

6. Participation and Access

6.1 Where do high school graduates go the year following graduation?

In 1997, the Department of Education carried out the second *High School Follow-up Study*. High school graduates from June 1996 were surveyed to determine what they had done following graduation, how many of them had proceeded to universities or colleges outside the Province and why some of them had chosen not to enrol in a postsecondary program in the year following high school graduation. Figure 6.1.1 provides a summary of the post-high school destination of 6,392 of the 7,251 high school graduates of 1996. This information was obtained either by matching high school and postsecondary records or through telephone interviews with the graduates themselves. It was not, however, possible to track down the remaining 859 students.

The largest group of the 1996 high school graduates (36.7%) was attending Memorial University, and a further 7.3% of the graduates were attending university outside the Province. Memorial has subsequently announced a new policy of offering scholarships to Grade 12 students earlier in the year in an attempt to compete with mainland universities for top calibre students (see also Section 6.5).

Just under 12% of the graduates reported that they were pursuing courses in public colleges within the Province while another one percent were attending similar institutions outside the Province. Another group

of graduates reported that they were attending private colleges either within (12.7%) or outside (0.6%) the Province.

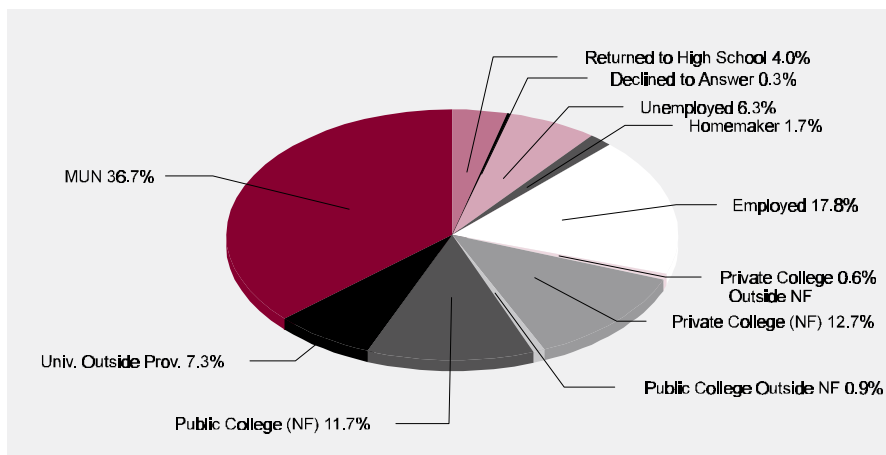
Slightly over one-third of these graduates that were contacted were not attending any form of postsecondary institution at the time of the survey. A small percentage (4.0%) had returned to school to upgrade their high school results, 17.8% found employment, 1.7% were homemakers and 6.3% were unemployed. A very small percentage (0.3%) declined to respond to the survey.

Those high school graduates who did not enrol in any form of postsecondary education upon graduation from high school were asked to indicate why. Figure 6.1.2 shows a breakdown of the 2,111 graduates' responses. A significant

number of graduates (13.4%) were back in school upgrading their marks, presumably in order to enter a postsecondary program at a later time. A further 14.3% reported that they were just not interested in postsecondary education and an additional 25.1% had succeeded in finding work.

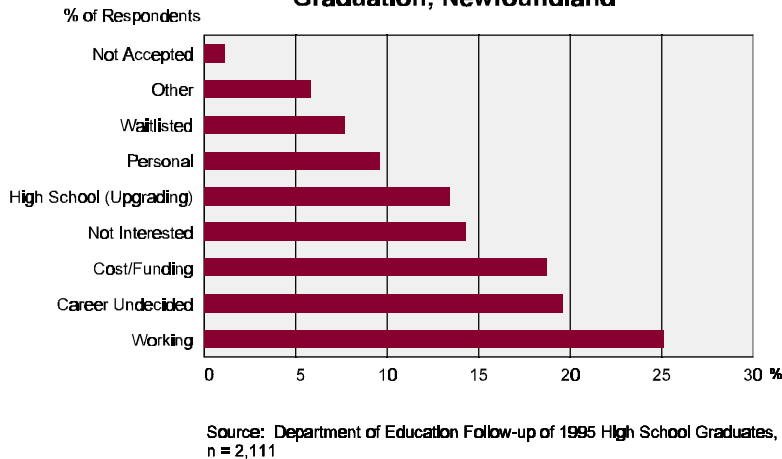
The cost of further education and the availability of funding was reported by 18.7% of those not pursuing postsecondary studies as being the factor that influenced their decision not to attend. This figure represented an increase over the results from the 1995 follow-up, when 16.5% of high school graduates cited cost as the reason they were not continuing their studies. Failure to meet entrance requirements, or not being accepted into the program was the reason given by 1.1% of graduates

Figure 6.1.1: Destination of 1996 High School Graduates during the Year Following Graduation, Newfoundland



Note: 6,392 out of a total of 7,251 high school graduates identified by matching databases or contacted in a telephone survey conducted from August to October 1997.

Figure 6.1.2: Reasons why 1996 High School Graduates did not Attend Postsecondary Institutions during the Year Following Graduation, Newfoundland



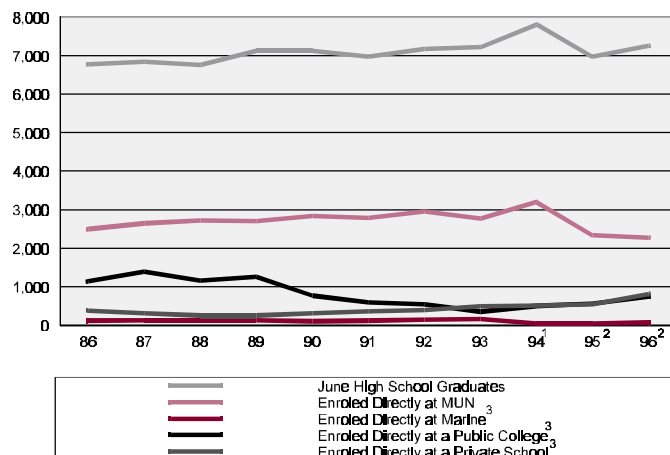
while 7.7% indicated that they were waitlisted for future programs.

A second method of monitoring the destinations of high school graduates is to examine postsecondary enrolments by institutional type relative to the number of graduates each year as illustrated by the line graph, Figure 6.1.3. Tracking exiting high school graduates over time shows a gradual increase in their number over the period 1986 to 1998. The year 1994 shows an unusual peak in the number of graduates as a result of the cancellation of public examinations in that year. Projections forecast a drop in the size of the Grade 12 graduating class well into the twenty-first century as described in Section 1.4 of this report. Declining enrolments have been occurring in the size of the Grade 12 cohort since 1991/92, however, improvements in the graduation rate have offset any decline in the size of the Grade 12 graduating class.

