, 18.3% of students who obtained a diploma in a college pre-university program in 1995-96 were unemployed–an increase of 4.2 percentage points over the previous year. Of the employed graduates, 64.4%

1. The analysis deals specifically with holders of a Secondary School Vocational Diploma (SSVD), a Diplôme d'études collégiales (DEC–diploma of college studies), a bachelor's degree and a master's degree.
2. Last year's edition presented figures according to the year in which the diploma was obtained. In this edition, results refer to students graduating in the year indicated, that is, 9 months after the completion of studies for graduates with an SSVD or an Attestation of Vocational Specialization (AVS) and roughly 10 months for DEC graduates (15 months for those finishing in the fall). The situation for those graduating with a bachelor's or a master's degree is as of January, two years after they obtained the degree.

worked full time; slightly more than 11% of these were employed in their field. The placement rate for employment in the field of study has hovered around 11% since 1995.

The unemployment rate for students who obtained a bachelor's degree in 1995 was 9.1% in January 1997; the rate has dropped by 2.3 percentage points compared with 1994. Of the employed graduates, 80% were on a full-time basis and 61.5% of these individuals were employed in their field of study. Placement rates for full-time work and for employment in the field have been on the decline since 1989.

The unemployment rate for those who graduate with a master's degree in 1995 was 8.1% in January 1997–an increase of 1.3 percentage points since 1994. Of those who were working, 85.2% were employed full time; 72.6% were in jobs related to their field of study. Placement rates for full-time employment and work in the field have been declining since 1989.

Unemployment rates for 15-to-34-year-olds are given in Table 4.1 as a reference.[3]

3. Data from the study on the work force include, for each age group, persons from all levels and types of education, whose work experience may differ from that of recent graduates.

## Table 4.1
# Unemployment rates of graduates, by level of instruction and type of diploma (%)

| | 1984 | 1989 | 1994 | 1996 | 1997 |
|---|---|---|---|---|---|
| **Secondary education** | | | | | |
| AVS | – | – | 24.6 | 21.8 | 21.4 |
| SSVD | – | – | 27.2 | 27.0 | 24.2 |
| **College** | | | | | |
| Pre-university education | N/A | N/A | 21.4 | 14.1 | 18.3 |
| Technical education | N/A | 8.2 | 18.4 | 13.3 | 11.1 |
| **University** | | | | | |
| Bachelor's degree | 11.8 | 8.1 | 11.4 | N/A | 9.1 |
| Master's degree | 6.3 | 4.9 | 6.8 | N/A | 8.1 |
| **Unemployment rates in Québec[1]** | | | | | |
| 15-to-19-year-olds | 23.0 | 15.2 | 20.6 | 24.6 | 27.6 |
| 20-to-24-year-olds | 18.3 | 11.9 | 15.9 | 15.6 | 15.6 |
| 25-to-34-year-olds | 12.9 | 9.6 | 12.7 | 11.9 | 11.6 |

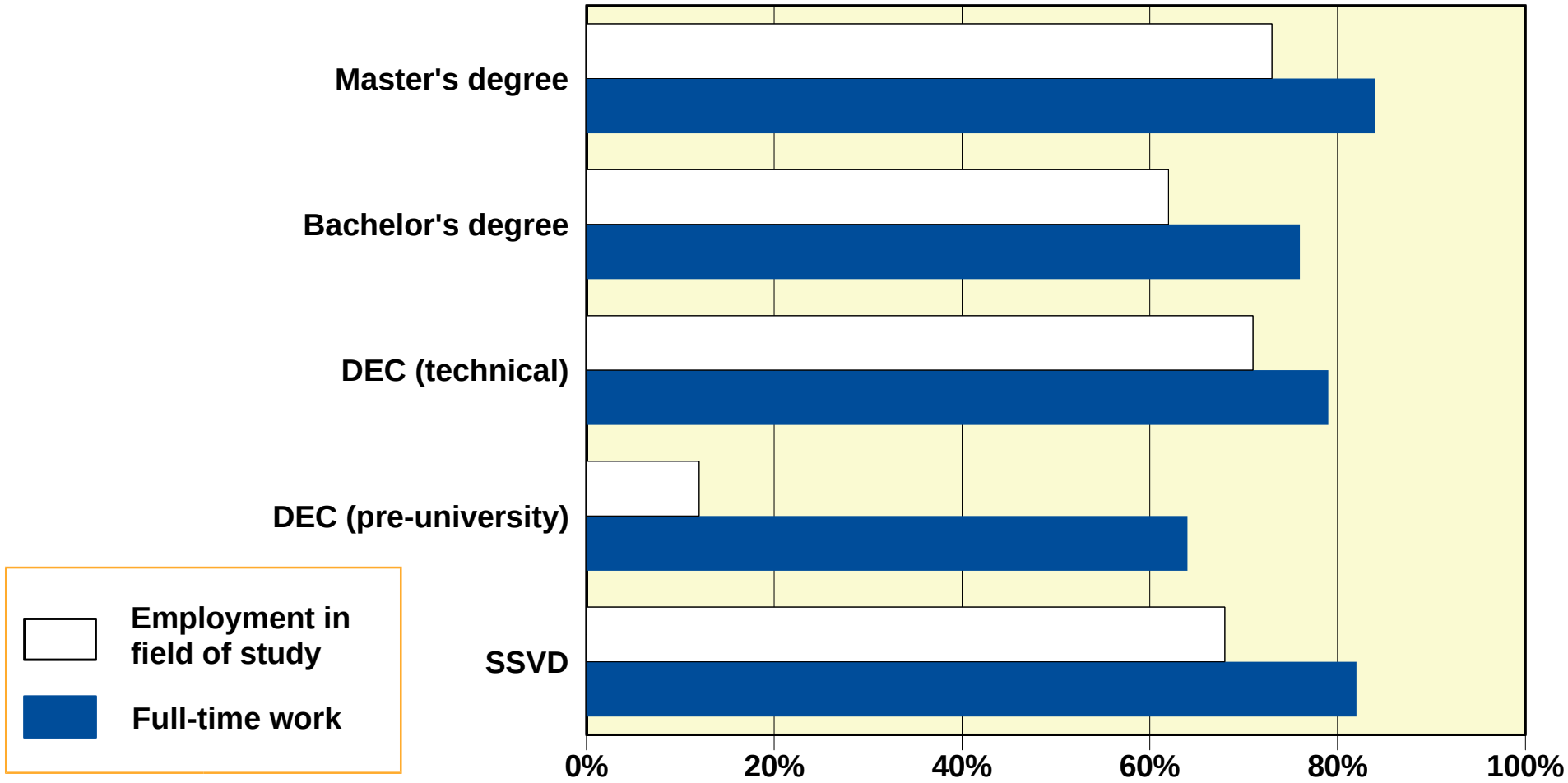
N/A: Data not available

–: Not applicable

1. Source: Statistics Canada. From 1984 to 1996, the figures are yearly averages, without reference to the type of diploma earned; for 1997, the figures are the average for the first 10 months.

Graph 4.1

## Placement rates for full-time work and employment in the field of study (for graduates working full-time), 1997



# 4.2 Secondary School Examination Results, by Several Variables–Youth Sector

The Ministère de l'Éducation administers uniform examinations to students in Secondary IV and V for purposes of certification. The average result for the June 1997 examinations was 71.9%,[1] and the success rate was 84%.

***The success rate for the secondary school June 1997 uniform ministry examinations was 84%. Overall, girls obtained slightly higher marks than boys.***

While girls have a much better record than boys for staying in school, they have no clear advantage over boys with regard to the results obtained on uniform examinations. This is probably because of the higher dropout rate among boys, for it is usually the weaker students who leave school before graduation.

The average mark obtained by students in private schools was 8.7 percentage points higher than the average mark obtained in the public system. The success rate was 82% in the public system, compared with 94.5% in the private system. One of the factors likely to explain these differences is that private schools impose selection criteria for admitting students, whereas school boards must accept all students eligible for secondary school.

Students who received instruction in French obtained slightly better results on the examinations than students who studied in English.

The best results were obtained in the second language and language of instruction examinations, and physical science 436. The lowest results were obtained in physical science 416 and history.

1. This figure is calculated on the basis of the students' final marks. The final mark is made up, in equal proportions, of the student's result on the uniform examination and the "moderated" school mark. "Moderation" is a procedure which renders the marks assigned by different schools comparable by using the results of the uniform examination for each student group as the basis of comparison.

Girls outperformed boys in English, language of instruction, French, language of instruction, and French, second language. In the other subjects, there was little difference.

## Table 4.2

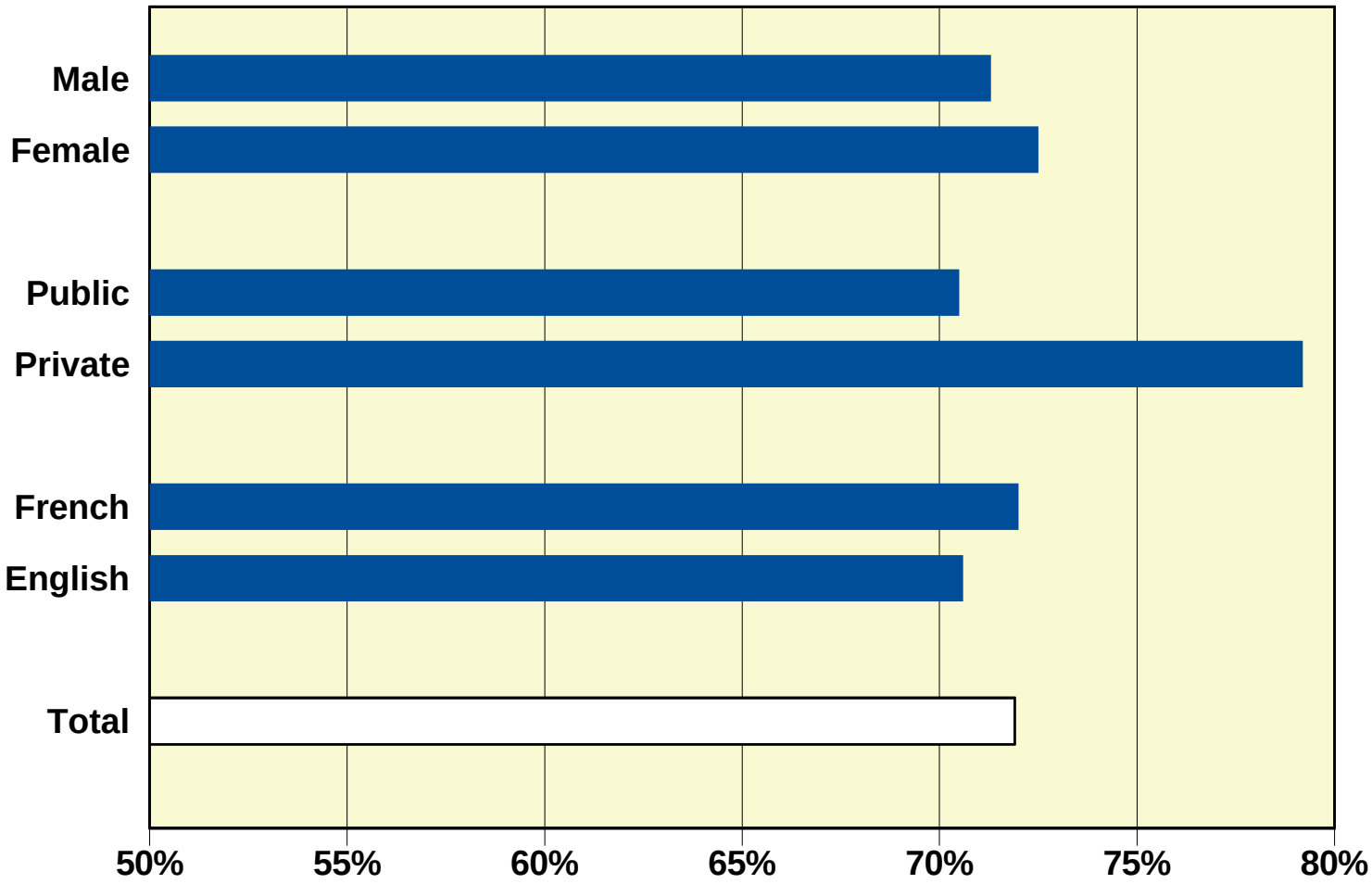
# Results on uniform secondary school examinations in the youth sector, by gender, school system, language of instruction and subject: June 1997 (%)

| | Average | Success Rate |
|---|---|---|
| Male | 71.3 | 83.8 |
| Female | 72.5 | 84.2 |
| Public schools | 70.5 | 82.0 |
| Private schools | 79.2 | 94.5 |
| Language of instruction: French | 72.0 | 84.1 |
| Language of instruction: English | 70.6 | 83.1 |
| English, language of instruction (Secondary V) | 72.3 | 94.3 |
| English, second language (Secondary IV) | 71.8 | 79.0 |
| English, second language (Secondary V) | 75.9 | 88.8 |
| French, language of instruction (Secondary V) | 74.7 | 94.2 |
| French, second language (Secondary V) | 79.5 | 95.8 |
| History (Secondary IV) | 69.0 | 75.8 |
| Physical science 416 (Secondary IV) | 65.0 | 78.8 |
| Physical science 436 (Secondary IV) | 72.4 | 86.2 |
| **Total** | **71.9** | **84.0** |

Note: Physical science 436 is an enriched course.

## Graph 4.2

# Averages of uniform secondary school examinations in the youth sector, by gender, school system and language of instruction: June 1997 (%)



# 4.3 Regional Disparities in Secondary School Examination Results–Youth Sector

Six regions recorded higher averages and success rates than the overall provincial results on the June 1997 uniform ministry examinations:[1] Montréal, Laval, Estrie, Québec, Montérégie and Outaouais. Ranked among the lowest were Gaspésie–Îles-de-la-Madeleine, Saguenay–Lac-Saint-Jean, Côte-Nord and Nord-du-Québec.

***The results of the June 1997 uniform examinations showed a difference of 8.4 percentage points between the success rates of students in the region with the best performance (86.2%) and that of students in the region with the poorest performance (77.8%). The gap decreased between 1996 and 1997.***

Regional disparities[2] decreased between 1996 and 1997. The difference between the highest and lowest averages fell from 6.3 to 5.9 percentage points, whereas the gap in the success rates dropped from 10.3 to 8.4 percentage points.

The results on uniform examinations are not necessarily indicative of the probability of obtaining a secondary school diploma (see Section 5.3). In some regions, it is possible that a low student retention rate contributes to higher marks on the uniform examinations because the weakest students have dropped out.

1. Results are calculated on the basis of the students' final marks. The final mark is made up, in equal proportions, of the student's result on the uniform examination and the "moderated" school mark. "Moderation" is a procedure which renders the marks assigned by different schools comparable by using the results of the uniform examination for each student group as the basis of comparison.
2. For statistical purposes, the territories of Catholic school boards only have been grouped as much as possible according to the administrative regions defined by the Bureau de la statistique du Québec in December 1987.

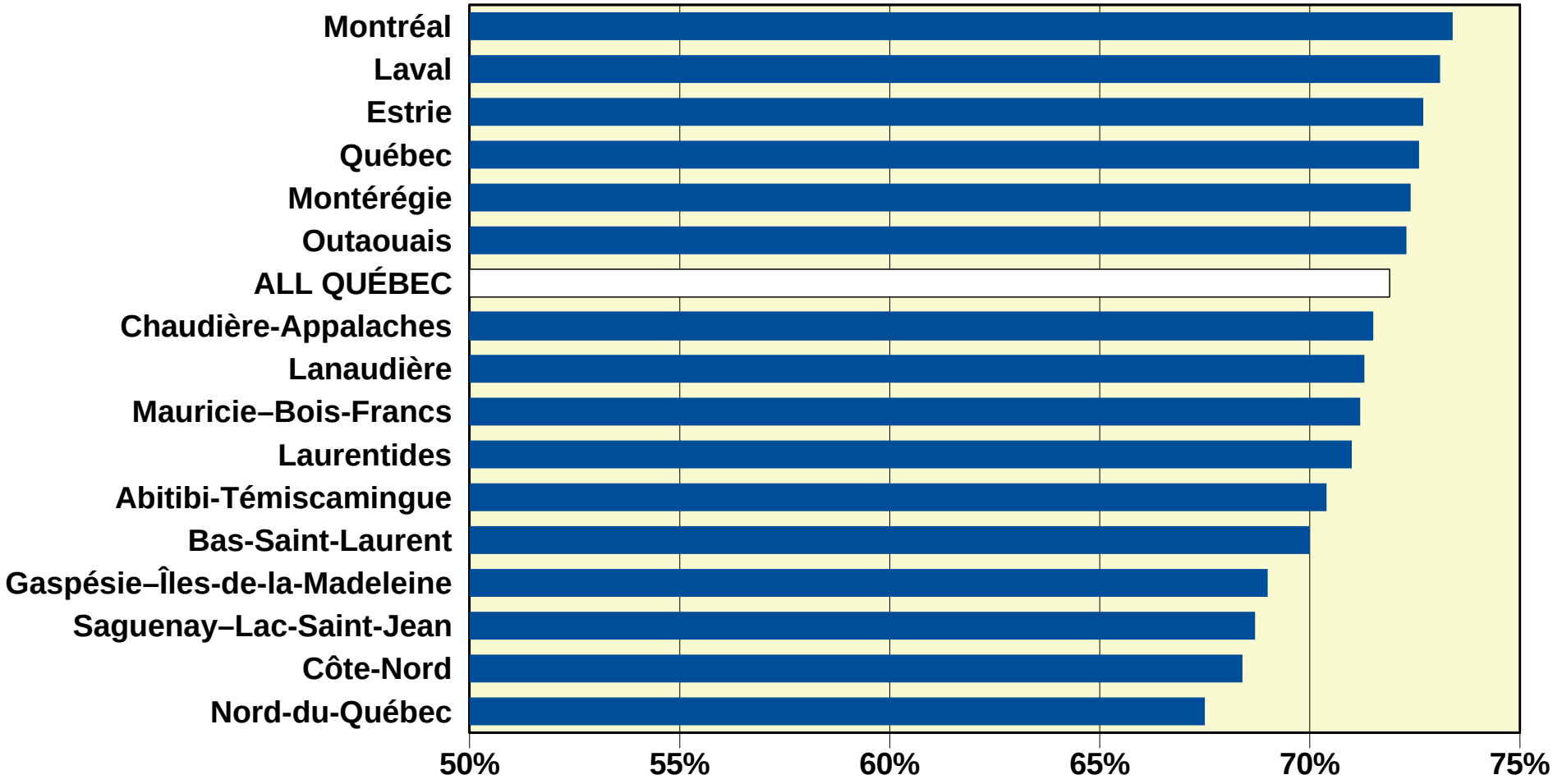
## Table 4.3

# Results on uniform secondary school examinations in the youth sector, by school administrative region: June 1997 (%)

| School Administrative Region | Average | Success Rate |
|---|---|---|
| Gaspésie–Îles-de-la-Madeleine | 69.0 | 78.7 |
| Bas-Saint-Laurent | 70.0 | 80.6 |
| Saguenay–Lac-Saint-Jean | 68.7 | 79.1 |
| Québec | 72.6 | 84.7 |
| Chaudière-Appalaches | 71.5 | 83.6 |
| Mauricie–Bois-Francs | 71.2 | 82.7 |
| Estrie | 72.7 | 85.2 |
| Montérégie | 72.4 | 85.0 |
| Montréal | 73.4 | 85.9 |
| Laval | 73.1 | 86.2 |
| Lanaudière | 71.3 | 82.7 |
| Laurentides | 71.0 | 83.8 |
| Outaouais | 72.3 | 85.2 |
| Abitibi-Témiscamingue | 70.4 | 82.6 |
| Côte-Nord | 68.4 | 77.8 |
| Nord-du-Québec | 67.5 | 78.8 |
| **Total** | **71.9** | **84.0** |

Graph 4.3

## Averages of uniform secondary school examinations in the youth sector, by school administrative region: June 1997 (%)



# 4.4 Secondary V French, Language of Instruction, Examination–Youth Sector

***The success rate on the June 1997 Secondary V French examination was 94.2%. Girls obtained significantly higher marks than boys.***

Students who wrote the June 1997 Secondary V French examination obtained an average mark of 74.7%. The success rate was 94.2%.[1]

The examination consisted of three components: written production, a reading comprehension exercise and a test on oral expression. The reading comprehension and oral expression components were under the responsibility of the schools; the results obtained in these sections are not included in Table 4.4; however, they were considered in the calculation of the overall results on the French examination. In written production, which was under the responsibility of the Ministère de l'Éducation, students obtained an average of 76.9% and a success rate of 89.7%.