Enrolment in postsecondary institutions directly from high school follows an interesting trend. Between 1986 and 1989 there were

modest increases in enrolment at both Memorial and the public colleges resulting from increased output from the K-12 system. After 1989, however, enrolment in the public colleges directly from high school dropped significantly and has not entirely recovered. Prior to 1990 enrolment in the public colleges directly from high school exceeded 1,100 students. From 1990 onward enrolment dropped markedly so that by 1993 the public colleges' share of new graduates was only 4.9%, down from a high of 18.5% in 1987. As of fall 1996, the public colleges' share increased to 11.7% of contacted graduates. Two factors contributed to the decline observed in the early 1990s: the difficulty new graduates had in securing places in their programs of choice and the rise of the private college sector. In the early 1990s, the public colleges had lengthy

Figure 6.1.3: Enrolment in Postsecondary Institutions directly from High School, Newfoundland, 1986-1996



Source: Department of Education and Centre for Institutional Analysis and Planning, Memorial University, 1996

1. In 1994, the increase in the number of June high school graduates was largely due to the cancellation of public examinations. The drop in Marine enrolment was due to the transfer of technology programs to the public colleges.
2. 1995 and 1996 data based on 1995 and 1996 High School Follow-up Surveys.
3. 1986 to 1994 data measured by projected headcount based on 100% response rate to the enrolment survey in the following program types: pre-employment, pre-apprenticeship, diploma programs and post-diploma/degree certificates.

waiting lists for certain programs. Students who were sponsored by a variety of federal government training support programs administered through HRDC such as NCARP and later TAGS were, to some degree, in direct competition for limited seats in certain popular programs. Students coming out of high school could not get the programs they wanted. Many of these recent high school graduates enrolled in programs in the private colleges where there were no ceilings on enrolment. In recent years, the number of private college campuses grew and students were and continue to be aggressively pursued by the private college industry. In the end, the lack of space in public college programs coupled with aggressive advertising campaigns on the part of the private colleges meant many of those who might have otherwise attended a public college instead went into the private college system. Figure 6.1.3 also tracks enrolment in the private colleges directly from high school over the same period. Enrolment of new graduates has grown from approximately 5% in the late 1980s to 12.7% of contacted graduates in 1996.

In the meantime enrolment at Memorial continued to grow until 1995 when the university began to experience a drop in enrolment directly from high school. New more stringent entrance requirements may be responsible for the 26.8% decline in enrolment directly from high school over 1994.

6.2 How has the profile of postsecondary enrolment changed over time?

The enrolment profile of full-time students in postsecondary

institutions has undergone significant changes over the past decade, in both the number of students seeking higher education and the institutions they choose to attend. Compared to 20,280 students in 1986/87, 32,275 students were in full-time attendance in some form of postsecondary education program in 1995/96, an increase of 59.1% over the ten-year period. The relative size of the pie charts in Figure 6.2.1 illustrates the increase in enrolment.

There has definitely been a new culture emerging in this province, one which strongly encourages higher education for young Newfoundlanders. This collective movement has resulted in increased postsecondary enrolment.

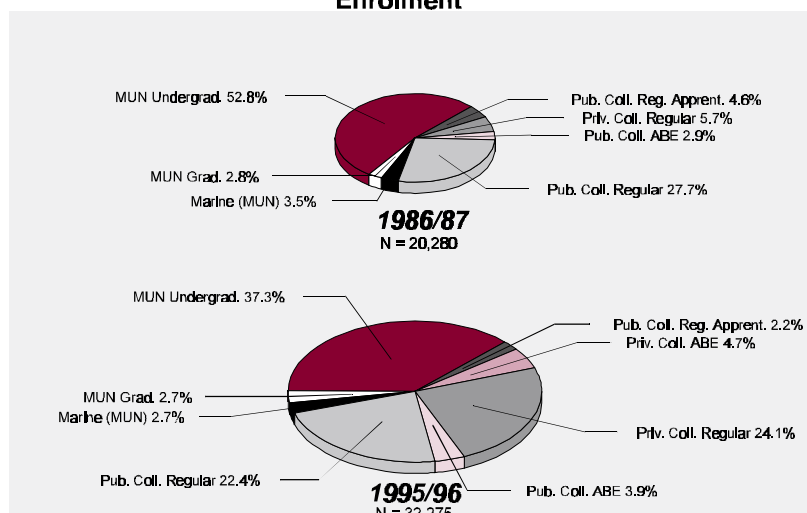
As graduation rates in the K-12 sector and access to higher education opportunities improved, more Newfoundlanders went on to postsecondary studies. Over the past decade employment

opportunities for those with just a high school education have been severely limited. When jobs are available they are generally minimum-wage positions with little opportunity for advancement. In addition, high schools have promoted postsecondary attendance with renewed enthusiasm.

Opportunities to study full-time through federally-sponsored education and training programs have also contributed to the increase. In 1994/95 the "active programming" component of the TAGS funding was at its peak. Some 15,500 TAGS clients enrolled in some form of education or training between 1994 and 1997. Other sponsored-training programs led to increased college enrolment.

Examining the share of postsecondary student enrolment held by each type of institution offering postsecondary programs, it is evident the private college system has emerged as a significant entity

Figure 6.2.1 Overview of Full-Time Postsecondary System Enrolment



Source: Department of Education and MUN Fact Book, 1996

in the higher education sector. The private colleges, with only 5.7% of total student enrolment in 1986/87, accounted for 28.8% of full-time postsecondary students in 1995/96. Although a large proportion of their enrolment was in the area of Adult Basic Education (ABE), a program that was not offered in the private colleges in 1986/87, enrolment in regular non-ABE programs also increased by over 500% over the ten-year period. The overall enrolment of students in the private colleges including ABE programs was approximately eight times the enrolment in 1986/87.

While in actual numbers, enrolment increased for Memorial and the public college system between 1986/87 and 1995/96, the relative share of total student enrolment dropped substantially. Memorial University (including the Marine Institute) accounted for 59.1% of postsecondary students in 1986/87 in undergraduate and graduate programs. By 1995/96 Memorial's share had declined to 42.7%. Part of the explanation for this is likely to be related to the fact that a significant part of the overall enrolment boom is composed of federally-sponsored students who were displaced fishery workers. The vast majority of these learners enrolled in non-university programs, such as ABE, and a host of shorter marine-related programs and courses. In addition, it may be suggested that the increase in enrolment is largely composed of a pool of students that would not typically have considered university as a postsecondary option. The "postsecondary culture" alluded to earlier may be attracting students who, in the past, would likely not have enrolled in any postsecondary programs.

Total enrolment in the public colleges showed a 29.1 % increase in actual numbers over the ten-year period, however, like the university, its enrolment share dropped. Compared to 1986/87 when the public colleges had a 35.2% share of total postsecondary enrolment, the public system held only 28.6% of students in 1995/96. The overall decrease was relatively small, owing largely to a substantial gain in the number of ABE students in the public system. Its share of regular program enrolment, however, decreased from 83.0% in 1986/87 to 48.2% in 1995/96, likely a direct result of the advent of the private college alternative.

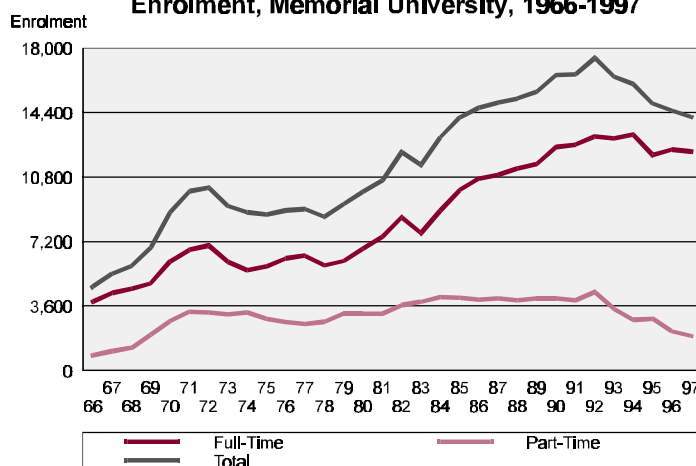
While the private college system made substantial inroads in postsecondary education in this province the public system began a period of relative decline. Why has this situation occurred? Unlike Memorial University, the public college system offers similar programs to the private colleges so they are, in essence, serving the

same pool of students. Reasons for the shift in the proportion of students at the public colleges have been discussed at length elsewhere in this report. They are related to the displacement of recent graduates of the K-12 system by clients of federally-sponsored programs and the resulting waiting lists for preferred programs.

6.3 How has university enrolment changed over time?

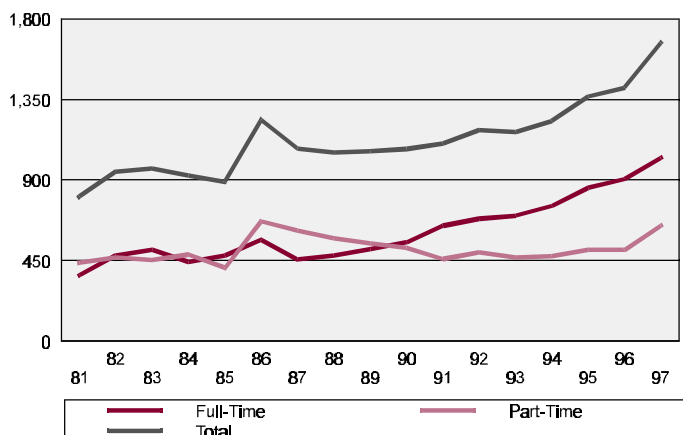
Total undergraduate enrolment at Memorial University increased nearly fourfold over the past 30 years. Since 1966 when the combination of full-time and part-time enrolment stood at 4,674, the number of students attending Memorial steadily increased until 1992 when it peaked at 17,453 students. Since 1992 enrolment has declined by 18.9% and, as described in Section 1.4, is likely to continue to decline well into the next century.

Figure 6.3.1: Full-Time, Part-Time and Total Undergraduate Enrolment, Memorial University, 1966-1997



Source: Centre for Institutional Analysis and Planning, Memorial University, 1996
 Note: Based on fall semester enrolment. Beginning in 1996, work-term students are included as full-time. Does not include post-graduate enrolment of 193 (medical interns and residents).

Figure 6.3.2: Full-Time, Part-Time and Total Graduate Student Enrolment, Memorial University, 1981-1997



Source: Centre for Institutional Analysis and Planning, Memorial University, 1996

Note: Based on fall semester enrolment. Beginning in 1996, work-term students are included as full-time. Does not include post-graduate enrolment of 193 (medical interns and residents).

The largest enrolment gains for Memorial were made during the second half of the 1960s when the average increase was nearly 18% a year. During the 1970s and 1980s, enrolment increases were more modest, at an annual average of 1.5% percent and 5.3% respectively. The decline since 1992 has averaged 4.1% per year for undergraduate programs. In contrast there was an average annual gain of 7.4% for graduate students (Figures 6.3.1 and 6.3.2).

The pattern of increases and declines over the 30 years was consistent. About every ten years a drop in enrolment occurred to break a pattern of otherwise regular increases. The fluctuating pattern of enrolment during most of the 1970s may have been influenced by the oil shortage induced inflation that disrupted western economies in general during the decade. The decline in 1983/84 was caused by the introduction of Grade 12 into the Newfoundland secondary school system, and the 1990s decline is a

result of several factors. Firstly, the enrolment decline coincides with an significant overall decrease in the number of secondary school graduates since 1994, a direct result of changing demographics in this province. For this reason, the decline is likely to be more prevalent in the undergraduate population. Indeed enrolment in graduate programs is still on the increase. A second factor relates to an increase in the entrance requirements to Memorial whereby new students must have a 70% average to enter - up from the previous 60%. These contributors, together with an increasing number of Newfoundland students attending university outside the Province explain this change. Clearly, the most significant factor is the decline in the K-12 student population which will cause a major decline in the number of new entrants to Memorial directly from high school in the next 10-15 years.

6.4 How does university and public college participation in Newfoundland compare nationally?

Postsecondary participation can be defined in any number of ways. Deciding on an appropriate definition of participation is difficult because no "standard definitions" have been established as they have been for the primary/elementary/secondary sector. Different methods of calculation for the same data will yield rates that vary greatly from one another. For example, we may express participation as a percentage of the population aged 17-24, 18-30 or some other arbitrary population range. The key is to examine participation using the same definition in relation to past years to give a historical perspective and to examine the indicator in relation to participation rates nationally.

Participation in the context of this document is defined as the number of enrolled full-time undergraduate university or public college students as a percentage of the general population of 18-24 year-olds in the Province. The Canadian participation rates are similarly defined. Reasons for selecting this definition are largely based on precedent. The Postsecondary Indicators '95 edition of this report used the 18-24 year population as the denominator for this calculation. Federal HRDC researchers have also used this denominator in the past. However, it should be noted that because of limitations in the availability of data for Canada, all students are included in the participation rates developed for this report, not just those aged 18-24.

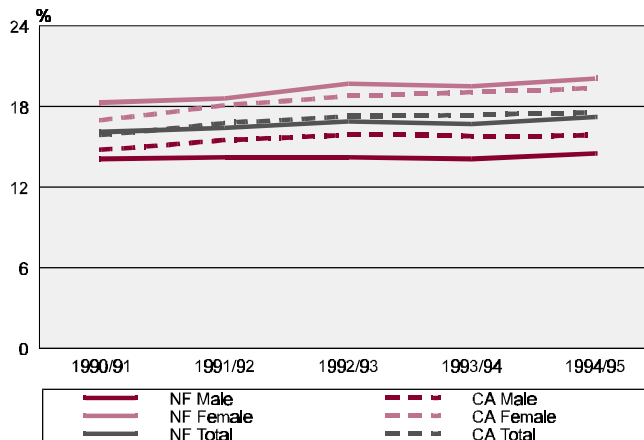
University Participation

Figure 6.4.1 depicts full-time university participation rates for Newfoundland and Canada for the period 1990/91 to 1994/95, by gender. Newfoundland participation increased from 16.1% to 17.2% over the period, an actual increase of 6.8%. A comparison of the total participation rate for Newfoundland with the Canadian average shows only marginal differences over the five-year period. The Newfoundland rate exceeded the national university participation rate in 1990/91. The following year, however, the national rate rebounded so that by the end of the period, Canada's participation rate was 17.6%, compared to the 17.2% rate for Newfoundland.