Whereas there was no significant difference overall between the results obtained by boys and girls on the examinations used for purposes of certification (see Section 4.2), girls outperformed boys on the French examination. The average for girls was 5.5 percentage points above that for boys, and their success rate was 4.9 percentage points higher than that for boys. In written production, the girls' average was 6.1 percentage points higher than the boys' and their success rate was 7.4 percentage points higher.

The average obtained by private school students surpassed that of public school students by 6.1 percentage points. In the public system, 6.6% of the students failed the ministry examination, compared with 1.4% in the private system. In written production, students in private schools scored higher than students in the public system.

1. Results are calculated on the basis of the students' final marks. The final mark is made up, in equal proportions, of the student's result on the uniform examination and the "moderated" school mark. "Moderation" is a procedure which renders the marks assigned by different schools comparable by using the results of the uniform examination for each student group as the basis of comparison.

## Table 4.4

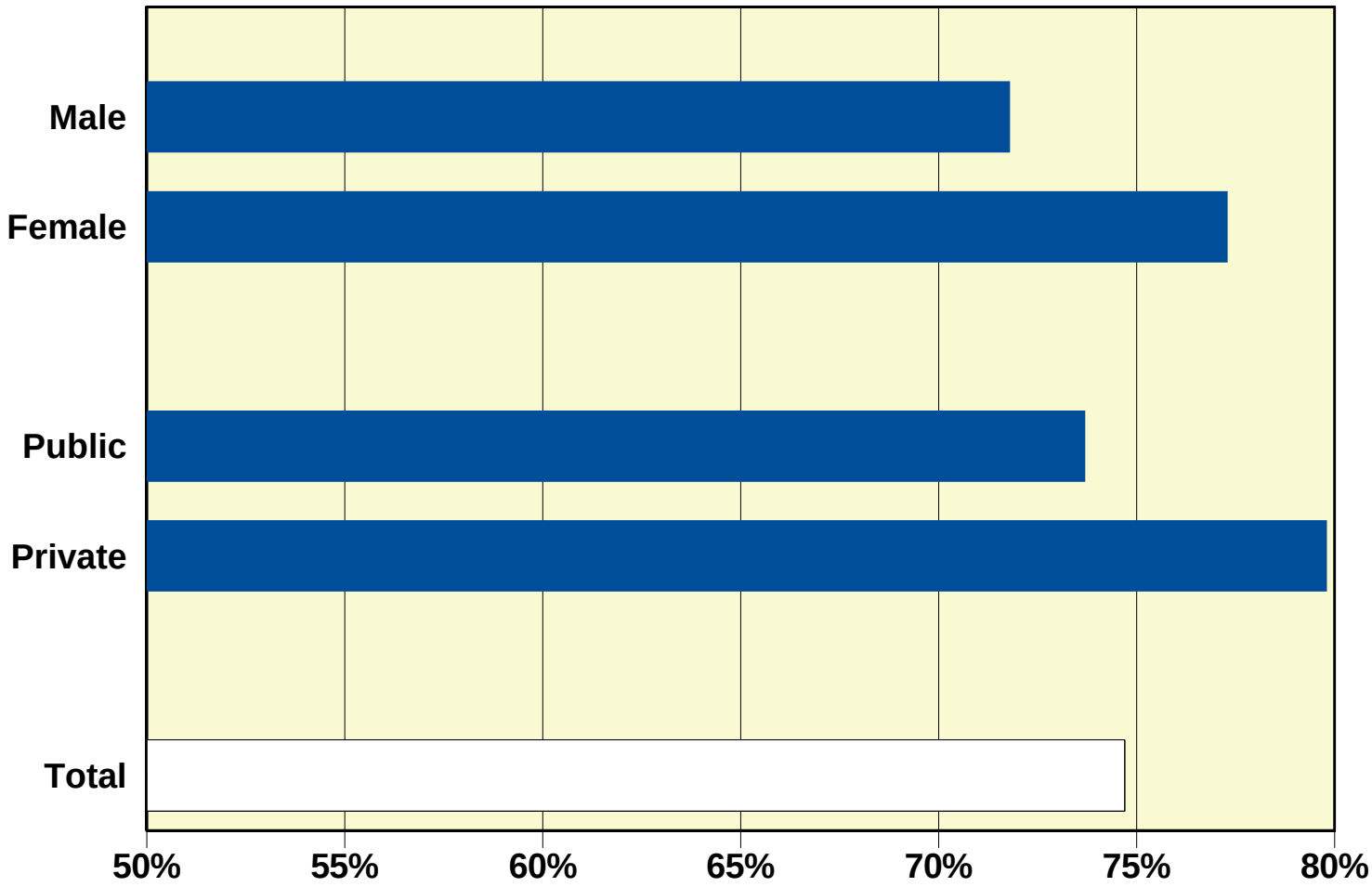
# Results on the Secondary V French, Language of Instruction, examination, in the youth sector, by gender and school system: June 1997 (%)

| | Written Production | | Overall Results | |
|---|---|---|---|---|
| | Average | Success Rate | Average | Success Rate |
| Male | 73.6 | 85.8 | 71.8 | 91.6 |
| Female | 79.7 | 93.2 | 77.3 | 96.5 |
| Public system[1] | 75.8 | 88.5 | 73.7 | 93.4 |
| Private system | 82.1 | 95.9 | 79.8 | 98.6 |
| **Total** | **76.9** | **89.7** | **74.7** | **94.2** |

1. Excludes the Cree School Board and the Kativik School Board.

Graph 4.4

## Averages on the Secondary V French, Language of Instruction, examination, in the youth sector, by gender and school system: June 1997 (%)



## 4.5 Mathematics Achievement among 13-year-olds

***Québec 13-year-olds obtained the best results in Canada on two mathematics examinations held in 1997. These results are better than those obtained during similar examinations held in 1993. Moreover, the gap between the results of Québec students and those of Canadian students overall has increased.***

Québec 13-year-olds obtained the best results in Canada on the mathematics examinations held in April 1997 by the Council of Ministers of Education, Canada, as part of the School Achievement Indicators Program (SAIP).

Two examinations were administered to students: one dealing with mathematical content and the other with problem solving. The students' results were expressed in terms of five levels of performance. The first level corresponded to the learning achievement expected of elementary school students, and the fifth level, to the results expected of students who had completed an advanced mathematics course. It was assumed that students who achieved a given level of performance met the requirements of the lower levels. Very few 13-year-olds placed in the fourth and fifth levels of performance.

Among the Francophone students from Québec, 9 out of 10 attained the first level of performance for the two examinations. With respect to the examination on mathematical content, 92.9% placed in the first level; this was slightly higher than the 90% recorded for Canadian students overall. No other province obtained higher results.[1] Québec students were predominant in the second and third levels, with proportions of 78.3% and 48.7%, compared with 59.4% and 28.4% for Canadian students overall. These results were better than those of all the other provinces. The situation was similar for the problem-solving examination. Among the Francophone students from Québec, 90.7% placed in the first level, 66.8% in the second level and 24.5% in the third level; these proportions were 84.2%, 52.2% and 15.3% respectively for Canadian students overall. Québec's results were higher than those of all the other provinces.

With respect to Anglophone students from Québec, 90.8% attained the first level of performance for the content examination, 65.3% the second level and 41.9% the third level. At the first level, the results of Anglophone

1. The comparisons of results in this section take into account a margin of error inherent to any result obtained by surveying a sampling of persons.

Quebecers were comparable to those of Canadian students overall; at the second and third levels, they were markedly higher. Francophone students from Manitoba had better results in the first level of performance, while at the second and third levels, Francophone Quebecers outperformed Anglophone Quebecers. With respect to the problem-solving examination, 85% of Anglophone students from Québec placed in the first level of performance, 57.9% in the second level and 17.4% in the third level. These results were comparable to those for Canadian students overall for the first and third levels, but were higher for the second level. Only Francophone students from Québec obtained better results than Anglophone students from Québec, and this, for all three levels of performance.

A comparison of the results of this study with a similar one conducted in 1993 in terms of the mathematical content examination reveals that the performance of Québec students has improved over the last four years. The proportion of Francophone students from Québec who placed in the third level of performance increased by 6 percentage points; for Anglophone students from Québec, the increase was 3 percentage points. Moreover, the gap between the results of Québec students and Canadian students overall increased between 1993 and 1997, for both Francophone and Anglophone students.

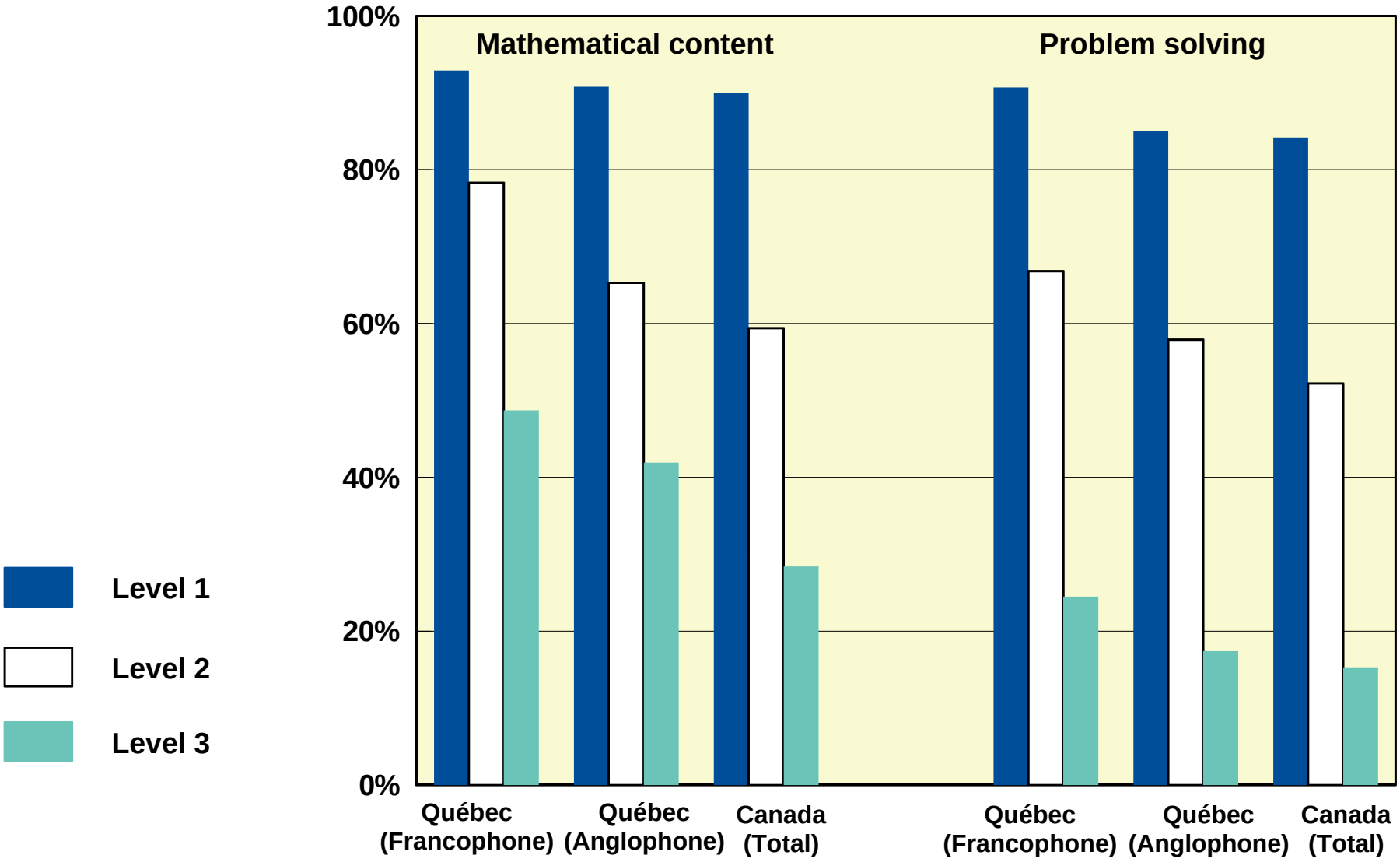
## Table 4.5

# Proportion of 13-year-olds placing in the first three levels of performance on the SAIP mathematics examinations, by province or territory: April 1997 (%)

| | Examination - Level of Performance | | | | | |
|---|---|---|---|---|---|---|
| | Mathematical Content | | | Problem Solving | | |
| | 1 | 2 | 3 | 1 | 2 | 3 |
| British Columbia | 89.7 | 56.9 | 27.0 | 80.9 | 47.8 | 14.0 |
| Alberta | 92.5 | 64.7 | 32.1 | 87.2 | 57.8 | 19.8 |
| Saskatchewan | 87.4 | 47.9 | 18.5 | 82.9 | 51.2 | 11.3 |
| Manitoba (Anglophone) | 87.8 | 51.9 | 23.0 | 80.9 | 45.2 | 11.9 |
| Manitoba (Francophone) | 95.0 | 61.9 | 31.9 | 86.1 | 52.1 | 16.8 |
| Ontario (Anglophone) | 88.4 | 50.0 | 17.9 | 81.7 | 45.4 | 10.5 |
| Ontario (Francophone) | 90.7 | 51.9 | 21.4 | 80.8 | 43.0 | 10.6 |
| **Québec (Anglophone)** | **90.8** | **65.3** | **41.9** | **85.0** | **57.9** | **17.4** |
| **Québec (Francophone)** | **92.9** | **78.3** | **48.7** | **90.7** | **66.8** | **24.5** |
| New Brunswick (Anglophone) | 87.9 | 54.6 | 18.5 | 82.9 | 47.2 | 11.8 |
| New Brunswick (Francophone) | 90.3 | 63.2 | 33.2 | 86.5 | 53.2 | 16.1 |
| Nova Scotia (Anglophone) | 88.3 | 53.0 | 17.3 | 82.1 | 46.0 | 11.4 |
| Nova Scotia (Francophone) | 93.1 | 66.0 | 36.1 | 81.7 | 48.1 | 15.9 |
| Prince Edward Island | 87.8 | 53.6 | 15.3 | 84.1 | 49.3 | 13.3 |
| Newfoundland | 88.9 | 56.9 | 24.0 | 78.3 | 43.6 | 10.0 |
| Northwest Territories | 61.3 | 31.4 | 9.7 | 54.6 | 27.5 | 6.1 |
| Yukon | 91.3 | 65.4 | 31.9 | 73.3 | 40.7 | 12.0 |
| **Canada (Total)** | **90.0** | **59.4** | **28.4** | **84.2** | **52.2** | **15.3** |

Graph 4.5

## Performance of 13-year-olds on the SAIP mathematics examination, for Québec and Canada: 1997 (%)



# 4.6 Mathematics Achievement among 16-year-olds

***Québec 16-year-olds obtained the best results in Canada on two mathematics examinations held in 1997. These results are better than those obtained during similar examinations held in 1993. Moreover, the gap between the results of Québec students and those of Canadian students overall has increased.***

Québec 16-year-olds obtained better results than Canadian students overall on the mathematics examinations held in April 1997 by the Council of Ministers of Education, Canada, as part of the School Achievement Indicators Program (SAIP).

Two examinations were administered to students: one dealing with mathematical content and the other with problem solving. The students' results were expressed in terms of five levels of performance. The first level corresponded to the learning achievement expected of elementary school students, and the fifth level, to the results expected of students who had completed an advanced mathematics course. It was assumed that students who achieved a given level of performance met the requirements of the lower levels. Very few 16-year-olds placed in the fifth level of performance.

Almost all the Francophone students from Québec placed in the first level of performance for the two examinations. The proportion of students placing in the first level was 97.8% for the content examination and 96.3% for the problem-solving examination; these proportions were higher than the 94.9% and 92.5% obtained by Canadian students overall.[1] For the content examination, the results of Francophone Quebecers largely surpassed the results of Canadian students overall in terms of placement in the second, third and fourth levels, with proportions of 92.8%, 81% and 28.1%, respectively, compared with 78.9%, 59.8% and 14.5% for Canadian students overall. Only the Francophone students in Nova Scotia came close to performing as well in the second and third levels. Francophone Quebecers also dominated the problem-solving examination: 86.9% placed in the second level, 57% in the third level and 20.7% in the fourth level, compared with 75.9%, 39.8% and 12.8%, respectively, for Canadian students overall. Québec Francophone students outperformed Anglophone students from Québec and students from all the other provinces.

1. The comparisons of results in this section take into account a margin of error inherent to any result obtained by surveying a sampling of persons.