Participation of female university undergraduates in Newfoundland has continued to exceed the national figures since 1985-86. Over the period 1990/91 to 1994/95 female participation rates were consistently higher than rates for Canada as a whole. The corresponding rates for males in this province lag behind male participation nationally.

Within the Province, the pattern of participation of males and females is similar to the pattern observed for the last ten years. Since about 1984 female participation rates have consistently surpassed the rates for males. Over the five-year period shown in Figure 6.4.1 rates for females have been 30-39% higher than rates for males and the gap is definitely widening. At the national level, university participation of females also exceeds that of males although differences in rates between males and females have

Figure 6.4.1: Full-Time Undergraduate Participation Rate¹ by Gender, Newfoundland and Canada, 1990/91 - 1994/95



Source: Statistics Canada, Catalogue nos. 81-229-XPB (1996), 81-229-XPB (1995) and CANSIM Database, Statistics Canada (Ottawa)

1. Defined as full-time undergraduate enrolment as a percentage of the population aged 18-24.

not been as great as for this province. Nationally, on average over the five-year period the female participation rate was 18.6% higher than the rate for males, and difference is increasing. In 1994/95, for example, university participation of females was 22% higher than that of males.

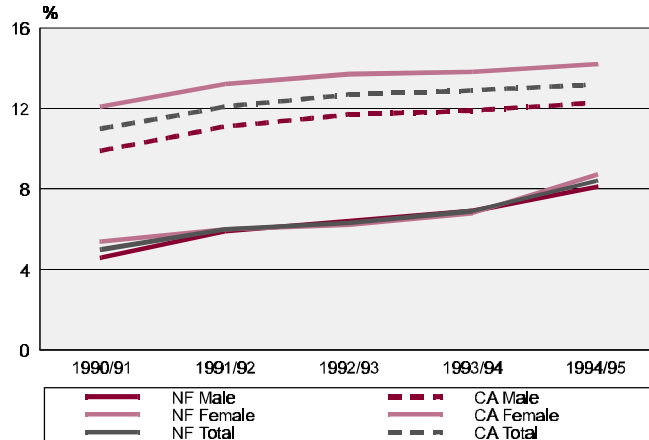
Public College Participation

Because of differences in the way college-level participation has been defined by researchers and educators, there has been some difficulty in getting a precise measure for this indicator. In this document, participation means enrolment or attendance at a public college in any program that is one year or longer in length. While such a definition excludes many people who enrol in short-term courses and programs at the public colleges from being counted, it captures the vast majority of students who enrol each year in career-oriented education and training. Again the

participation rate refers to public college enrolment as a percentage of the population of 18-24 year-olds.

Full-time public college participation rates by gender, over time and against the national average are plotted in Figure 6.4.2. The data show that, unlike university participation rates, overall public college participation rates in this province are significantly lower than those of the Country as a whole. Participation rates in this province ranged from 5.0% in 1990/91 to 8.4% in 1994/95. This compares with participation rates for Canada in the range of 11% to 13.2%. Provincially, there were substantial gains in public college participation over the five-year period with overall participation rising 68% compared to a five-year increase of 20% nationally. However, much of this increase occurred between 1993/94 and 1994/95 and may be accounted for by the growth in sponsored training opportunities for displaced fisherpersons and plant workers discussed elsewhere in this report.

Figure 6.4.2: Full-Time Public College Participation Rate¹ by Gender, Newfoundland and Canada, 1990/91 - 1994/95



Source: Statistics Canada, Catalogue nos. 81-229-XPB (1996), 81-229-XPB (1995) and CANSIM Database, Statistics Canada (Ottawa)

1. Defined as full-time undergraduate enrolment as a percentage of the population aged 18-24.

According to data published by Statistics Canada, public college participation in this province remains considerably lower than national rates.

Gender differences in public college participation rates were not as great as those for the university sector. The five-year period began with higher participation levels by females. In 1990/91 the female public college participation rate was 5.4% compared to 4.6% for males. Both genders increased their participation with the male rate edging above the female rate in 1992/93 and 1993/94. At the end of the period, however, participation of females had increased to 8.7% compared to 8.1% for males. Nationally, the pattern of public college participation was similar to that of university participation. Females enrolled in relatively higher proportions than males and this was consistent throughout the five-year period.

Several possible explanations exist for the difference in public college participation between Newfoundland and Canada. One is related to the statistical reporting of enrolment information. While a real difference may exist (i.e., Newfoundland participation levels may be lower than the national average) what is questionable is the extent of the difference. Officials from Statistics Canada have confirmed that reported enrolments may exclude some students in one-year public college certificate programs. Statistics Canada reported that in 1994/95, there were 5971 persons enrolled in full-time public college certificate programs in Newfoundland. However, Department of Education databases show substantially higher enrolment levels for that year. By using the Department's enrolment statistics the calculated rate for 1994/95 is considerably closer to the national average and likely to be a more realistic estimate of the actual public college participation rate. Section 6.6 examines participation

by postsecondary sector using data which include enrolment in all career-oriented programs one year or longer in duration.

A second factor which contributes to the lower public college participation rates in Newfoundland is the significant enrolment levels of students in the private colleges. While private college enrolment data are not available for other Canadian provinces, it is believed that relative enrolment levels in Newfoundland may be higher than elsewhere in Canada. High private college enrolment means a reduced share of the pool of postsecondary students for the public college system and subsequently lower public college participation rates.

The higher participation by females in both this province and the Country as a whole are likely to be influenced by several factors. Firstly, over the past twenty-five years increased numbers of women entered the workforce and began careers. Higher education and training became an integral part of that shift. The success of national employment equity and career education programs which promoted educational attainment and career aspirations among women contributed to the gains made by women. Secondly, females are graduating from high school in higher proportions than males. There are more female honours graduates, a higher proportion are completing more academically-challenging programs and fewer females are dropping out of school. In short, females are academically better prepared to enter postsecondary programs of all types and this preparedness is reflected in the numbers who do go

on to university and college to pursue higher education.

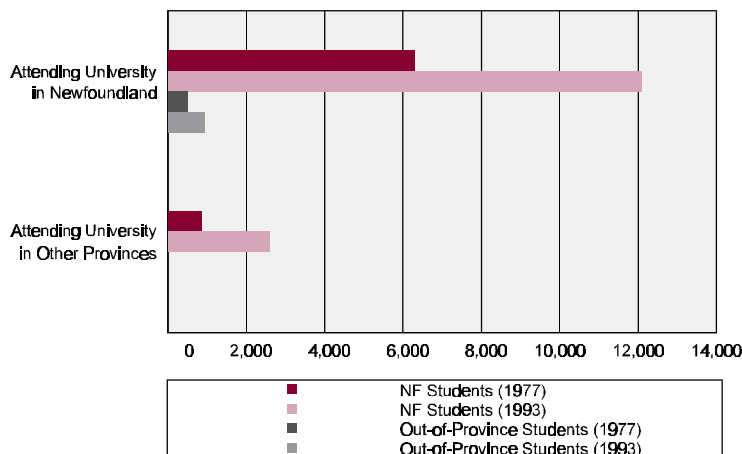
6.5 What proportion of students attend university in other provinces?

Newfoundland is third in the country when it comes to exporting university students to study in other provinces. With the exception of Prince Edward Island and New Brunswick, more Newfoundland university students study outside their native province than do students from other provinces. In 1993, the most current year for which data are available, 2611 graduate and undergraduate students from this province were studying in other Canadian provinces (Figure 6.5.1). This compares with 931 Canadian students from out-of-province who were studying at Memorial University.

In 1977 only 843 students enrolled in Canadian universities other than Memorial compared with 490 students who came from other provinces to study here. In other words, the proportion of students this province has exported has grown relative to the proportion it imports. In 1977, in Newfoundland, the proportion of in-migrating students was 58.1% of out-migrating students. By 1993 this proportion had declined to 35.7%.

There are a number of reasons believed to contribute to this net export of students. The cost of a postsecondary education outside the Province is about the same or may be slightly lower for many students living in Labrador and communities in western Newfoundland. Anecdotal reports suggest undergraduate attendance

Figure 6.5.1: Enrolment¹ in University by Residence Status, 1977 and 1993



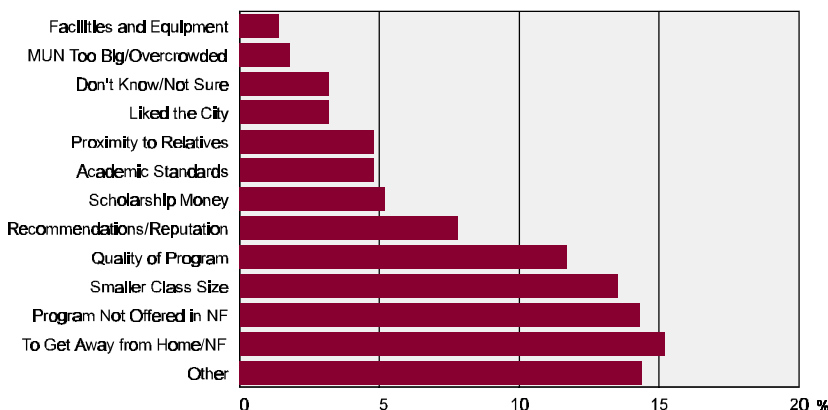
Source: Statistics Canada Catalogue no. 81-579-XPB

1. Includes undergraduate and graduate students.

at universities outside the Province, particularly in Nova Scotia, is economically about the same as attending university in St. John's. Given the fact they will have to move long distances from home in any event, many students choose universities outside the Province.

As part of the 1995 High School Follow-up study, students who were studying outside the Province were contacted and asked about their reasons for doing so. Figure 6.5.2 provides the reasons cited by students. They relate to the availability of certain university programs such as law and

Figure 6.5.2: Reasons Cited by Recent Secondary School Graduates for Attending Out-of-Province Universities, 1995



Source: Department of Education 1995 High School Graduate Follow-up Survey, n = 349.

veterinary medicine, a general desire to study on the mainland, smaller class sizes at other universities, the availability of scholarships and bursaries outside the Province as well as a host of other factors. On the issue of scholarship availability, until recently scholarships at Memorial were tied to student performance on final high school examinations. This meant some students who may have been offered scholarships from more than one university including Memorial would have likely accepted another scholarship before receiving notification from Memorial. That policy has recently been changed such that Memorial now notifies students who have been awarded scholarships earlier in their final year of high school. Memorial also has plans to expand its scholarships and awards program through the newly established Opportunity Fund.

6.6 What is the level of postsecondary participation by sector within Newfoundland?

Section 6.4 described provincial and national participation rates for full-time undergraduate university and public college programs using data from Statistics Canada. In the context of providing a national comparison, using the data collected by Statistics Canada is essential so that rates for Newfoundland and Canada as a whole are comparable. However, as previously noted, there are concerns with the Statistics Canada data in that they may exclude one-year public college programs and do not reference enrolment in the private college sector. The data also included enrolled students older than 24 years of age. The analysis presented in this section

Table 6.6.1: Participation Rate by Postsecondary Sector, 1989/90, 1994/95 and 1995/96

Participation Rates				
	Memorial University	Fisheries and Marine Institute	Public Colleges	Private Colleges
1989/90	12.1%	0.9%	6.1%	1.3%
1994/95	14.9%	0.9%	7.2%	4.1%
1995/96	14.0%	0.8%	6.8%	6.6%

Source: Department of Education and Statistics Canada, Catalogue nos. 81-229-XPB (1996), 81-229-XPB (1995) and CANSIM Database, Statistics Canada (Ottawa)

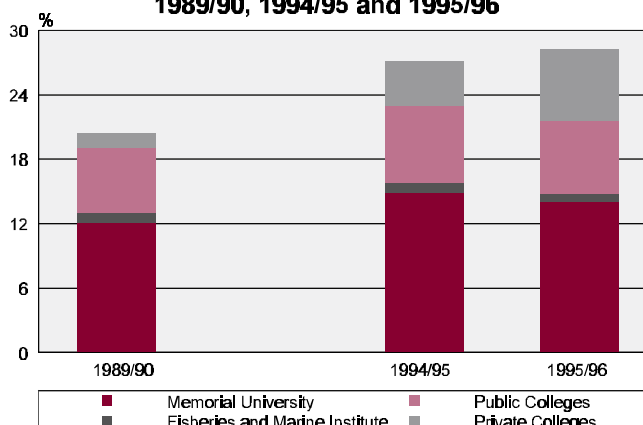
Note: Participation rate is defined as the number of full-time undergraduate university or college students aged 18-24 as a percentage of the population aged 18-24.

uses data collected and maintained by the Department of Education which is not subject to these limitations.

Table 6.6.1 presents participation rates by postsecondary sector for 1989/90, 1994/95 and 1995/96. As can be seen from the table, the most significant changes in participation have been at the private college level. In 1989/90 the

private college sector played a relatively minor role in higher education with just over one percent of those aged 18-24 attending. By 1994/95 participation of young adults in the programs offered by the private college system had increased to 4.1% and the following year, 1995/96, jumped to 6.6%. The overall increase in the participation rate over six years has been 400%. The private system, in 1995/96, had

Figure 6.6.1: Participation Rate by Postsecondary Sector,¹ 1989/90, 1994/95 and 1995/96



Source: Department of Education and Statistics Canada, Catalogue nos. 81-229-XPB (1996), 81-229-XPB (1995) and CANSIM Database, Statistics Canada (Ottawa)

1. Defined as the number of full-time undergraduate university or college students aged 18-24 as a percentage of the population aged 18-24.

How is the Participation Rate calculated?

The analysis presented in this section refers to participation by sector for all career-oriented programs one year or longer in length. ABE and Personal Interest programs are not included. Participation is defined as the number of full-time enrolled students aged 18-24 as a proportion of the population aged 18-24. University participation is calculated for undergraduate students only.

a participation rate that was only marginally lower than that of the public college system for this age group.