With respect to Anglophone students from Québec, 96.5% attained the first level of performance for the content examination, and 93.2%, the first level for the problem-solving examination. These results were comparable to those of Canadian students overall. At the second, third and fourth levels, the results of Anglophone Quebecers were almost without exception higher than those for Canadian students overall. With respect to the content examination, 85.6% of Anglophone students from Québec placed in the second level of performance, 74.3% in the third level and 21.9% in the fourth level. These results were better than those for Canadian students overall and for most of the other provinces. Only Francophone Quebecers obtained higher results than Anglophone Quebecers. With respect to the problem-solving examination, 78.2% of Anglophone students from Québec placed in the second level of performance, 46.5% in the third level and 18.3% in the fourth level. These results were comparable to those for Canadian students overall for the second level; for the third and fourth levels, the results were higher than for Canadian students overall and for most of the provinces. Only Francophone students from Québec scored higher in the second and third levels.

A comparison of the results of this study with a similar one conducted in 1993 in terms of the mathematical content examination reveals that the performance of Québec students has improved over the last four years. The proportion of Francophone students from Québec who placed in the third and fourth levels of performance increased by 8 and 4 percentage points, respectively; for Anglophone students from Québec, the increase was 12 and 5 percentage points, respectively. Moreover, the gap between the results of Québec students and Canadian students overall increased between 1993 and 1997, for both Francophone and Anglophone students.

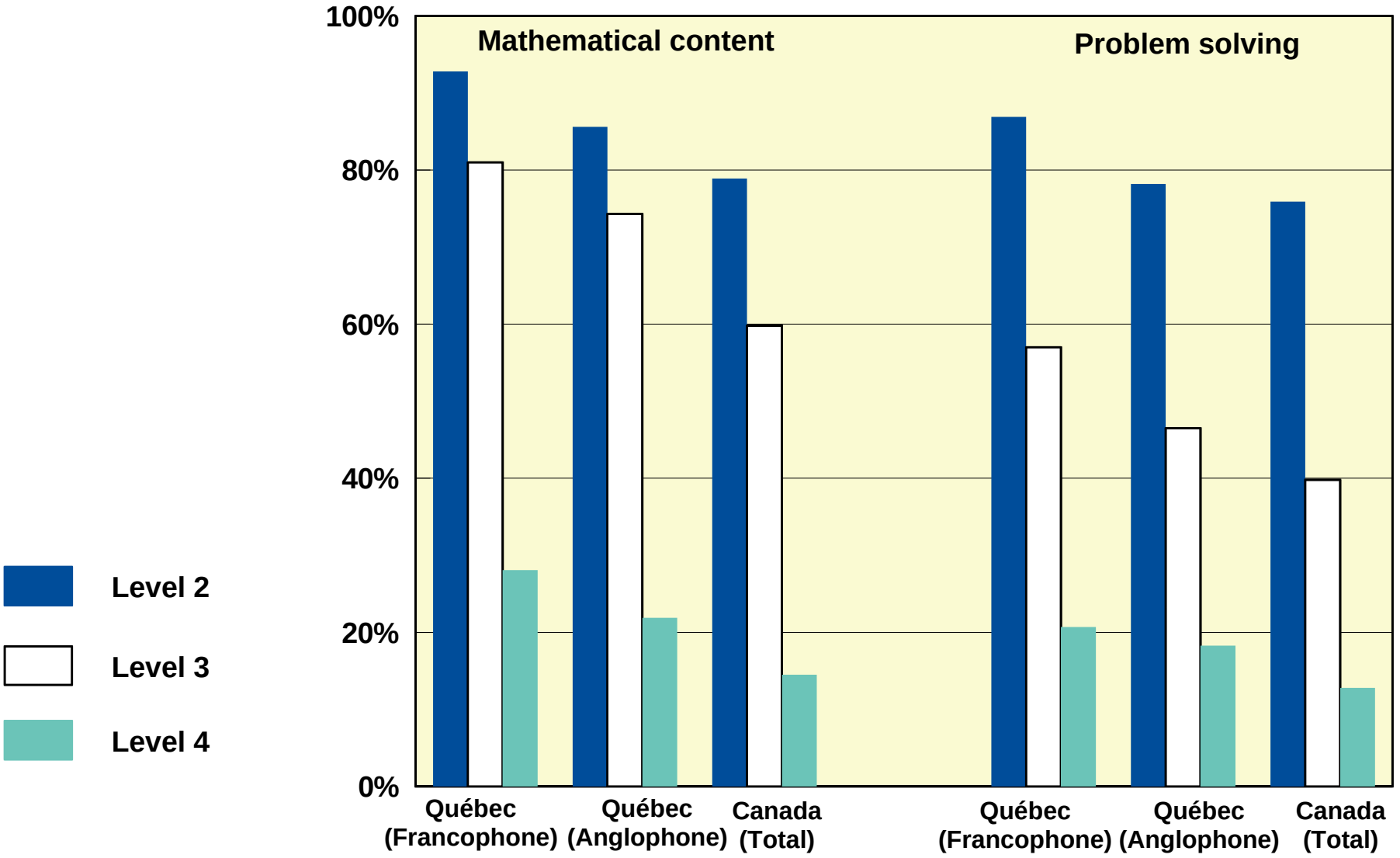
## Table 4.6

# Proportion of 16-year-olds placing in the second, third and fourth levels of performance on the SAIP mathematics examinations, by province or territory: April 1997 (%)

| | Examination - Level of Performance | | | | | |
|---|---|---|---|---|---|---|
| | Mathematical Content | | | Problem Solving | | |
| | 2 | 3 | 4 | 2 | 3 | 4 |
| British Columbia | 75.5 | 54.6 | 12.7 | 68.3 | 31.2 | 9.9 |
| Alberta | 82.0 | 61.4 | 16.0 | 78.6 | 44.8 | 14.6 |
| Saskatchewan | 73.7 | 50.0 | 7.9 | 73.5 | 38.6 | 10.9 |
| Manitoba (Anglophone) | 74.7 | 53.4 | 9.7 | 76.7 | 40.2 | 10.0 |
| Manitoba (Francophone) | 84.7 | 61.2 | 9.8 | 78.9 | 45.3 | 7.9 |
| Ontario (Anglophone) | 73.2 | 52.0 | 9.3 | 72.9 | 33.0 | 10.0 |
| Ontario (Francophone) | 68.7 | 49.2 | 5.4 | 70.3 | 27.8 | 6.1 |
| **Québec (Anglophone)** | **85.6** | **74.3** | **21.9** | **78.2** | **46.5** | **18.3** |
| **Québec (Francophone)** | **92.8** | **81.0** | **28.1** | **86.9** | **57.0** | **20.7** |
| New Brunswick (Anglophone) | 72.4 | 47.3 | 8.4 | 71.4 | 33.6 | 8.7 |
| New Brunswick (Francophone) | 83.8 | 63.4 | 12.8 | 73.2 | 37.1 | 10.4 |
| Nova Scotia (Anglophone) | 78.2 | 57.3 | 8.4 | 74.6 | 36.8 | 9.2 |
| Nova Scotia (Francophone) | 90.2 | 76.1 | 19.0 | 84.0 | 44.2 | 10.7 |
| Prince Edward Island | 69.0 | 48.5 | 4.1 | 64.8 | 27.5 | 5.7 |
| Newfoundland | 68.4 | 43.0 | 7.2 | 67.6 | 30.8 | 7.2 |
| Northwest Territories | 52.3 | 37.8 | 4.5 | 48.3 | 18.5 | 4.9 |
| Yukon | 75.8 | 59.2 | 10.0 | 66.3 | 30.8 | 14.2 |
| **Canada (Total)** | **78.9** | **59.8** | **14.5** | **75.9** | **39.8** | **12.8** |

Graph 4.6

## Performance of 16-year-olds on the SAIP mathematics examination, for Québec and Canada: 1997 (%)



# 4.7 Mathematics Achievement among Elementary and Secondary School Students: An International Comparison

In 1994-95, Québec students in grades 3 and 4 at the elementary level and grades 7 and 8 at the secondary level (which correspond to Secondary I and II in Québec) took part in the Third International Mathematics and Science Study (TIMSS). Québec students obtained higher results than the international average at the four grade levels.[1]

***Elementary and secondary school students in Québec ranked second or third among the 20 or so OECD countries participating in a mathematics examination in 1994-95.***

A total of 16 member countries of the Organisation for Economic Co-operation and Development (OECD) participated in the study for grades 3 and 4 and 23 countries, for grades 7 and 8. Table 4.8 presents the results for Québec and the OECD countries that were represented in the four groups of students, as well as the results for Germany, Belgium and France. For grades 3 and 4, only Japan scored higher than Québec. For grade 3, Québec outperformed all the participating OECD countries; for grade 4, Québec's results were comparable to those of the Netherlands and higher than those of the other participating countries. For grade 7, Québec was surpassed by Japan and by the Flemish community in Belgium; Québec did better than all the other participating OECD countries. For grade 8, Japan ranked first, and Québec second, followed by Belgium (Flemish) and the Czech Republic (differences among these countries are not significant, given the study's margin of error).

It is possible to compare the results of students from Québec with those from five other Canadian provinces: Newfoundland, New Brunswick, Ontario, Alberta and British Columbia. Québec students scored higher than students from all these provinces. The results of these provinces ranged from 41.9% to 51.1% for grade 3, from 57.1% to 65% for grade 4, from 46.9% to 53.6% for grade 7 and from 53.9% to 62.8% for grade 8.

1. The comparisons of results in this section take into account a margin of error inherent to any result obtained by surveying a sampling of persons. Also, other countries have presented these results in the form of rating scales. There is no direct formula to convert percentages into scales.

Overall, among the participating countries, boys performed slightly better than girls in grades 3, 7 and 8; the gap of less than 1 percentage point was, however, very small. No significant differences were observed between the sexes for grade 4. In Québec, there were no differences between the results of boys and girls for any of the grade levels.

## Table 4.7

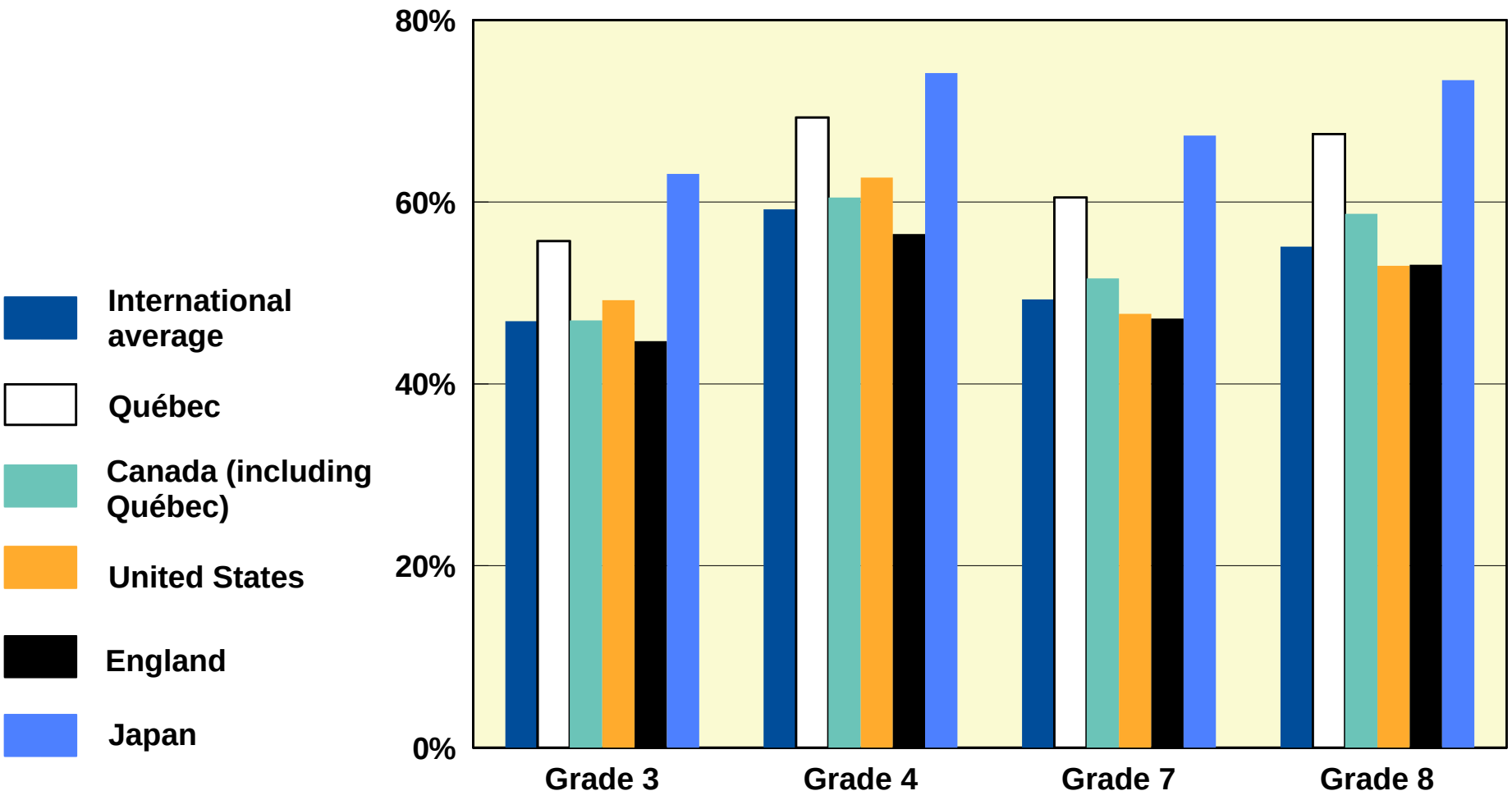
# Results of students in four elementary and secondary grade levels on an international mathematics examination held in various OECD countries: 1994-95 (average in %)

| | Grade | | | |
|---|---|---|---|---|
| | 3 | 4 | 7 | 8 |
| Austria | 49.7 | 65.3 | 55.5 | 61.9 |
| Belgium (French) | – | – | 54.4 | 58.7 |
| Belgium (Flemish) | – | – | 65.1 | 65.8 |
| Canada (including Québec) | 47.0 | 60.5 | 51.6 | 58.7 |
| Czech Republic | 52.0 | 66.1 | 57.2 | 65.5 |
| England | 44.7 | 56.5 | 47.2 | 53.1 |
| France | – | – | 51.0 | 61.3 |
| Germany | – | – | 49.0 | 53.9 |
| Greece | 37.1 | 50.8 | 40.5 | 49.3 |
| Hungary | 48.9 | 63.7 | 53.8 | 61.5 |
| Iceland | 35.2 | 49.7 | 43.3 | 49.8 |
| Ireland | 47.8 | 63.5 | 53.3 | 58.7 |
| Japan | 63.1 | 74.2 | 67.3 | 73.4 |
| Netherlands | 52.1 | 69.3 | 55.1 | 59.8 |
| Norway | 35.5 | 53.3 | 44.3 | 53.6 |
| Portugal | 37.2 | 48.0 | 36.6 | 42.9 |
| **Québec** | **55.7** | **69.3** | **60.5** | **67.5** |
| Scotland | 44.8 | 58.0 | 44.3 | 51.6 |
| United States | 49.2 | 62.7 | 47.7 | 53.0 |
| **International average** | **46.9** | **59.2** | **49.3** | **55.1** |

-: Not applicable

Graph 4.7

## Results of students in four elementary and secondary grade levels on an international mathematics examination, for Québec and various OECD countries: 1994-95 (average in %)



# 4.8 Science Achievement among Elementary and Secondary School Students: An International Comparison

***Elementary and secondary school students in Québec attained higher or comparable results than most of the 20 or so OECD countries participating in a science examination in 1994-95.***

In 1994-95, Québec students in grades 3 and 4 at the elementary level and grades 7 and 8 at the secondary level (which correspond to Secondary I and II in Québec) took part in the Third International Mathematics and Science Study (TIMSS). Québec students obtained higher results than the international average at the four grade levels.[1]

A total of 16 member countries of the Organisation for Economic Co-operation and Development (OECD) participated in the study for grades 3 and 4 and 23 countries, for grades 7 and 8. Table 4.9 presents the results for Québec and the OECD countries that were represented in the four groups of students, as well as the results for Germany, Belgium and France. For grades 3 and 4, the results of students from Québec were lower than those for students from Japan, Australia, the United States and the Netherlands; they were comparable to those of students from Austria, Canada, the Czech Republic, England and Scotland, and higher than those for students from the seven other OECD countries represented in these two groups. For grade 7, Québec was outperformed by Japan, the Flemish community in Belgium and the Czech Republic; Québec's results were comparable to those of nine other countries, including Canada, England, Germany and the United States. For grade 8, Québec students ranked sixth, coming behind Japan, the Netherlands, the Czech Republic, Austria and England. The performance of Québec students was comparable to that of students from 10 OECD countries, including Canada, Germany, the United States and Belgium (Flemish).

It is possible to compare the results of students from Québec with those from five other Canadian provinces: Newfoundland, New Brunswick, Ontario, Alberta and British Columbia. For grade 3, Québec students were

1. The comparisons of results in this section take into account a margin of error inherent to any result obtained by surveying a sampling of persons. Also, other countries have presented these results in the form of rating scales. There is no direct formula to convert percentages into scales.

outperformed by students from Alberta (59.5%) and British Columbia (55.7%), but they did better than students from Ontario (51%) and New Brunswick (50.9%). For grade 4, only students from Alberta had a higher average than students from Québec, with 67.9%; students from Québec obtained better results than students from Newfoundland (62.2%), Ontario (61.9%) and New Brunswick (61.3%). For grade 7, once again, students from Alberta scored the highest in Canada with 59.7%; Québec's results were comparable to those of the other provinces. For grade 8, Alberta (64.6%) and British Columbia (62.2%) had better results than Québec; students from Québec outperformed students from Ontario (55.5%).

Overall, among the participating countries, boys performed slightly better than girls. In grades 3 and 4, the gap was 1 percentage point, and for grades 7 and 8, 2 percentage points. In Québec, however, there were no differences between the results of boys and girls for grades 3, 7 and 8, and only a slight difference of 0.5 percentage points in favour of the boys for grade 4.