Participation in the public college sector showed an overall increase over the five-year period between 1989/90 and 1994/95 moving from 6.1% to 7.2%. Rates in 1995/96 indicated a slight decline to 6.8% of 18-24 year-olds.

Memorial University attracted and continues to attract the largest share of 18-24 year-olds seeking postsecondary education. In 1989/90 the participation was at 12.1%. It increased to 14.9% in 1994/95 and declined slightly to 14.0% in 1995/96. Participation in programs at the Fisheries and Marine Institute is presented separately since it did not officially become a part of Memorial University until 1992. Participation was relatively stable between 1989/90 and 1994/95 at just under one percent. There was a slight decline in 1995/96.

Clearly the growth in postsecondary participation has been in the private college sector. Reasons for this growth have been described elsewhere in this report. A combination of factors is responsible. Programs in the private

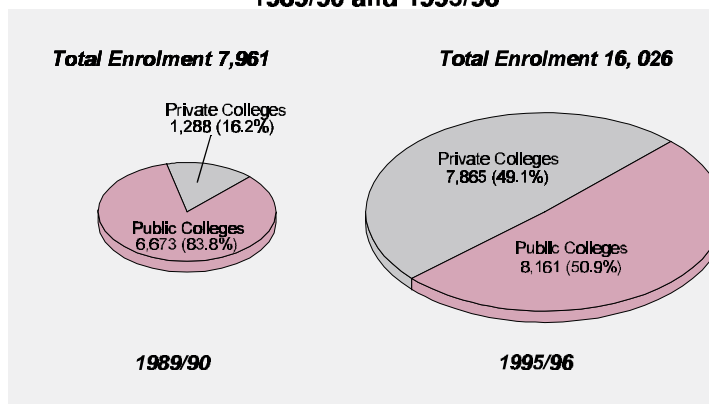
college system were readily accessible to learners throughout the Province, a number of mainly federally-sponsored training programs were available, waiting lists existed for certain programs in the public college system, student loans became available for private college programs and private college programs were heavily advertised through direct mail, radio, television and the print media.

6.7 How does participation in public college programs compare with that in private college programs?

Over the six-year period 1989/90 to 1995/96 overall college enrolment in career-oriented programs increased dramatically. This excludes ABE, general interest and career exploration programs. Figure 6.7.1 shows that for programs of at least one academic year in length, while overall enrolment has increased in both the public and private college sectors, the gains for the private college system have far exceeded those for the public colleges. Private college enrolment increased by more than 500% over the six-year period compared to a 22% increase in the public colleges.

Accompanying these increases has been a significant loss in the share of student enrolment on the part of the public colleges. Specifically in 1989/90 the public college share of student enrolment fell from 83.8% in 1989/90 to 50.9% in 1995/96.

Figure 6.7.1: Total Public¹ and Private College Enrolment,² 1989/90 and 1995/96

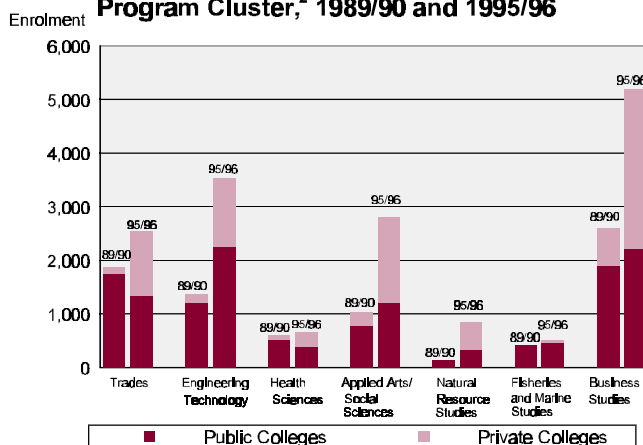


Source: Department of Education and MUN Fact Book, 1996

1. Marine Institute of Memorial Included.

2. Enrolment measured by headcount in major programs of at least one academic year in length. Adult Basic Education, General Interest or Career Exploration programs not included.

Figure 6.7.2: Public¹ and Private College Enrolment by Program Cluster,² 1989/90 and 1995/96



Source: Department of Education and MUN Fact Book, 1996

1. Marine Institute of Memorial Included.
2. Enrolment measured by headcount in major programs of at least one academic year in length. Adult Basic Education, General Interest or Career Explorations programs not included.

Overall enrolment in the entire college sector was greatest in Business Studies programs where public and private combined enrolment for 1995/96 was 5,192 students. This was followed by Engineering Technology at 3,525, Applied Arts/Social Sciences at 2,781 and Trades programs at

2,539 students. Enrolment in Natural Resource Studies programs followed with an overall enrolment of 840 students, Health Sciences at 653 and Fisheries and Marine Studies at 496.

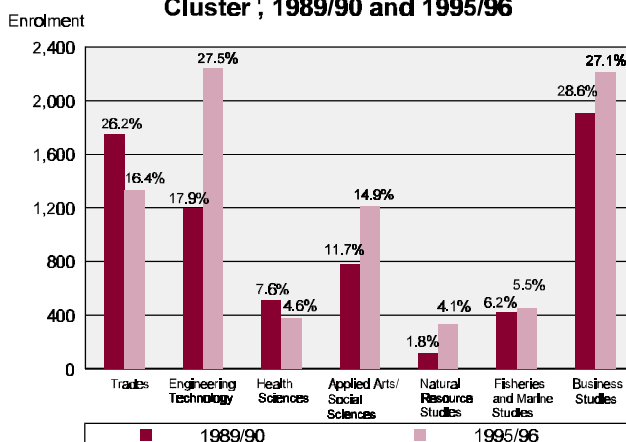
The types of programs affected by the expansion of the private college

system are presented in Figure 6.7.2. The relative enrolment share for the private colleges increased in each of the seven program clusters, but the most significant gains were made in the Trades, Engineering Technology, Applied Arts/Social Sciences and Business Studies. Private college enrolment in programs classified as Applied Arts/Social Sciences, Business Studies and Natural Resource Studies now exceeds that of the public college system. Reasons for this shift have been proposed and discussed at length elsewhere in this document.