## Table 4.8

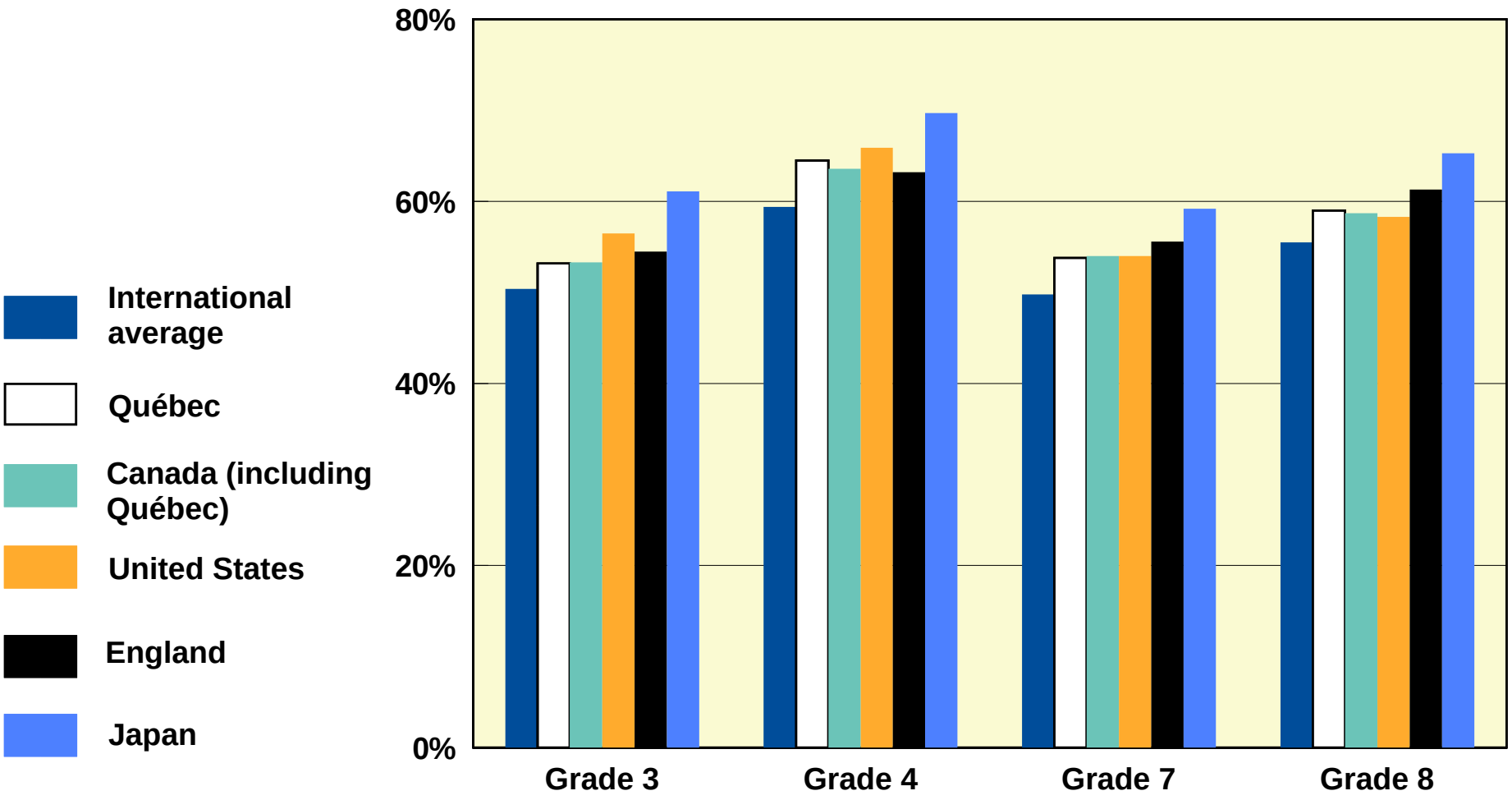
# Results of students in four elementary and secondary grade levels on an international science examination held in various OECD countries: 1994-95 (average in %)

| | Grade | | | |
|---|---|---|---|---|
| | 3 | 4 | 7 | 8 |
| Australia | 56.5 | 66.3 | 53.8 | 59.9 |
| Austria | 54.6 | 65.7 | 55.4 | 61.5 |
| Belgium (Flemish) | – | – | 57.1 | 60.2 |
| Belgium (French) | – | – | 45.0 | 50.2 |
| Canada (including Québec) | 53.3 | 63.6 | 54.0 | 58.7 |
| Czech Republic | 54.6 | 65.5 | 58.4 | 64.1 |
| England | 54.5 | 63.2 | 55.6 | 61.3 |
| France | – | – | 46.1 | 53.7 |
| Germany | – | – | 52.8 | 57.9 |
| Greece | 44.3 | 53.8 | 44.5 | 52.0 |
| Hungary | 49.7 | 61.2 | 55.5 | 60.7 |
| Iceland | 42.3 | 55.1 | 46.3 | 52.1 |
| Ireland | 51.1 | 61.0 | 52.0 | 58.4 |
| Japan | 61.1 | 69.7 | 59.2 | 65.3 |
| Netherlands | 55.9 | 67.1 | 55.9 | 62.3 |
| Norway | 45.8 | 60.5 | 50.4 | 57.6 |
| Portugal | 41.0 | 50.2 | 41.3 | 49.9 |
| **Québec** | **53.2** | **64.5** | **53.8** | **59.0** |
| Scotland | 51.4 | 60.3 | 48.2 | 55.3 |
| United States | 56.5 | 65.9 | 54.0 | 58.3 |
| **International Average** | **50.4** | **59.4** | **49.8** | **55.5** |

–: Not applicable

Graph 4.8

## Results of students in four elementary and secondary grade levels on an international science examination, for Québec and various OECD countries: 1994-1995 (average in %)



# 4.9 How Employers View Secondary Vocational Education Graduates[1]

In 1997, the Ministère de l'Éducation conducted a survey among 2 244 employers who had hired at least one secondary school vocational education graduate between 1993 and 1995. The survey made it possible to gather information on what employers think about the graduates' competence, performance, work attitudes, abilities, practical skills and knowledge.

***Overall, more than 90% of the employers surveyed considered the competence of vocational education graduates to be moderate or high. They felt that certain attitudes, abilities, practical skills and knowledge needed improvement, including knowledge of French and English.***

In 1997, more than 91% of the employers surveyed considered their vocational education recruits competent: 50.3% thought them moderately competent and 40.9% very competent, compared with 7.8% who considered them not very competent. Vocational education graduates were primarily hired by very small businesses (with 1 to 25 employees), where the satisfaction rate is rising steadily. Over the last three surveys, this satisfaction rate has increased from 80.3% in 1990 to 88% in 1994-95 and to 90% in 1997.

Close to three out of four employers were satisfied with the performance of their vocational education recruits after three months of work; after six months, the satisfaction rate increased to 87.8%.

The satisfaction rate with respect to the performance of vocational education graduates increased with the size of the company, and varied from 70.7% for very small businesses to 81% for large businesses, after three months of work.

Approximately 77.7% of the employers maintained that a formal education in school is a privileged means of producing qualified workers, but that partnership between schools and the business community is necessary.

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1. Employers' opinions regarding college technical education graduates were not available when the 1998 *Education Indicators* were prepared; therefore, they will be published in next year's edition.

More than 80% of the employers believed that vocational education provides graduates with distinct tools that give them an advantage over non-graduates and that prepare them to more effectively perform their tasks and adapt to change: more theoretical knowledge, greater ease in specializing in their field and greater skills (dexterity). Also, 72% of the employers pointed out that graduates had better attitudes with respect to work.

Vocational education produces a pool of graduates sought after by employers hiring trade workers. More than 82% of the employers preferred to hire vocational education graduates for these jobs.

Vocational education graduates found employment more easily because they tend to have better language skills, abilities and proactive attitudes, as well as technical knowledge related to the trade.

Employers appeared to be looking for vocational education graduates with the following profile: recruits with good knowledge of basic techniques; who are productive (accuracy, quality, speed), punctual, frank and loyal to the company; who respect authority and have good listening skills; who have a sense of responsibility and work well in a team; who keep themselves up-to-date in their daily work; who understand and follow work instructions well; and who are resourceful.

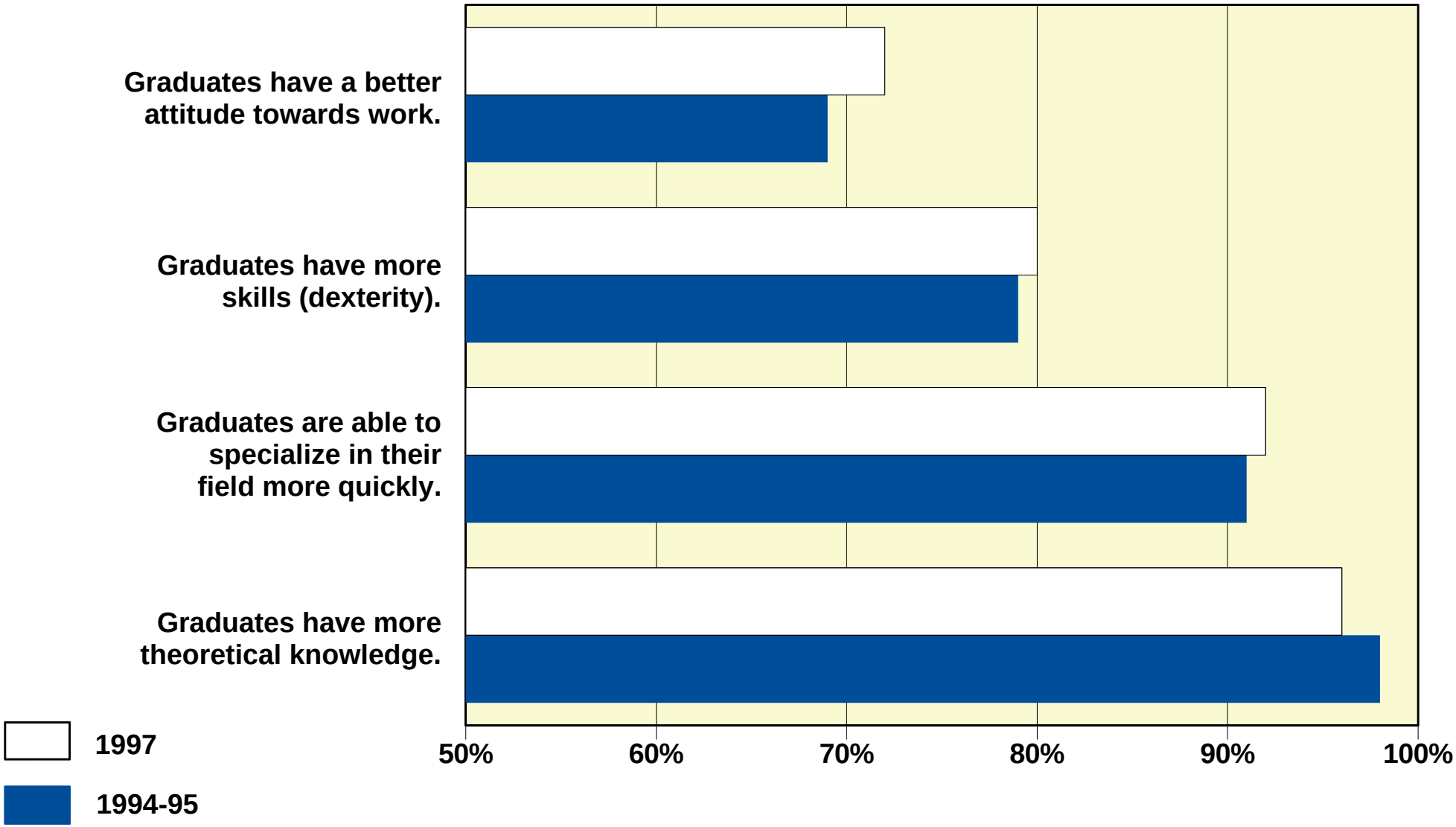
## Table 4.9

# Abilities, practical skills and knowledge that need to be improved, according to at least 20% of the employers surveyed (in order of priority), 1997

| Abilities and skills to be improved | % of employers | Knowledge and aptitudes to be improved | % of employers |
|---|---|---|---|
| Written communication in French | 33.0 | Knowledge of English | 32.8 |
| Verbal communication in English | 31.4 | Knowledge of French | 29.8 |
| Written communication in English | 31.3 | Knowledge of specialized techniques | 26.5 |
| Work planning and organization | 27.0 | Leadership | 25.0 |
| Introduction of new ideas | 26.2 | A desire for challenges | 23.7 |
| Work productivity (accuracy, quality, speed) | 22.0 | Personal commitment to the company and job | 22.9 |
| Resourcefulness | 20.1 | Knowledge of basic techniques | 20.4 |

Graph 4.9

## Comparison of recruits with and without a diploma in similar jobs and percentage of employers who agree with certain statements



# 5.1 Level of Graduation upon Leaving the Education System

The main data pertaining to diplomas obtained at various levels of instruction appears on page 7 and is presented in more detail in the following pages. Organized in a different way,[1] this data may also show the distribution of a cohort of school leavers according to the highest diploma earned.[2]

***In 1995-96, 58.6% of those leaving the education system graduated with a bachelor's degree or a diploma in technical or vocational education.***

Between 1975-76 and 1995-96, graduation rates at the secondary and university levels rose at a rapid pace for both men and women. The increase in the proportion of new graduates with bachelor's degrees (from 14.8% to 28.5%) was accompanied, at the other extreme, by a drop of almost two thirds in the proportion of those leaving school without a diploma (from 43.2% to 12.6%). This decline has resulted in a significant increase in all the other categories.

Thus, the proportion of school leavers who are not prepared for the job market, that is, persons without a diploma or with only a Secondary School Diploma (SSD) in general education or a pre-university DEC (including DECs without mention) was 65% in 1975-76 and dropped to 41.4% in 1995-96. This decline of 23.6 percentage points is reflected by increases of 13.7 percentage points in the proportion of graduates with a bachelor's degree and

1. It is assumed that the diplomas awarded at a given level are preceded by a diploma at a lower level. For example, the number of bachelor's degrees should be a subset of the number of DECs; it follows that the surplus of DECs in relation to the bachelor's degrees would represent the number of DECs that are not followed by a university degree. For this reason, there are no persons with a DEC in pre-university education or without mention as a last diploma in 1975-76 and 1995-96. An additional hypothesis makes it possible to estimate the number of DECs in technical education that are followed by a bachelor's degree. It is also assumed that secondary vocational education diplomas are not followed by another higher-level diploma. Partial studies at a given level are grouped with the diploma immediately below: for example, uncompleted college studies are considered with the Secondary School Diplomas in general education.
2. This level of schooling is not that for the population as a whole as indicated in the census, which is primarily a historical reflection of all the generations in question. The level measured here is the schooling for persons currently leaving the education system; this level also reflects what would become of the general state of schooling if current conditions were to remain the same.

9.9 percentage points in the proportion of holders of vocational or technical education diplomas (6 and 3.9 percentage points, respectively).

A glance at the situation according to gender highlights the disparities already observed in the schooling of men and women. One and one half times more women than men graduate with a bachelor's degree or with a college diploma in technical education (48.3% compared with 31.1%), while roughly three times fewer women than men leave school without any diploma (5.8% compared with 19%).

The overall situation, however, is likely to worsen in 1996-97, at least at the secondary level (see Section 5.2). At the university level, the decline in enrolments in bachelor's programs (Section 2.11) is likely to bring down the probability of obtaining a bachelor's degree.

## Table 5.1
# Distribution of school leavers, by highest diploma earned (%)

| | 1975-76 | 1980-81 | 1985-86 | 1990-91 | 1994-95 | 1995-96 |
|---|---|---|---|---|---|---|
| Bachelor's degree[1] | 14.8 | 17.5 | 18.8 | 23.4 | 27.6 | 28.5 |
| College diploma in technical education[2] | 7.1 | 9.9 | 11.7 | 11.1 | 12.2 | 11.1 |
| Secondary vocational education diploma[3] | 13.0 | 21.8 | 17.6 | 13.7 | 16.9 | 19.0 |
| DEC in pre-university education or without mention of speciality | 0.1 | – | 3.5 | 4.9 | 0.6 | - |
| SSD (general education) | 21.8 | 18.5 | 27.3 | 23.7 | 28.1 | 28.8 |
| No diploma | 43.2 | 32.3 | 21.1 | 23.2 | 14.6 | 12.6 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

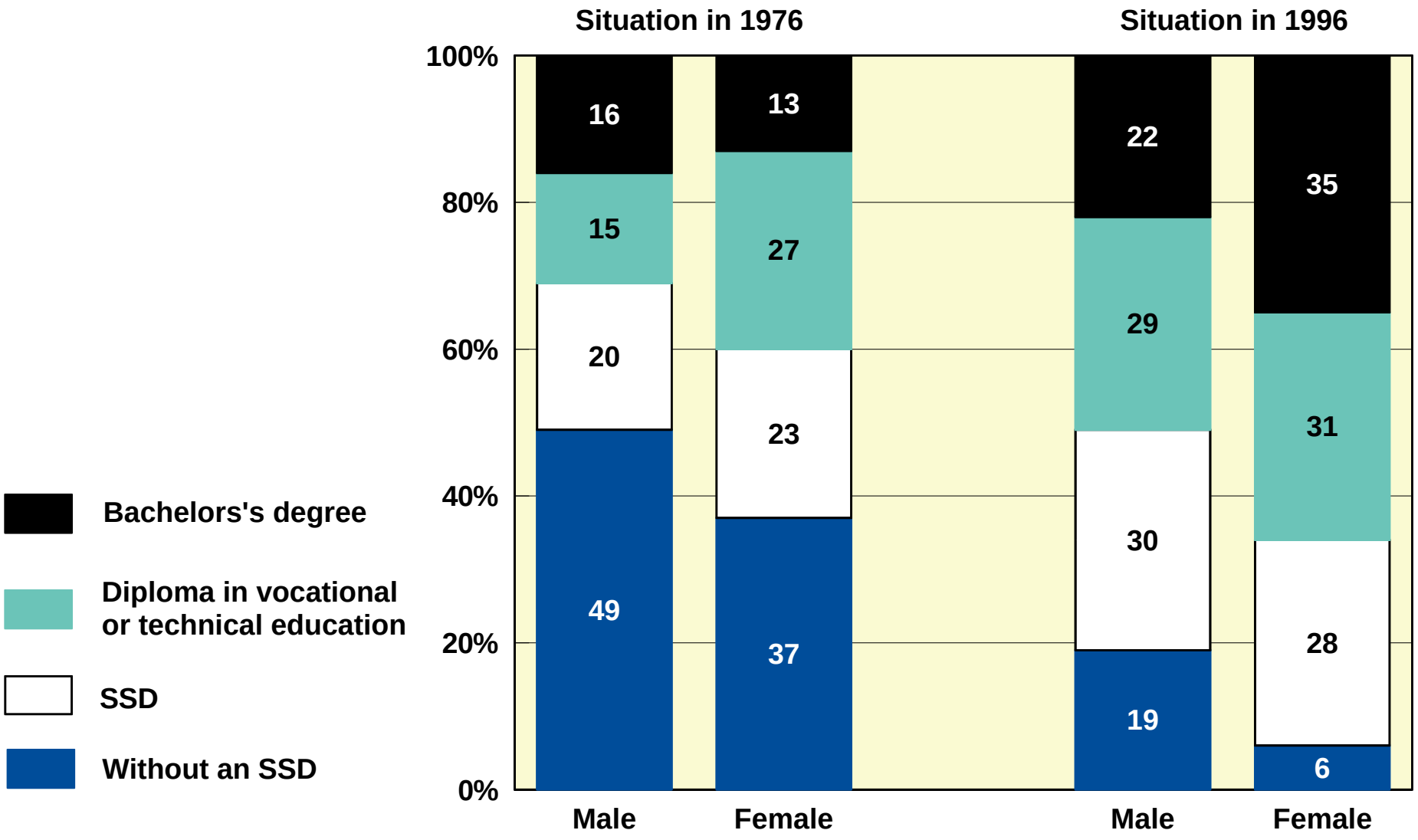
1. Figures for university are based on the calendar year in which the school year ends.