6.8 How has college enrolment in specific programs changed?

Section 6.7 compared private and public college enrolment by program cluster. This section presents these data for each of the college sectors separately and show more clearly the enrolment changes that have taken place in the college system in recent years. As shown in Figure 6.8.1, within the public college system, increased demand for programs classified in the Engineering Technology cluster resulted in a relative enrolment shift between 1989/90 and 1995/96. Engineering Technology programs accounted for more than one-quarter of all enrolments in the public colleges in 1995/96, up by 60% from six years earlier. Business Studies programs made up another 27.1% of enrolments, followed by Trades and Applied Arts/Social Sciences programs which accounted for 16.4% and 14.9% of public college enrolments respectively. Enrolment was relatively low in the other three program clusters although the number of students in Natural Resource Studies programs is on

Figure 6.8.1: Public College Enrolment by Program Cluster¹, 1989/90 and 1995/96

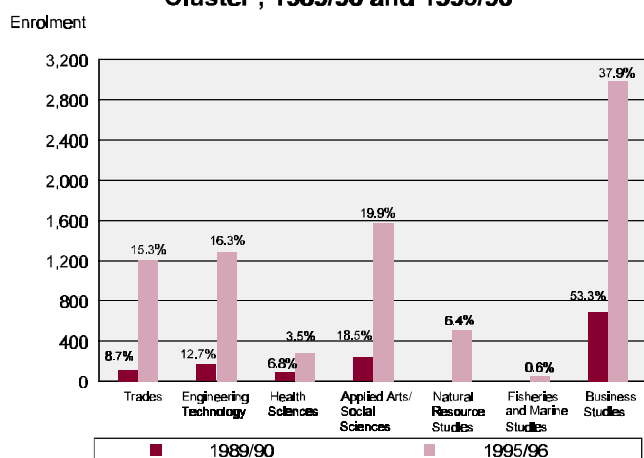


Source: Department of Education and MUN Fact Book, 1996

1. Marine Institute of Memorial Included. Enrolment measured by headcount in major programs of at least one academic year in length. Adult Basic Education, General Interest or Career Explorations programs not included.

Note: Annotated percentages refer to the proportion of total enrolment each program represents.

Figure 6.8.2: Private College Enrolment by Program Cluster¹, 1989/90 and 1995/96



1. Enrolment measured by headcount in major programs of at least one academic year in length. Adult Basic Education, General Interest or Career Exploration programs not included.

Note: Annotated percentages refer to the proportion of total enrolment each program represents.

the increase and comprised 4.1% of enrolments.

From an examination of Figure 6.8.2 it is obvious that Business Studies programs continue to account for the highest proportion of the private college enrolment. Although the chart shows an exponential increase of about 350% in the actual number of students enrolled in these programs, the proportion of Business Studies students relative to the total private college enrolment actually decreased from 53% to 38% between 1989/90 and 1995/96. The massive increases in overall enrolment in the private colleges tends to obscure this observation. The private colleges also made enrolment gains in every other program area with a tenfold increase in the Trades programs and a sixfold increase in the Applied Arts/Social Sciences.

6.9 How do university and college enrolments differ by gender?

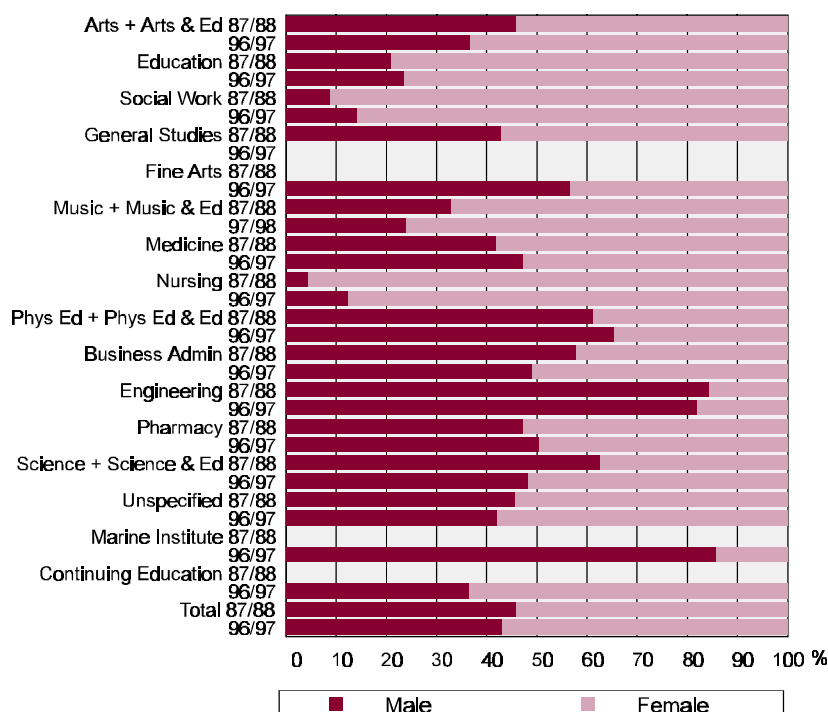
Gender differences in achievement and attainment have been well documented in the K-12 school system. Males have been shown to be seriously underperforming relative to average performance on standardized tests in the primary/elementary/secondary sector and relative to the performance of females. In addition, there continues to be a substantial gender difference in high school graduation rates with males taking longer to complete high school and graduating in significantly fewer numbers than females.

It is no surprise then, that university undergraduate enrolment by females is higher than enrolment by males. Figure 6.9.1 shows that female enrolment exceeded male enrolment in 1996/97 and in the comparison year 1987/88, ten years earlier. In 1996/97 female students accounted for 56.9% of total

full-time undergraduate enrolment at Memorial, up from 54.2 % in 1987/88. While increases were seen for both genders, the enrolment gain for females, at 21.1%, greatly exceeded that of males which was only 8.8% over the ten-year period. In other words, at the undergraduate level there are now about 13 female students attending university for every 10 males. This pattern parallels the general participation patterns in university education in both Newfoundland and Canada over the last 20 years. Males, as a group, have been slow to make gains in graduation rates at the K-12 level. It has also been shown that males drop out in higher numbers and this has tended to be the case historically. Fewer male high school graduates leads to fewer male university students.

An examination of individual faculties shows that males continue to dominate the faculties of Engineering and Physical Education. In 1996/97, 82.1% of engineering students were males. This represents a marginal decrease over the situation ten years earlier when males comprised 84.5% of this group. Enrolments in Physical Education (including conjoint Physical Education and Education) were 65.4% male, up from 61.2 in 1987/88. A higher proportion of males enrolled in the Fine Arts faculty as well. However, the actual numbers enrolled in that faculty are relatively small and gender splits tend to fluctuate somewhat from year to year. Male enrolment in programs at the Marine Institute also greatly outnumbered that of females with males making up over 85% of its students.

Figure 6.9.1: Enrolment in Specific Programs by Gender, Memorial University, 1987/88 and 1996/97



Source: CIAP and Department of Education

Female enrolment was significantly higher in the Faculties of Arts, Education, Social Work, Music and Nursing. There were also notable gains for female students in the Faculty of Arts and the Faculty of Music as compared to ten years ago. This is not unexpected since these are faculties where females have traditionally enrolled in higher numbers. In addition, there was a higher proportion of females who had not specified a faculty. However, compared to 1987/88 the proportion of total enrolment by females in 1996/97 showed a notable increase in the faculties of

Business Administration and Science, two academic areas where male enrolment was traditionally much higher. Over the ten-year period, enrolment by female students in these two faculties substantially exceeded increases by male students. There is now a slightly higher proportion of female students than male students studying in the faculties of Science and Business Administration. More females are also pursuing medical studies and this has tended to be the case for a number of years.