2. The diplomas considered here are the DEC in technical education, the Attestation d'études collégiales (AEC–attestation of college studies) until 1984, the Certificat d'études collégiales (CEC–certificate of college studies) and the Diplôme de perfectionnement de l'enseignement collégial (DPEC–diploma of advanced college studies).

3. The diplomas considered here are the Short Vocational Diploma, the Long Vocational Diploma, the Secondary School Vocational Certificate (SSVC), the Secondary School Vocational Diploma (SSVD), the Attestation of Vocational Specialization (AVS), the Vocational Education Certificate (VEC) and other secondary school diplomas (SSDs) with mention of vocational specialty.

Graph 5.1

# Trends in the distribution of school leavers, by the highest diploma earned (%)



# 5.2 Graduation from Secondary School–Youth and Adult Sectors

In 1996-97, the probability of obtaining a secondary school diploma[1] was 82.4%, a drop of 5 percentage points from 1995-96. Nevertheless, Québec has a higher graduation rate than the average for the OECD countries, which was 80% in 1995.[2]

***In 1996-97, the probability of obtaining a first secondary school diploma from the youth or adult sector was 82.4%, a drop of 5 percentage points from 1995-96.***

In 1996-97, for students in the youth sector and those under 20 years of age in the adult sector, the probability of obtaining a secondary school diploma was 69.6%, a drop of more than 3 percentage points from 1995-96. The Ministère's objective is 85% by the year 2010.

The drop observed for 1996-97 is a result of several factors. First, enrolments in Secondary V have decreased by almost 4 percentage points (see Section 2.4, which demonstrated that the enrolment rate of 1996-97 represents a return to a normal level after the passing of a cohort of students with a particularly high success rate). All things being equal, if fewer students enrol in Secondary V, then there will also be fewer students who earn a diploma. Second, the success rate on uniform ministry examinations was 1.5 percentage points lower than in 1995-96 (see Section 4.2 of this edition and last year's edition; the decline is more pronounced for girls than for boys). Lastly, the graduation rate for general education for adults has been particularly high in the last few years because of certain administrative policies.[3] The year 1996-97 marks a return to a normal level, which partly explains the decline in the graduation rate for adults in general education.

---

1. The probability of obtaining a first secondary school diploma is determined by grouping the first diplomas obtained at the secondary level in general and vocational education. This indicator is a measure of the proportion of a generation that stays in school until a secondary-level diploma is earned.
2. Organisation for Economic Co-operation and Development, *Education at a Glance–OECD Indicators* (Paris, 1997).
3. Between 1993-94 and 1995-96, the Ministère undertook a vast operation to correct the files of numerous students who met all the requirements for obtaining a secondary school diploma but who had never received one. The probability of obtaining a first diploma in adult education (in general education, not preceded by a vocational education diploma) went from 12.2% in 1995-96 to 10.5% in 1996-97.

The situation presented here in terms of the graduation rate and its decline in 1996-97 primarily applies to general education. Section 5.4 reveals that the graduation rate for vocational education increased in 1996-97. This section is primarily concerned with the first diplomas obtained.[4] It might be interesting to note that, in 1996-97, 93% of all the diplomas earned were first diplomas obtained in general education. This proportion was 98.4% if only diplomas obtained in the youth sector or by those under 20 years of age in the adult sector are considered.

The temporary slump in the graduation rate between 1986 and 1990 was largely due to the raising of the pass mark from 50% to 60%, which has made the diploma more valuable, yet more difficult to obtain. Students seem to have overcome this obstacle since 1989, and the graduation rate continued to rise until recently.

During the 1980s, the probability of graduating from secondary school was greater for girls than for boys. The gap between the sexes was 18 percentage points in 1989-90, and 11 percentage points in 1996-97.

The graduation rate for girls reached more than 92% for several years, but now stands at 88%. For boys, it was 80% in 1995-96, but dropped down to 77% in 1996-97.

4. Figures do not include the second or third vocational education diploma that a student may have earned, nor a vocational education diploma received after a general SSD, nor an SSD obtained after a vocational education diploma.

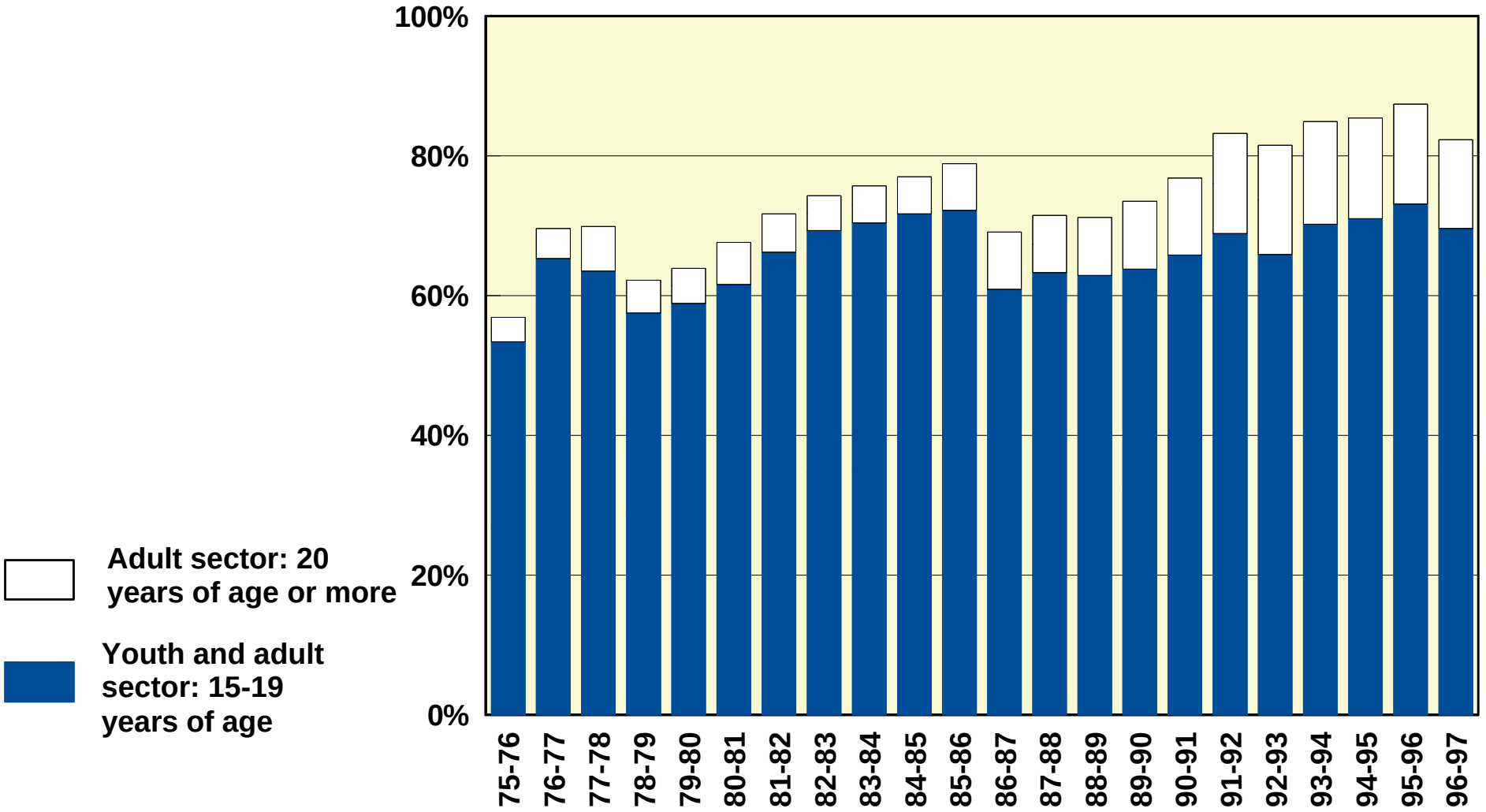
## Table 5.2
# Probability of obtaining a secondary school diploma from either the youth or adult sector, by gender (%)

| | 1975-76 | 1985-86 | 1994-95 | 1995-96 | 1996-97[e] |
|---|---|---|---|---|---|
| **Male** | | | | | |
| Youth sector | 47.2 | 66.4 | 61.7 | 64.0 | 61.2 |
| Youth and adult sectors: 15 to 19 years of age | 48.0 | 66.9 | 64.5 | 66.9 | 64.3 |
| **Youth and adult sectors: all ages** | **51.0** | **72.9** | **78.1** | **81.0** | **77.0** |
| **Female** | | | | | |
| Youth sector | 58.3 | 77.1 | 74.6 | 76.5 | 72.4 |
| Youth and adult sectors: 15 to 19 years of age | 58.8 | 77.8 | 77.9 | 79.7 | 75.2 |
| **Youth and adult sectors: all ages** | **62.8** | **85.3** | **93.0** | **94.2** | **88.0** |
| **Both** | | | | | |
| Youth sector | 52.7 | 71.6 | 68.0 | 70.1 | 66.6 |
| Youth and adult sectors: 15 to 19 years of age | 53.4 | 72.2 | 71.0 | 73.1 | 69.6 |
| **Youth and adult sectors: all ages** | **56.9** | **78.9** | **85.4** | **87.4** | **82.4** |

e: Estimates

Graph 5.2

## Probability of obtaining a secondary school diploma from either the youth or adult sector (%)



# 5.3 Graduation from Secondary School: Regional Disparities–Youth and Adult Sectors

Caution should be exercised in interpreting these regional statistics;[1] for example, indicators vary enough that the ranking of the administrative regions, as shown in Graph 5.3, changes considerably from one year to the next. Recent year's statistics indicate that the regions of Saguenay–Lac-Saint-Jean, Chaudière-Appalaches, Québec, Estrie and Bas-Saint-Laurent generally had the highest results and the regions of Outaouais, Côte-Nord and Nord-du-Québec had the lowest results.

***In 1996-97, in 10 of the 16 administrative regions in Québec, the probability of obtaining a first secondary school diploma exceeded 80%. Only one region recorded a rate higher than 90%: Saguenay–Lac-Saint-Jean.***

The drop in student retention until graduation recorded by Québec as a whole in 1996-97 was reported in all the administrative regions. The decreases observed were as high as 8 percentage points (Montréal) compared with 1995-96. The average decline was 5 percentage points.

Graph 5.3 illustrates the relative share of diplomas from the youth sector and the adult sector with respect to the graduation rate for each administrative region. For example, the provincial graduation rate for a first secondary school diploma (82.4%) can be broken down as follows: 69.6% for diplomas obtained by students in the youth sector and students under 20 years of age in the adult sector; and 12.8% for diplomas earned by students 20 years old or more in the adult sector. The graduation rate for students over the age of 20 in the adult sector for most of the school administrative regions ranges between 12% and 16%; this rate for Abitibi-Témiscamingue, Gaspésie–Îles-de-la-Madeleine, Saguenay–Lac-Saint-Jean and Nord-du-Québec was over 18%.

1. The probability of obtaining a first secondary school diploma is determined by grouping the first diplomas obtained at the secondary level in general and vocational education. This indicator is a measure of the proportion of a generation that stays in school until a secondary-level diploma is earned.

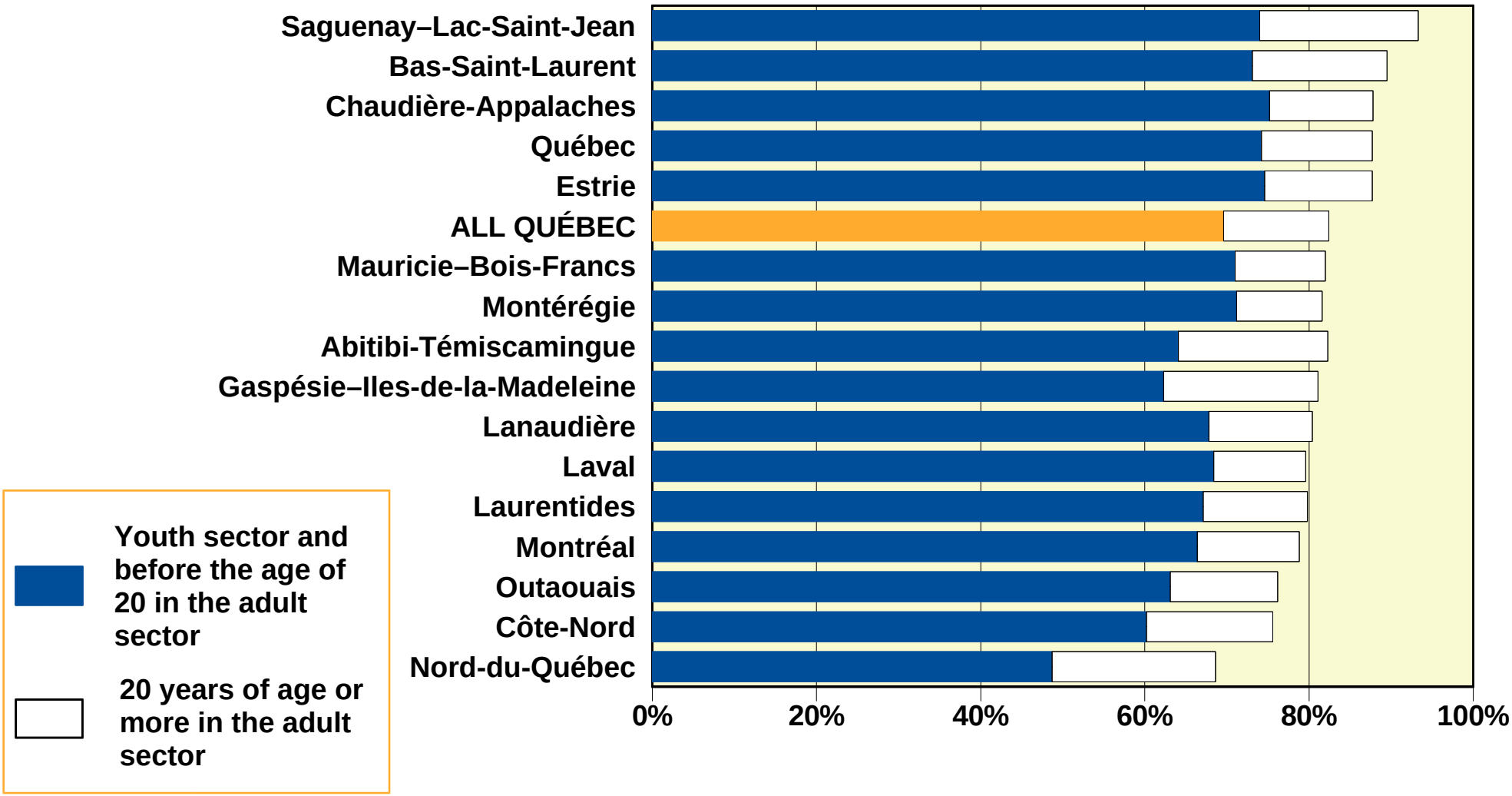
## Table 5.3
# Probability of obtaining a first secondary school diploma, by school administrative region (%)

| | 1985-86 | | | 1996-97[e] | | |
|---|---|---|---|---|---|---|
| | Youth sector and under 20 years of age in the adult sector | Adult sector: 20 years of age or more | Total | Youth sector and under 20 years of age in the adult sector | Adult sector: 20 years of age or more | Total |
| Gaspésie–Îles-de-la-Madeleine | 60.5 | 6.3 | 66.8 | 62.3 | 18.8 | 80.4 |
| Bas-Saint-Laurent | 73.7 | 7.9 | 81.6 | 73.1 | 16.4 | 89.1 |
| Saguenay–Lac-Saint-Jean | 75.5 | 10.9 | 86.3 | 74.0 | 19.3 | 92.7 |
| Québec | 80.2 | 6.8 | 87.0 | 74.2 | 13.5 | 87.7 |
| Chaudière-Appalaches | 74.8 | 6.8 | 81.6 | 75.2 | 12.6 | 87.9 |
| Mauricie–Bois-Francs | 75.6 | 7.9 | 83.5 | 71.0 | 11.0 | 82.2 |
| Estrie | 75.6 | 11.1 | 86.5 | 74.6 | 13.1 | 87.7 |
| Montérégie | 73.0 | 6.5 | 79.6 | 71.2 | 10.4 | 81.9 |
| Montréal | 69.6 | 4.5 | 74.2 | 66.4 | 12.4 | 78.8 |
| Laval | 75.1 | 4.8 | 80.0 | 68.4 | 11.2 | 79.8 |
| Lanaudière | 66.2 | 5.2 | 71.4 | 67.8 | 12.6 | 80.4 |
| Laurentides | 67.5 | 7.3 | 74.7 | 67.1 | 12.7 | 79.7 |
| Outaouais | 61.8 | 4.9 | 66.8 | 63.1 | 13.1 | 76.1 |
| Abitibi-Témiscamingue | 67.3 | 11.6 | 78.7 | 64.1 | 18.2 | 81.7 |
| Côte-Nord | 64.7 | 10.1 | 74.7 | 60.2 | 15.4 | 75.2 |
| Nord-du-Québec | 48.6 | 10.2 | 58.6 | 48.7 | 19.9 | 67.5 |
| **All Québec** | **72.2** | **6.7** | **78.9** | **69.6** | **12.8** | **82.4** |

e: Estimates

Graph 5.3

## Probability of obtaining a first secondary school diploma, by administrative region, 1996-97 (%)



# 5.4 Graduation from Secondary Vocational Education–Youth and Adult Sectors

Based on behaviours observed in 1996-97, 21 out of 100 young Quebecers can expect to obtain a vocational education diploma[1] in secondary school.[2] This group includes 15 persons who already have a first Secondary School Diploma (SSD) in general education. Since the beginning of the vocational education reform in 1987-88, a growing number of persons obtaining a vocational education diploma are doing so after having obtained a diploma in general education.

***The proportion of a generation of students obtaining a secondary school vocational education diploma was 21.1% in 1996-97, 14.6% of whom already had an SSD in general education.***

In 1996-97, the probability of students in the youth sector or those under the age of 20 in the adult sector obtaining a first secondary school diploma in vocational education was 1.6%, whereas it was over 15% in 1977-78. This confirms that obtaining a first diploma in vocational education is becoming increasingly less common and that students in the youth sector or those under the age of 20 in the adult sector who obtain a first secondary school diploma (69.6% in 1996-97) are most likely to do so in general education (see Section 5.2).

The very nature of vocational education diplomas has also changed. Short vocational programs have been phased out in favour of general education. The basic difference between the Secondary School Vocational Diploma (SSVD) and its predecessor, the Long Vocational Diploma, is that the SSVD deals exclusively with vocational education, since all the components of the vocational programs dealing with general education have been transferred to the SSD.

---

1. Figures refer to the probability of obtaining a first secondary school diploma. This rate includes only the first secondary school diplomas obtained in vocational education. This indicator is a measure of the proportion of a generation staying in school until a vocational education diploma is obtained.
2. The diplomas considered here are the Short Vocational Diploma, the Long Vocational Diploma, the Secondary School Vocational Certificate (SSVC), the Secondary School Vocational Diploma (SSVD), the Attestation of Vocational Specialization (AVS), the Vocational Education Certificate (VEC) and other Secondary School Diplomas (SSDs) with mention of vocational specialty.

The difference between boys and girls is much less pronounced than in general education. Nevertheless, more males than females graduate from vocational education.

In 1994-95, 4 617 vocational education diplomas[3] were awarded to students under 20 years of age. The Ministère's objective is to quadruple this number before the year 2000, that is, 18 500 diplomas. In 1995-96, 5 132 diplomas were awarded.

3. All vocational education diplomas are considered here, be they the first, second, third, and so on, earned by a student. The other statistics in this section deal only with the first vocational education diploma, which may be the first diploma earned at the secondary level or the diploma earned after having obtained an SSD in general education.

## Table 5.4
# Probability of obtaining a vocational education diploma, by sector, age and gender (%)

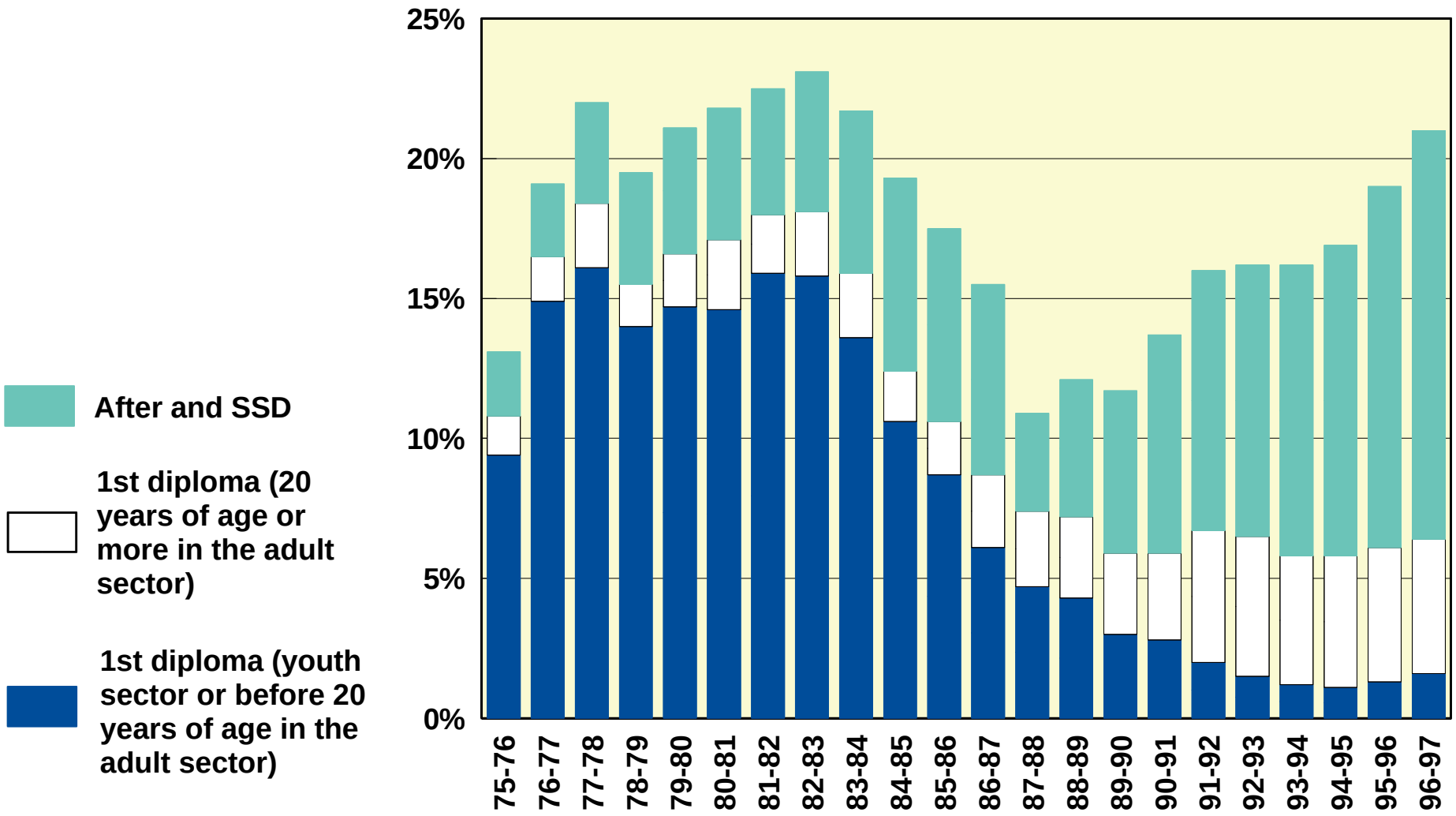
| | 1975-76 | 1985-86 | 1990-91 | 1994-95 | 1995-96 | 1996-97[e] |
|---|---|---|---|---|---|---|
| **Youth sector or before 20 years of age in the adult sector** | | | | | | |
| First diploma | 9.4 | 8.7 | 2.8 | 1.1 | 1.3 | 1.6 |
| After an SSD | 2.1 | 6.3 | 3.9 | 3.0 | 3.4 | 3.9 |
| Total | 11.5 | 15.1 | 6.8 | 4.1 | 4.7 | 5.5 |
| **Adult sector: 20 years of age or over** | | | | | | |
| First diploma | 1.4 | 1.9 | 3.1 | 4.7 | 4.8 | 4.8 |
| After an SSD | 0.2 | 0.6 | 3.9 | 8.1 | 9.5 | 10.7 |
| Total | 1.5 | 2.5 | 6.9 | 12.8 | 14.3 | 15.6 |
| **Both** | | | | | | |
| First diploma | 10.8 | 10.7 | 5.9 | 5.8 | 6.1 | 6.4 |
| After an SSD | 2.3 | 6.9 | 7.8 | 11.1 | 12.9 | 14.6 |
| **Total** | **13.0** | **17.6** | **13.7** | **16.9** | **19.0** | **21.1** |
| Male | 9.6 | 16.9 | 14.0 | 17.2 | 20.5 | 23.0 |
| Female | 16.5 | 18.3 | 13.4 | 16.5 | 17.4 | 19.1 |

e: Estimates

SSD: Secondary School Diploma

Graph 5.4

## Probability of obtaining a vocational education diploma, by sector and age (%)



# 5.5 Graduation from College

In 1995-96, the proportion of a generation who could expect to obtain a first college diploma, be it a Diplôme d'études collégiales (DEC–diploma of college studies) or any other diploma, was 37.7%. The proportion has increased by 15.7 percentage points since 1975-76, when it stood at 22%. The proportion of a generation who are admitted to college education (see Section 2.9) and the proportion of students who obtain a diploma upon leaving college (see sections 3.3 and 3.4) combine to produce this result.

***In 1995-96, the proportion of young Quebecers who could expect to obtain a DEC was 37.3%, a decline of 1.2 percentage points from the previous year.***

The probability of women obtaining a diploma was approximately one and one half times higher than for men (45.6% compared with 30.1%). The gap between the sexes grew steadily during the 1980s. In 1975-76, the probability of women obtaining a college diploma[1] was already 2.7 percentage points higher than for men. Since then, the probability of obtaining a college diploma has continued to rise more sharply for women than for men, and the gap is now 15.5 percentage points.

The greatest growth occurred with the pre-university DEC, as the probability of obtaining this type of diploma rose from 13.6% to 23.8% between 1975-76 and 1995-96, an increase of 10.2 percentage points, compared with a rise of 5.8 percentage points for the technical DEC over the same period. From 1994-95 to 1995-96, there was a drop of 1.5 percentage points with respect to students obtaining a pre-university DEC and a rise of 0.4 percentage points for a technical DEC.

For both types of programs, the number of women graduating between 1975-76 and 1995-96 exceeded the number of men and the gap between the sexes continued to widen. The probability of women obtaining a pre-university DEC increased by 16.2 percentage points, compared with a rise of 4.5 percentage points for men. On the other

1. The probability of obtaining a first college diploma is the measure of the proportion of a generation that stays in school until a college diploma is earned. In this edition, the rates are calculated according to the school year and not the calendar year, as was done in previous editions.

hand, for both sexes the probability of obtaining a technical DEC grew more modestly, although the increase for men was more pronounced in technical education (5.2 percentage points) than in pre-university education (4.5 percentage points). Women outnumbered men by 4.1 percentage points in 1975-76, and by 5.3 percentage points in 1995-96.

The Ministère's objective for the year 2010 is that 60% of young Quebecers obtain a DEC; in 1995-96, the rate was 37.3%. The gap between the actual rate and the objective is greater than the increase recorded over the last 20 years because the probability of obtaining a DEC in 1975-76 was 21%.

## Table 5.5
# Probability of obtaining a first college diploma, by gender and type of education (%)

| | 1975-76 | 1980-81 | 1985-86 | 1990-91 | 1994-95 | 1995-96[e] |
|---|---|---|---|---|---|---|
| **Male** | | | | | | |
| All diplomas[1] | 20.7 | 25.1 | 29.3 | 32.6 | 32.6 | 30.1 |
| **DEC[2]** | **19.8** | **23.7** | **27.8** | **30.7** | **30.7** | **29.7** |
| Pre-university education | 14.4 | 15.2 | 17.6 | 21.2 | 20.0 | 18.9 |
| Technical education | 5.4 | 8.4 | 10.0 | 8.8 | 10.4 | 10.6 |
| **Female** | | | | | | |
| All diplomas[1] | 23.4 | 29.0 | 39.0 | 46.4 | 48.6 | 45.6 |
| **DEC[2]** | **22.3** | **27.8** | **37.5** | **44.7** | **46.6** | **45.2** |
| Pre-university education | 12.8 | 15.4 | 22.6 | 29.2 | 30.9 | 29.0 |
| Technical education | 9.5 | 12.4 | 14.5 | 14.5 | 15.3 | 15.9 |
| **Both** | | | | | | |
| All diplomas[1] | 22.0 | 27.0 | 34.0 | 39.4 | 40.4 | 37.7 |
| **DEC[2]** | **21.0** | **25.7** | **32.4** | **37.6** | **38.5** | **37.3** |
| Pre-university education | 13.6 | 15.3 | 20.1 | 25.1 | 25.3 | 23.8 |
| Technical education | 7.4 | 10.4 | 11.9 | 11.6 | 12.8 | 13.2 |

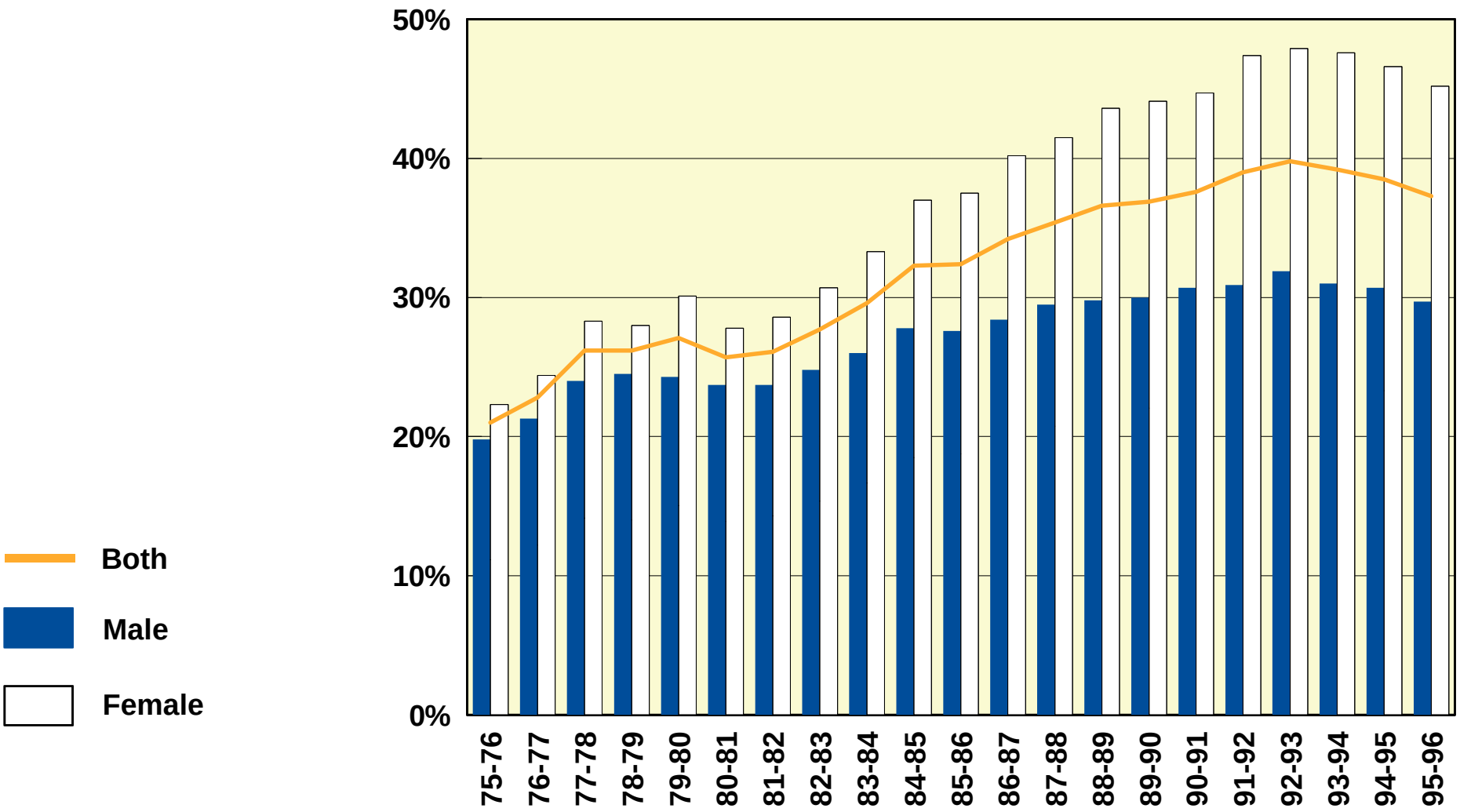
e: Estimates

1. The diplomas considered here are the Diplôme d'études collégiales (DEC–diploma of college studies), the Attestation d'études collégiales (AEC–attestation of college studies) until 1984, the Certificat d'études collégiales (CEC–certificate of college studies) and the Diplôme de perfectionnement de l'enseignement collégial (DPEC–diploma of advanced college studies).

2. These figures include DECs without mention of vocational specialty.

## Graph 5.5

# Probability of obtaining a first DEC, by gender (%)



# 5.6 Graduation from University[1]

***In 1996, 34.8% of women and 22.4% of men could expect to earn a bachelor's degree.***

Based on behaviours observed in 1996, more than one quarter of young Quebecers (28.5%) can expect to obtain a bachelor's degree. For several years, more women than men have enrolled in university (see Section 2.11). The situation for the two sexes has changed drastically since 1976, when the probability of obtaining a bachelor's degree was 13% for women and 16.6% for men. In 1983, the probability for both sexes was more similar, and since then the increase in probability has been in the women's favour. In 1996, the probability of obtaining a bachelor's degree was 34.8% for women and 22.4% for men, or an increase of 21.8 percentage points for women and 5.8 percentage points for men.

The Ministère's objective for the year 2010 is that 30% of young Quebecers obtain a bachelor's degree. The current rate of 28.5% is likely to drop given that since 1992-93, enrolments in programs leading to a bachelor's degree have decreased (see Section 2.11). The probability of obtaining a bachelor's degree is nevertheless higher in Québec than the average of 19.4% recorded for member countries of the Organisation for Economic Co-operation and Development (OECD) in 1995.[2]

The difference between the sexes is much less significant (0.6 percentage points) with regard to their obtaining a master's degree, but could widen in favour of women, given the growing margin with respect to obtaining a bachelor's degree and to enrolment in master's programs (see Section 2.11). The recent rise in enrolment at the master's level, maintained until 1996-97, points to a continued increase in the number of master's degrees awarded for at least a few years to come. In 1996, the probability of graduating with a master's degree was 5.9%, or more

1. Only university degrees (bachelor's, master's and doctoral degrees) awarded by Québec universities are considered here. Degrees earned by Quebecers outside the province are not taken into account.
2. This is the average with respect to the probability of obtaining a first university degree when the short programs (similar to a bachelor's) and long programs (more than four years) are combined. These rates appear in Graph G2.1 in the OECD publication, *Education at a Glance–OECD Indicators* (Paris, 1997).

than double the 2.7% probability for 1976. Here too, the situation of men and women has reversed, with the probability of women obtaining a master's degree climbing from 1.8% to 6.2%; and the probability for men and women was the same in 1993.

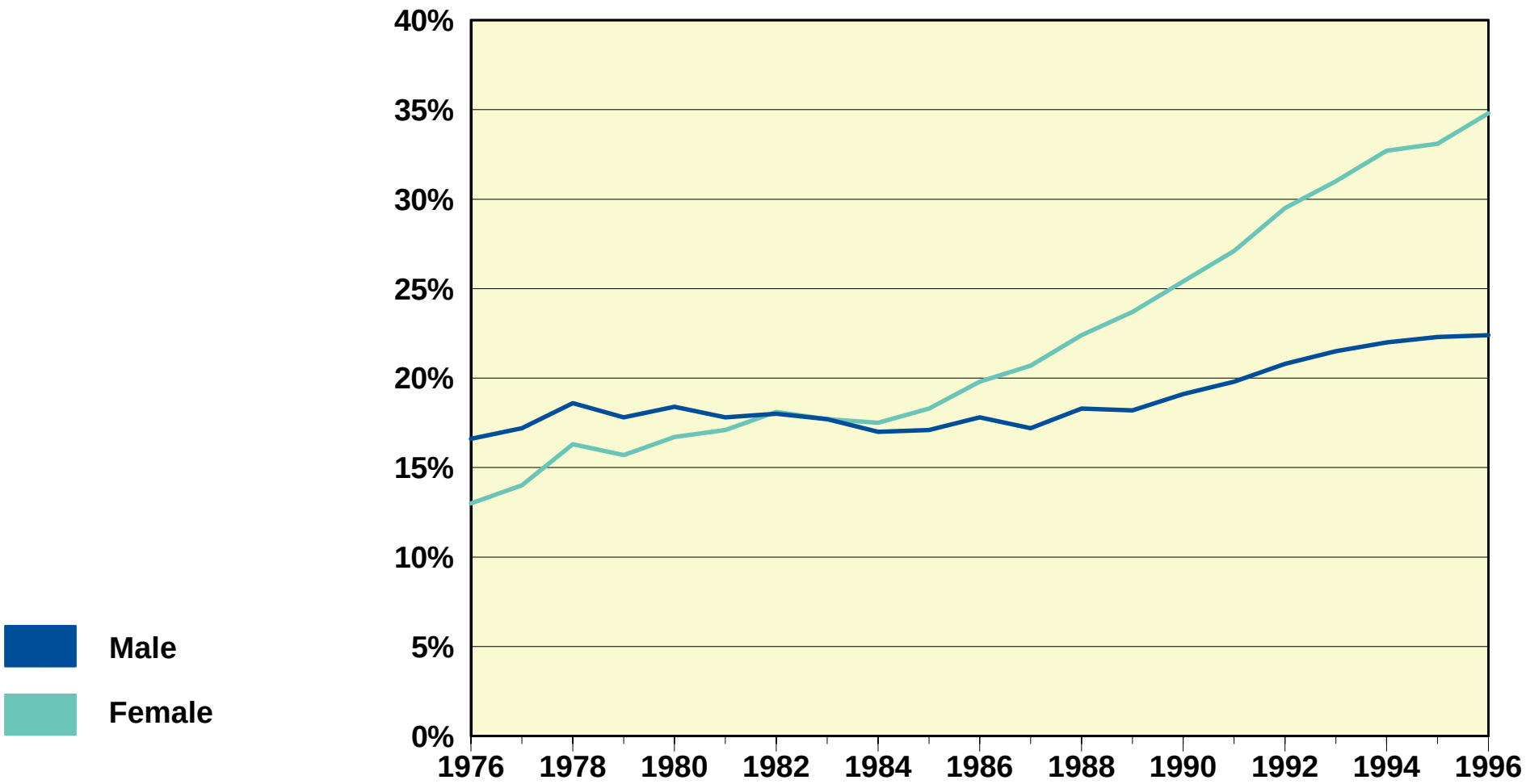
A doctorate is still earned by a minute fraction of the population–only 0.9%. This last phase in the education system is perhaps the only one in which men continue to outnumber women. Figures are, however, minimal for both sexes: 1.2% of men obtain a doctorate, compared with 0.6% of women. In view of developments at the master's level, the pool of aspiring doctoral candidates is also likely to increase for some time to come.

## Table 5.6
# Probability of obtaining a university degree, by gender (%)

| | 1976 | 1981 | 1986 | 1991 | 1995 | 1996 |
|---|---|---|---|---|---|---|
| **Bachelor's degree** | | | | | | |
| Male | 16.6 | 17.8 | 17.8 | 19.8 | 22.3 | 22.4 |
| Female | 13.0 | 17.1 | 19.8 | 27.1 | 33.1 | 34.8 |
| **Both** | **14.8** | **17.6** | **18.8** | **23.4** | **27.6** | **28.5** |
| **Master's degree** | | | | | | |
| Male | 3.5 | 3.6 | 4.4 | 4.4 | 5.4 | 5.6 |
| Female | 1.8 | 2.4 | 3.4 | 4.3 | 5.9 | 6.2 |
| **Both** | **2.7** | **3.0** | **3.9** | **4.3** | **5.7** | **5.9** |
| **Doctorate** | | | | | | |
| Male | 0.6 | 0.6 | 0.7 | 0.9 | 1.1 | 1.2 |
| Female | 0.2 | 0.2 | 0.3 | 0.4 | 0.6 | 0.6 |
| **Both** | **0.4** | **0.4** | **0.5** | **0.6** | **0.8** | **0.9** |

## Graph 5.6

# Probability of obtaining a bachelor's degree, by gender (%)



# 5.7 University Degrees by Field of Study

In 1996, the largest proportion (33.5%) of bachelor's, master's and doctoral degrees issued by Québec universities were earned in the social sciences and humanities, followed by business administration (17.5%), education (15.6%), engineering and architecture (10.6%), health sciences (8.8%), natural sciences (7.2%), mathematics and computer science (3.5%), and law (3.3%).

***In 1996, the proportion of degrees earned in engineering and architecture, natural sciences, and mathematics and computer science accounted for 21.3% of all the bachelor's, master's and doctoral degrees awarded. In these fields of study, more men (67.7%) obtained degrees than women; however, more women earned degrees when the other fields of study are considered or when the fields of study as a whole are taken into account.***

The majority of degree holders were women (57.6%). Women earned 85.9% of the degrees in medicine, 76.6% in education, 64.2% in the social sciences and humanities[1] and 60.2% in law. Men earned the majority of their degrees in engineering and architecture (77.1%), mathematics and computer science (70.8%) and the natural sciences (52.2%).[2]

Compared with 1990, the number of degrees issued by universities in 1996 rose by 18.6%. This percentage is the result of a 28% increase in the number of degrees awarded to women and an 8% increase in the degrees awarded to men.

In the last six years, the breakdown of the degrees awarded according to field of study has changed. For example, the number of degrees in business administration has dropped (by 3.6 percentage points), as has, to a lesser extent, the number of degrees in engineering and architecture, mathematics and computer science, and the natural sciences (from 0.5 to 0.4 percentage points). At the other extreme, the number of degrees awarded in education has risen by 5.7 percentage points, and in the social sciences and humanities, by 1.3 percentage points.

1. The proportion of degrees in engineering and architecture earned by women rose from 16.8% in 1990 to 22.9% in 1996.
2. This refers to students who have earned a university degree (bachelor's, master's or doctoral degree) during the year in question.

For member countries of the Organisation for Economic Co-operation and Development (OECD),[3] degrees earned in the sciences (natural sciences, mathematics and computer science, engineering and architecture) accounted for 28% of the total number of degrees earned in 1995; in Québec, this proportion was 21.3%. The proportion of degrees in law and business administration was 24% for the OECD countries and 20.8% for Québec, whereas the proportion of degrees in health sciences was 11% for the OECD countries and 8.8% for Québec. Degrees in the social sciences and humanities (including education) represented 37% for the OECD countries and 49.1% for Québec.

3. Source: *OECD, Education at a Glance–OECD Indicators* (Paris: 1997). All comparisons between the results presented in this section with those published by the OECD must take into account the fact that differences exist in the methodologies used to obtain the results.

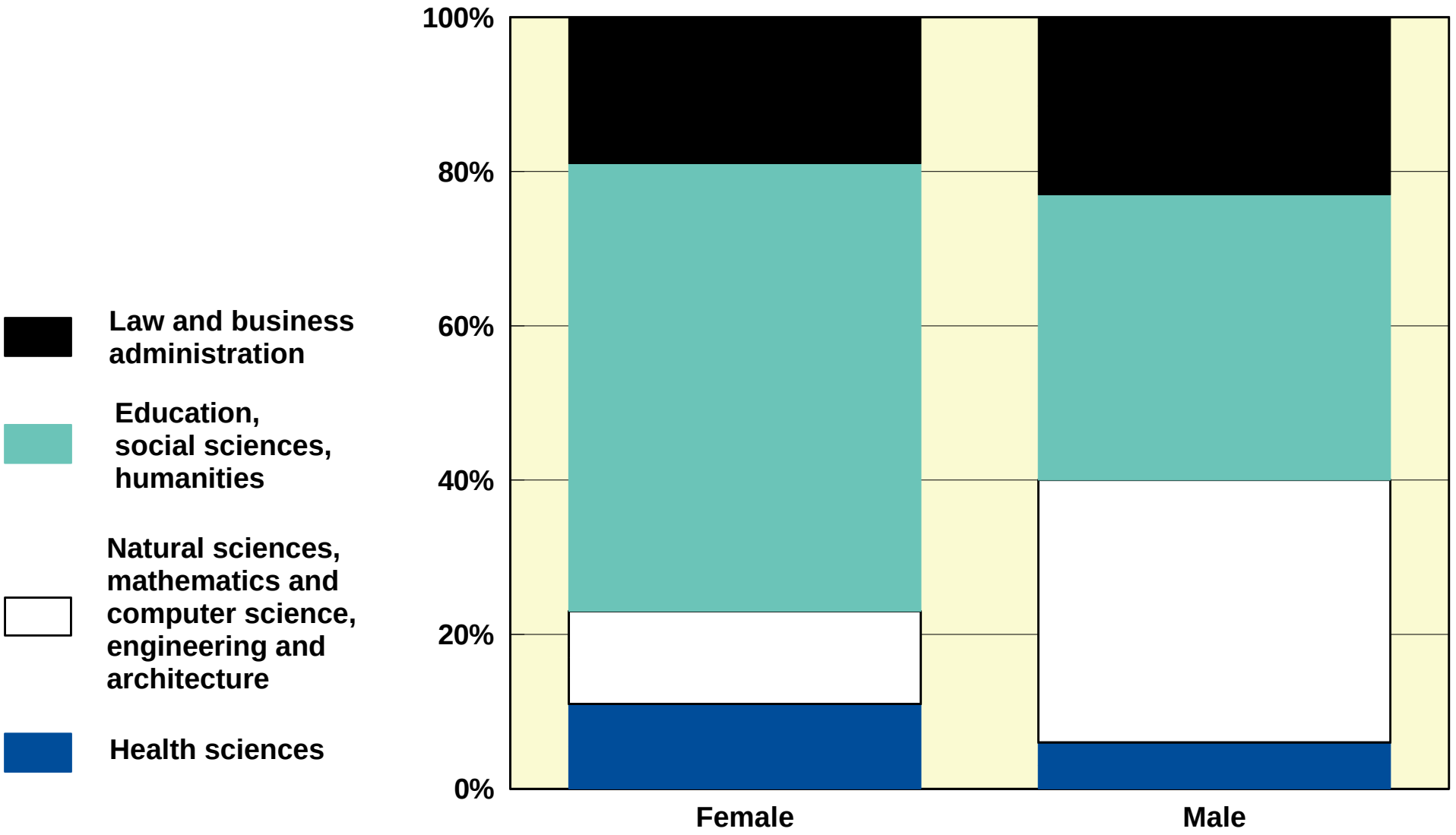
## Table 5.7
# Breakdown of University Degrees, by Field of Study and Gender (%)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|
| Health sciences | 8.7 | 8.5 | 8.4 | 8.7 | 9.0 | 8.9 | 8.8 |
| Natural sciences | 7.6 | 7.3 | 7.0 | 6.5 | 6.8 | 6.3 | 7.2 |
| Mathematics and computer science | 4.0 | 3.8 | 3.6 | 3.8 | 3.5 | 3.6 | 3.5 |
| Engineering and architecture | 11.1 | 11.1 | 11.0 | 10.7 | 11.0 | 11.0 | 10.6 |
| Law | 3.5 | 3.6 | 3.6 | 3.6 | 3.2 | 3.2 | 3.3 |
| Business administration | 21.1 | 21.3 | 21.5 | 21.1 | 19.6 | 18.5 | 17.5 |
| Education | 11.2 | 11.7 | 12.1 | 13.2 | 13.9 | 15.5 | 15.6 |
| Social studies and humanities | 32.8 | 32.7 | 32.8 | 32.4 | 33.0 | 33.0 | 33.5 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |
| Female | 53.4 | 53.8 | 54.6 | 55.3 | 56.3 | 56.4 | 57.6 |
| Male | 46.6 | 46.2 | 45.4 | 44.7 | 43.7 | 43.6 | 42.4 |

1. Only holders of bachelor's, master's or doctoral degrees who obtained their degree in the year in question are considered.

Graph 5.7

# Distribution of university degrees awarded by field of study and gender: 1995 (%)



# Appendix

**Table 1**
Full-time and part-time enrolments, by level of instruction and sector, 1987-88 to 1996-97

**Table 2**
Full-time and part-time enrolments, by category of institution, language of instruction, level of instruction and sector, 1995-96

**Table 3**
Enrolments in secondary vocational education and college technical education, 1990-91 to 1996-97

**Table 4**
Personnel in school boards, CEGEPs and universities calculated according to full-time equivalents and by category of employment, 1986-87 to 1995-96

**Table 5**
Number of diplomas awarded, by level of instruction and type of diploma, 1987 to 1996

**Table 6**
Schooling rates, by age, gender, level of instruction and attendance status, 1995-96 (%)

## Table 1

# Full-time and part-time enrolments, by level of instruction and sector, 1987-88 to 1996-97

| | 1987-88 | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97p |
|---|---|---|---|---|---|---|---|---|---|---|
| **Preschool (4-year-olds)** | **6 220** | **6 614** | **7 009** | **7 171** | **7 598** | **8 002** | **8 151** | **14 023** | **17 284** | **17 294** |
| **Preschool (5-year-olds)** | **90 041** | **87 755** | **88 200** | **86 341** | **85 276** | **83 530** | **85 316** | **89 912** | **95 651** | **96 087** |
| **Elementary Education (youth sector)** | **585 170** | **588 252** | **586 353** | **583 893** | **576 601** | **566 448** | **555 417** | **547 395** | **547 642** | **552 482** |
| **Secondary Education (youth sector)** | **461 016** | **459 039** | **464 122** | **473 634** | **478 571** | **495 339** | **498 306** | **498 105** | **492 629** | **486 696** |
| **Elementary and Secondary Education (adult education[1])** | **229 263** | **234 449** | **238 766** | **238 486** | **248 825** | **223 651** | **222 531** | **223 886** | **226 317** | **221 355** |
| **College[2]** | **233 661** | **235 076** | **231 494** | **235 435** | **242 333** | **251 384** | **254 870** | **247 433** | **241 800** | **236 980** |
| Regular Education | 159 011 | 156 218 | 153 777 | 154 697 | 161 744 | 172 077 | 179 033 | 180 970 | 178 814 | 180 101 |
| Adult Education | 74 650 | 78 858 | 77 717 | 80 738 | 80 589 | 79 307 | 75 837 | 66 463 | 62 986 | 56 899 |
| **University[3]** | **235 059** | **241 033** | **244 534** | **245 433** | **249 048** | **256 565** | **253 468** | **244 725** | **238 053** | **231 131** |
| Undergraduate Studies | 200 585 | 205 554 | 207 838 | 207 928 | 209 825 | 214 856 | 210 761 | 201 493 | 194 292 | 187 571 |
| Graduate Studies | 28 634 | 29 172 | 29 856 | 30 275 | 31 469 | 33 473 | 33 904 | 34 140 | 34 418 | 34 265 |
| Postgraduate Studies | 5 840 | 6 307 | 6 840 | 7 230 | 7 754 | 8 236 | 8 803 | 9 092 | 9 343 | 9 295 |
| **Total** | **1 840 430** | **1 852 218** | **1 860 478** | **1 870 393** | **1 888 252** | **1 884 919** | **1 878 059** | **1 865 479** | **1 859 376** | **1 842 025** |

Sources: Déclaration des clientèles scolaires (DCS), Déclaration des clientèles en formation professionnelle (DCFP), Système d'information du Ministère sur les clientèles adultes (SIMCA), Système d'information financière sur la clientèle adulte (SIFCA), Système d'information et de gestion des données sur l'effectif collégial (SIGDEC), Système de recensement des clientèles universitaires (RECU).

p: Preliminary figures

1. Only persons having taken courses for which credits are earned for certification purposes are included.
2. Fall term. Figures for adult education exclude students enrolled in non-credit programs.
3. Fall term. These figures include resident physicians, some students in college or in Explorations programs; however, they exclude auditors, students from the Collège militaire Royal de Saint-Jean and postuniversity trainees.

## Table 2

# Full-time and part-time enrolments, by category of institution, language of instruction, level of instruction and sector, 1995-96

| | Preschool | | Elementary | Secondary | Elementary and | College[2] | | University[3] | Total |
|---|---|---|---|---|---|---|---|---|---|
| | 4-year-olds | 5-year-olds | Youth Sector | Youth Sector | **Secondary** (Adult Sector[1]) | Regular Education | Adult Education | | |
| **School Boards** | **16 998** | **91 307** | **520 882** | **415 491** | **225 188** | | | | **1 269 866** |
| French | 15 865 | 81 985 | 469 340 | 375 533 | 201 668 | | | | 1 144 391 |
| English | 847 | 8 827 | 50 775 | 39 957 | 23 226 | | | | 123 632 |
| Native languages | 286 | 495 | 767 | 1 | 294 | | | | 1 843 |
| **Private Institutions** | **58** | **4 053** | **24 595** | **75 749** | **730** | **16 608** | **10 744** | | **132 537** |
| French | 31 | 3 396 | 19 853 | 68 822 | 621 | 11 422 | 5 292 | | 109 437 |
| English | 27 | 657 | 4 742 | 6 927 | 109 | 2 671 | 251 | | 15 384 |
| French and English | | | | | | 2 515 | 5 201 | | 7 716 |
| **Public Institutions outside the Jurisdiction of the Ministère de l'Éducation** | **228** | **291** | **2 165** | **1 389** | **399** | **1 802** | **99** | | **6 373** |
| French | 140 | 213 | 1 783 | 1 336 | 399 | 1 713 | 99 | | 5 683 |
| English | 17 | 22 | 96 | 52 | | 89 | | | 276 |
| Native languages | 71 | 56 | 286 | 1 | | | | | 414 |
| **CEGEP and Campuses** | | | | | | **160 404** | **52 143** | | **212 547** |
| French | | | | | | 137 115 | 44 976 | | 182 091 |
| English | | | | | | 23 289 | 7 167 | | 30 456 |
| French and English | | | | | | | | | |
| **Universities and Branches** | | | | | | | | **238 053** | **238 053** |
| French | | | | | | | | 179 887 | 179 887 |
| English | | | | | | | | 58 166 | 58 166 |
| **Total** | **17 284** | **95 651** | **547 642** | **492 629** | **226 317** | **178 814** | **62 986** | **238 053** | **1 859 376** |
| French | 16 036 | 85 594 | 490 976 | 445 691 | 202 688 | 150 250 | 50 367 | 179 887 | 1 621 489 |
| English | 891 | 9 506 | 55 613 | 46 936 | 23 335 | 26 049 | 7 418 | 58 166 | 227 914 |
| Native languages | 357 | 551 | 1 053 | 2 | 294 | | | | 2 257 |
| French and English | | | | | | 2 515 | 5201 | | 7 716 |

Sources: Déclaration des clientèles scolaires (DCS), Déclaration des clientèles en formation professionnelle (DCFP), Système d'information du Ministère sur les clientèles adultes (SIMCA), Système d'information financière sur la clientèle adulte (SIFCA), Système d'information et de gestion des données sur l'effectif collégial (SIGDEC), Système de recensement des clientèles universitaires (RECU).

1. Only persons having taken courses for which credits are earned for certification purposes are included.
2. Fall term. Figures for adult education exclude students enrolled in non-credit programs.
3. Fall term. These figures include resident physicians, some students in college or in Explorations programs; however, they exclude auditors, students from the Collège militaire Royal de Saint-Jean and postuniversity trainees.

## Table 3

# Enrolments in secondary vocational education and college technical education, 1990-91 to 1996-97

| | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 | 1996-97p |
|---|---|---|---|---|---|---|---|
| **SECONDARY EDUCATION[1]** | **104 777** | **91 483** | **84 726** | **85 026** | **86 018** | **86 900** | **87 961** |
| Under 20 years of age[2] | 23 592 | 20 613 | 18 840 | 18 840 | 19 655 | 22 376 | 25 658 |
| 20 years of age or over[3] | 81 185 | 70 870 | 66 546 | 66 546 | 66 363 | 64 524 | 62 303 |
| **REGULAR PATHS** | **54 484** | **57 476** | **58 023** | **58 023** | **59 771** | **66 950** | **72 683** |
| SSVD, SSVC, AVS, VEC | 54 367 | 57 476 | 58 023 | 58 023 | 59 771 | 66 950 | 72 683 |
| Long vocational | 117 | | | | | | |
| Short vocational | | | | | | | |
| **Under 20 years of age[2]** | **19 469** | **17 855** | **17 066** | **16 871** | **18 015** | **20 921** | **24 460** |
| SSVD, SSVC, AVS, VEC | 19 469 | 17 855 | 17 066 | 16 871 | 18 015 | 20 921 | 24 460 |
| Long vocational | | | | | | | |
| Short vocational | | | | | | | |
| **20 years of age or over[3]** | **35 015** | **39 621** | **41 347** | **41 152** | **41 756** | **46 029** | **48 223** |
| SSVD, SSVC, AVS, VEC | 34 898 | 39 621 | 41 347 | 41 152 | 41 756 | 46 029 | 48 223 |
| Long vocational | 117 | | | | | | |
| **OTHER PROGRAMS** | **50 293** | **34 007** | **26 313** | **27 003** | **26 247** | **19 950** | **15 278** |
| Under 20 years of age[2] | 4 123 | 2 758 | 2 207 | 1 609 | 1 640 | 1 455 | 1 198 |
| 20 years of age or over[3] | 46 170 | 31 249 | 24 106 | 25 394 | 24 607 | 18 495 | 14 080 |
| **COLLEGE** | **97 612** | **102 146** | **113 673** | **116 632** | **115 718** | **120 740** | **121 596** |
| Diplôme d'études collégiales (DEC-technical) | 75 513 | 78 055 | 81 712 | 84 913 | 87 367 | 89 278 | 90 339 |
| Certificat d'études collégiales (CEC) | 5 792 | 7 724 | 11 275 | 10 574 | 8 518 | 7 335 | 1 163 |
| Attestation d'études collégiales (AEC) | 16 127 | 16 205 | 20 507 | 20 932 | 19 755 | 24 033 | 30 092 |
| Diplôme de perfectionnement de l'enseignement collégial (DPEC) | 180 | 162 | 179 | 213 | 78 | 94 | 2 |

Sources: Déclaration des clientèles en formation professionnelle (DCFP), Déclaration des clientèles scolaires (DCS), Système d'information financière sur la clientèle adulte (SIFCA), Système d'information du Ministère sur les clientèles adultes (SIMCA), Système d'information et de gestion des données sur l'effectif collégial (SIGDEC).

p: Preliminary figures

SSVD: Secondary School Vocational Diploma; SSVC: Secondary School Vocational Certificate; AVS: Attestation of Vocational Specialization; VEC: Vocational Education Certificate

1. Only persons having taken courses for which credits are earned for certification purposes are included. Persons enrolled in more than one program in the same year are counted only once.
2. Includes students 20 years of age or over in the youth sector.
3. For the adult sector only.

## Table 4

# Personnel in school boards, CEGEPs and universities calculated according to full-time equivalents and by category of employment,[1] 1986-87 to 1995-96

| | 1986-87 | 1987-88 | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 | 1993-94 | 1994-95 | 1995-96 |
|---|---|---|---|---|---|---|---|---|---|---|
| **School Boards** | **N/A** | **N/A** | **N/A** | **102 403** | **105 821** | **107 379** | **108 418** | **107 487** | **106 934** | **105 918** |
| **Youth and Adult Sectors** | | | | | | | | | | |
| Teaching staff | N/A | N/A | N/A | 68 730 | 70 867 | 71 958 | 72 079 | 71 170 | 70 518 | 70 331 |
| Administrative staff | N/A | N/A | N/A | 1 603 | 1 607 | 1 552 | 1 514 | 1 479 | 1 452 | 1 387 |
| School principals | N/A | N/A | N/A | 3 831 | 3 874 | 3 878 | 3 878 | 3 804 | 3 820 | 3 753 |
| Managerial staff | N/A | N/A | N/A | 796 | 822 | 842 | 874 | 859 | 848 | 802 |
| Non-teaching professionals | N/A | N/A | N/A | 4 320 | 4 486 | 4 563 | 4 767 | 4 803 | 4 691 | 4 530 |
| Support staff | N/A | N/A | N/A | 23 123 | 24 165 | 24 586 | 25 306 | 25 372 | 25 605 | 25 115 |
| **CEGEPs** | **18 394** | **18 227** | **18 550** | **18 434** | **19 296** | **19 799** | **20 820** | **21 304** | **21 771** | **21 245** |
| **Regular Education and Adult Education** | | | | | | | | | | |
| Teaching staff | 11 357 | 11 151 | 11 176 | 11 085 | 11 669 | 12 264 | 12 863 | 13 405 | 13 919 | 13 652 |
| Administrative staff | 609 | 608 | 637 | 648 | 662 | 646 | 657 | 667 | 670 | 664 |
| Managerial staff | 288 | 294 | 303 | 304 | 313 | 315 | 323 | 335 | 327 | 307 |
| Non-teaching professionals | 888 | 930 | 1 019 | 1 015 | 1 056 | 1 048 | 1 095 | 1 127 | 1 146 | 1 085 |
| Support staff | 5 252 | 5 244 | 5 415 | 5 382 | 5 596 | 5 526 | 5 882 | 5 770 | 5 709 | 5 537 |
| **Universities[2]** | **29 069** | **29 503** | **29 947** | **30 656** | **31 905** | **32 679** | **33 535** | **33 404** | **33 054** | **32 224** |
| Teaching and research staff | 9 251 | 9 426 | 9 654 | 9 969 | 10 336 | 10 838 | 11 111 | 11 260 | 11 038 | 10 826 |
| Teaching and research assistants | 3 153 | 3 175 | 3 108 | 3 301 | 3 720 | 3 959 | 4 046 | 4 083 | 4 304 | 4 299 |
| Executive personnel | 1 232 | 1 265 | 1 284 | 1 305 | 1 308 | 1 343 | 1 347 | 1 348 | 1 305 | 1 291 |
| Managerial staff | 540 | 540 | 569 | 597 | 601 | 734 | 615 | 603 | 647 | 491 |
| Non-teaching professionals | 2 844 | 2 899 | 3 039 | 3 148 | 3 266 | 3 231 | 3 607 | 3 557 | 3 496 | 3 487 |
| Support staff | 12 049 | 12 198 | 12 293 | 12 336 | 12 674 | 12 574 | 12 809 | 12 553 | 12 264 | 11 830 |

Sources: Personnel des commissions scolaires (PERCOS II), Système d'information sur le personnel des organismes collégiaux (SPOC-RFA), Système d'information financière des universités (SIFU).

N/A: Figures are not available.

1. All personnel activities carried out during the school year are included in the calculation of full-time equivalents for each category of employment.

2. Funds with or without restrictions. Excludes courses given by lecturers, those given in addition to regular course loads by regular professors and those given by individuals receiving honoraria or on contract. Figures for 1995-96 are preliminary.

## Table 5
# Number of diplomas awarded, by level of instruction and type of diploma, 1987 to 1996

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Secondary Education[1]** | **89 251** | **80 042** | **77 784** | **81 554** | **89 585** | **102 822** | **111 100** | **102 928** | **104 221** | **110 777** |
| General education | 62 504 | 63 762 | 61 521 | 64 691 | 69 676 | 78 688 | 79 236 | 80 952 | 81 700 | 86 282 |
| Vocational education | 26 747 | 16 280 | 16 263 | 16 863 | 19 909 | 24 134 | 31 864 | 21 976 | 22 521 | 24 495 |
| **College** | 40 010 | 40 992 | 40 843 | 41 303 | 41 769 | 43 268 | 44 603 | 44 511 | 42 611 | 38 746 |
| **All DECs** | **38 065** | **39 034** | **39 227** | **39 456** | **39 493** | **40 135** | **41 198** | **41 422** | **40 949** | **38 528** |
| DEC (pre-university education) | 24 086 | 24 812 | 24 851 | 24 992 | 25 244 | 25 403 | 24 934 | 25 757 | 25 269 | 23 266 |
| DEC (technical education) | 13 275 | 13 409 | 13 495 | 13 632 | 13 196 | 13 509 | 14 736 | 14 944 | 15 399 | 15 134 |
| DEC without mention of specialty | 704 | 813 | 881 | 832 | 1 053 | 1 223 | 1 528 | 721 | 281 | 128 |
| AEC, CEC and DPEC[2] | 1 945 | 1 958 | 1 616 | 1 847 | 2 276 | 3 133 | 3 405 | 3 089 | 1 662 | 218 |
| **University[3]** | **43 130** | **45 497** | **46 756** | **48 728** | **51 329** | **53 822** | **55 279** | **56 819** | **56 021** | **55 189** |
| Bachelor's degree | 23 653 | 24 593 | 24 850 | 25 526 | 26 911 | 27 683 | 28 404 | 28 968 | 28 932 | 29 602 |
| Master's degree | 4 551 | 4 666 | 4 905 | 5 166 | 5 404 | 5 823 | 6 082 | 6 604 | 6 414 | 6 547 |
| Doctorate | 595 | 608 | 696 | 712 | 810 | 915 | 891 | 959 | 1 037 | 1 087 |
| Certificates and diplomas | 14 331 | 15 630 | 16 305 | 17 324 | 18 204 | 19 401 | 19 902 | 20 288 | 19 638 | 17 953 |

Sources: Système de sanction des études appliquée au ministère de l'Éducation (SESAME), Sanction des adultes en formation générale (SAGE), Système de la sanction des études au collégial (SSEC), Système de recensement des clientèles universitaires (RECU).

DEC: diplôme d'études collégiales; AEC: attestation d'études collégiales; CEC: certificat d'études collégiales; DEPC: diplôme de perfectionnement de l'enseignement collégial.

1. 1986-87 to 1995-96. Following the vocational education reform, approximately 8 800 students with a CEP (Certificat d'études professionnelles) also received an SSVD in 1993.
2. Since 1994, there have been no new enrolments in programs leading to these types of certification.
3. These figures exclude diplomas awarded by the Collège militaire Royal de Saint-Jean.

## Table 6

# Schooling rates,[1] by age, gender, level of instruction and attendance status, 1995-96 (%)

| | Preschool and Elementary Education | Secondary Education | | College | | University | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time | All attendance statuses |
| **4-year-olds** | | | | | | | | | | |
| Male | 18,4 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 18,4 | 0,0 | 18,4 |
| Female | 19,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 19,0 | 0,0 | 19,0 |
| Both | 18,7 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 18,7 | 0,0 | 18,7 |
| **5-year-olds** | | | | | | | | | | |
| Male | 97,4 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 97,4 | 0,0 | 97,4 |
| Female | 98,1 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 98,1 | 0,0 | 98,1 |
| Both | 97,7 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 97,7 | 0,0 | 97,7 |
| **15-year-olds** | | | | | | | | | | |
| Male | 0,0 | 95,1 | 0,2 | 0,1 | 0,0 | 0,0 | 0,0 | 95,2 | 0,2 | 95,3 |
| Female | 0,0 | 95,4 | 0,1 | 0,1 | 0,0 | 0,0 | 0,0 | 95,5 | 0,1 | 95,6 |
| Both | 0,0 | 95,2 | 0,1 | 0,1 | 0,0 | 0,0 | 0,0 | 95,3 | 0,2 | 95,5 |
| **16-year-olds** | | | | | | | | | | |
| Male | 1,1 | 91,0 | 2,2 | 1,4 | 0,0 | 0,0 | 0,0 | 93,6 | 2,2 | 95,8 |
| Female | 0,5 | 92,3 | 1,5 | 1,9 | 0,1 | 0,0 | 0,1 | 94,7 | 1,6 | 96,4 |
| Both | 0,8 | 91,6 | 1,8 | 1,7 | 0,0 | 0,0 | 0,0 | 94,1 | 1,9 | 96,1 |
| **17-year-olds** | | | | | | | | | | |
| Male | 1,9 | 39,1 | 10,0 | 37,3 | 0,1 | 0,3 | 0,0 | 78,6 | 10,1 | 88,7 |
| Female | 0,8 | 29,1 | 7,7 | 53,0 | 0,1 | 0,4 | 0,0 | 83,4 | 7,9 | 91,3 |
| Both | 1,4 | 34,2 | 8,9 | 44,9 | 0,1 | 0,3 | 0,0 | 80,9 | 9,0 | 89,9 |
| **18-year-olds** | | | | | | | | | | |
| Male | 2,0 | 22,8 | 9,8 | 39,8 | 0,8 | 1,9 | 0,1 | 66,5 | 10,7 | 77,2 |
| Female | 0,9 | 16,3 | 7,4 | 54,0 | 0,7 | 2,7 | 0,1 | 73,9 | 8,2 | 82,1 |
| Both | 1,4 | 19,6 | 8,6 | 46,7 | 0,7 | 2,3 | 0,1 | 70,1 | 9,5 | 79,6 |
| **19-year-olds** | | | | | | | | | | |
| Male | 1,7 | 15,8 | 7,8 | 28,1 | 2,2 | 10,6 | 0,3 | 56,2 | 10,3 | 66,5 |
| Female | 0,8 | 11,1 | 5,8 | 33,9 | 2,6 | 17,9 | 0,6 | 63,7 | 9,0 | 72,7 |
| Both | 1,3 | 13,5 | 6,8 | 30,9 | 2,4 | 14,2 | 0,5 | 59,8 | 9,7 | 69,5 |

1. Schooling rates are calculated by dividing the school population of a given age as at September 30, 1995, by the population of the same age on the same date. The schooling rates for 4- and 5-year-olds differ from the results presented in Section 2.3 (see the notes in that section referring to this matter).

## Table 6 (cont.)

# Schooling rates, by age, gender, level of instruction and attendance status, 1995-96 (%)

| | Preschool and Elementary Education | Secondary Education | | College | | University | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Full time | Part time | Full time | Part time | Full time | Part time | Full time | Part time | All attendance statuses |
| **20-to-24-year-olds** | | | | | | | | | | |
| Male | 1,1 | 7,0 | 4,7 | 8,9 | 1,9 | 14,1 | 3,1 | 31,2 | 9,6 | 40,8 |
| Female | 0,6 | 5,2 | 3,3 | 9,0 | 2,5 | 18,8 | 4,6 | 33,7 | 10,3 | 44,0 |
| Both | 0,9 | 6,1 | 4,0 | 9,0 | 2,2 | 16,4 | 3,8 | 32,4 | 10,0 | 42,4 |
| **25-to-29-year-olds** | | | | | | | | | | |
| Male | 0,8 | 2,6 | 2,4 | 1,7 | 1,0 | 4,0 | 3,5 | 9,1 | 6,8 | 16,0 |
| Female | 0,6 | 2,4 | 1,8 | 1,8 | 1,6 | 3,6 | 4,9 | 8,3 | 8,3 | 16,7 |
| Both | 0,7 | 2,5 | 2,1 | 1,8 | 1,3 | 3,8 | 4,2 | 8,7 | 7,6 | 16,3 |
| **30-to-39-year-olds** | | | | | | | | | | |
| Male | 0,6 | 1,6 | 1,7 | 0,7 | 0,7 | 1,0 | 2,2 | 4,0 | 4,6 | 8,6 |
| Female | 0,5 | 1,8 | 1,5 | 0,9 | 1,5 | 0,9 | 3,1 | 4,1 | 6,2 | 10,3 |
| Both | 0,5 | 1,7 | 1,6 | 0,8 | 1,1 | 1,0 | 2,6 | 4,0 | 5,4 | 9,4 |
| **40-to-49-year-olds** | | | | | | | | | | |
| Male | 0,3 | 0,9 | 1,1 | 0,3 | 0,6 | 0,3 | 1,4 | 1,8 | 3,0 | 4,8 |
| Female | 0,4 | 1,1 | 1,1 | 0,5 | 1,2 | 0,4 | 2,6 | 2,4 | 4,9 | 7,3 |
| Both | 0,4 | 1,0 | 1,1 | 0,4 | 0,9 | 0,3 | 2,0 | 2,1 | 4,0 | 6,1 |
| **50-to-59-year-olds** | | | | | | | | | | |
| Male | 0,2 | 0,3 | 0,5 | 0,1 | 0,3 | 0,1 | 0,4 | 0,7 | 1,3 | 2,0 |
| Female | 0,3 | 0,3 | 0,5 | 0,1 | 0,5 | 0,1 | 0,9 | 0,9 | 1,8 | 2,7 |
| Both | 0,3 | 0,3 | 0,5 | 0,1 | 0,4 | 0,1 | 0,7 | 0,8 | 1,6 | 2,4 |
| **60 years of age or over** | | | | | | | | | | |
| Male | 0,1 | 0,0 | 0,1 | 0,0 | 0,1 | 0,0 | 0,1 | 0,2 | 0,2 | 0,4 |
| Female | 0,3 | 0,0 | 0,1 | 0,0 | 0,1 | 0,0 | 0,1 | 0,3 | 0,2 | 0,6 |
| Both | 0,2 | 0,0 | 0,1 | 0,0 | 0,1 | 0,0 | 0,1 | 0,3 | 0,2 | 0,5 |