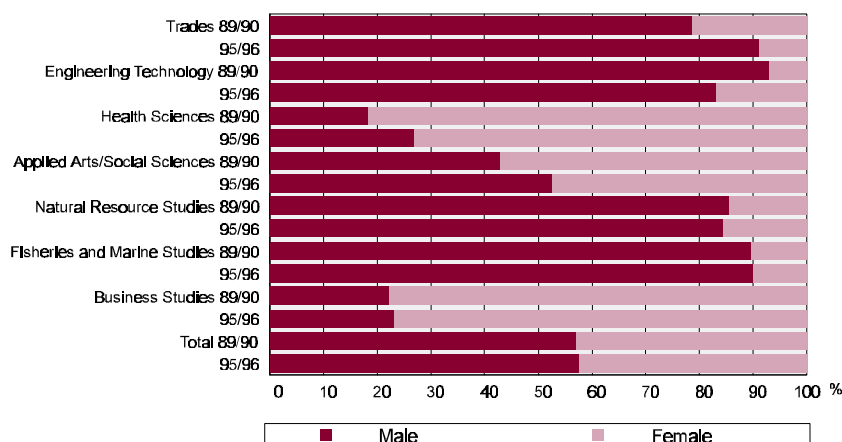
Males too are making some gains in traditionally female areas of academic study. For example the proportion of males studying nursing almost tripled between 1987/88 and 1996/96. More males were also studying in the faculties of Education and Social Work than ten years ago.

Similar gender data for the public and private college system are depicted in Figures 6.9.2 and 6.9.3. These charts present the proportional gender split by program cluster for 1995/96 as compared to 1989/90, six years earlier. It should be noted that different years and a shorter span of comparison is being described for the college system than was the case for the university gender analysis and that enrolment in ABE, personal interest and career exploration programs are not included in this analysis.

Overall counts show enrolment by males to be slightly greater than that of females in the college system. Of the 7,961 students enrolled in 1989/90, 51.2% were male. By 1995/96, overall enrolment increased to 16,026 with the proportion of male students increasing to 51.8%.

In the college system the proportion of males and females enrolled differs depending on the sector. In the public colleges male enrolment exceeded female enrolment while the reverse was true for the private college system. The private colleges enrolled 79.7% females in 1989/90. In that year most career-oriented programs were in Business Studies and the Applied Arts/Social Sciences. Females made up the vast majority of students completing these programs. In general these

Figure 6.9.2: Enrolment by Program Cluster by Gender, Public Colleges,¹ 1989/90 and 1995/96



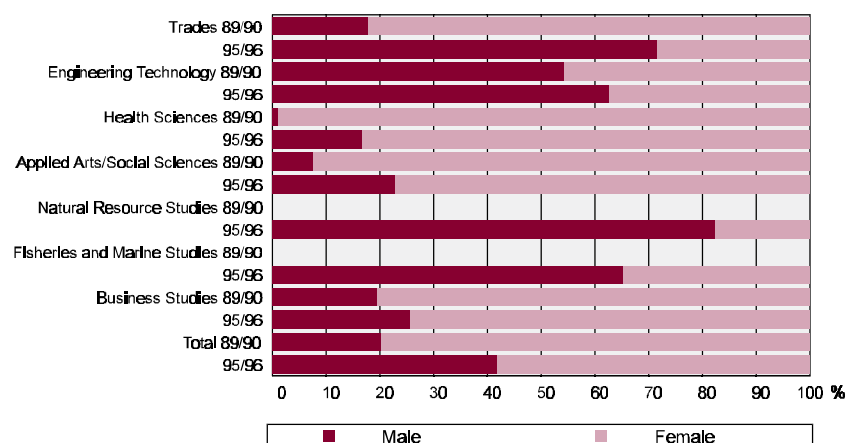
1. Marine Institute of Memorial University Included.

were programs that might be considered to prepare students for traditionally female-dominated occupations such as secretarial work and hairdressing. By 1995/96, however, the proportion of female students in the private colleges had declined to 58.3% of students

although in terms of actual numbers female enrolment grew by more than 300 percent. In fact, in actual numbers the enrolment increase was higher for females. In 1995/96 female enrolment was in a broader range of program areas.

In the public college system enrolment was skewed in favour of male students. In 1989/90, 57.1% of those enrolled in the public college system were males, a large segment of those in the Trades and Engineering Technology Programs, traditionally male-dominated areas. Females outnumbered males in Business Studies, Applied Arts/Social Sciences and Health Sciences programs. Six years later in 1995/96, the overall proportion of males in the public college system increased to 61.6%. Enrolment increased for both males and females over the period, however enrolment growth was greater for male students. In 1995/96 males continued to occupy the vast majority of places in Trades and Engineering Technology programs in the public system although females did make some inroads into areas that were traditionally male. The proportion of females in Engineering Technology programs increased substantially from 7.1% to 16.8% over the period.

Figure 6.9.3: Enrolment by Program Cluster by Gender, Private Colleges, 1989/90 and 1995/96



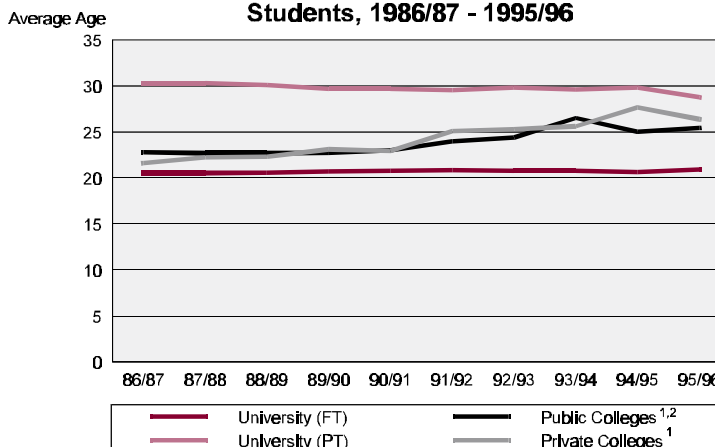
When enrolments in the seven program clusters are compared it is clear that while both males and females have made some gains in some nontraditional areas, there will still be a large majority of male graduates available for historically male occupations and the same can be said for historically female occupations. University enrolments tell a similar story. Males and females are slowly entering faculties traditionally dominated by the opposite gender. With regard to overall enrolment levels across postsecondary sectors, it is clear that more females are choosing a university education while slightly more males pursue college studies.

6.10 How do university and college enrolments differ by age?

Differences in age among university undergraduate students are related more to attendance status than to gender. For full-time undergraduate students over a ten-year period, 1986/87 to 1995/96, the average age ranged from 20.5 to 20.9. Males were an average of two to three months older than females (Figure 6.10.1). For part-time students, the average age for most of the period was approximately 30. Females were, on average, six months older than males. The age difference between full-time and part-time students was, on average, about nine years, although a trend towards younger part-time students is emerging.

In the public college system, over the ten academic years from 1986/87 to 1995/96, the average age of students who enrolled in the fall in any of the main program clusters has tended to be progressively higher than the year earlier. That is, on average, each year's cohort of students was older than the previous year's cohort. For example, enrolment of 18 year-olds declined from 734 students in 1986-87 to 535 students in 1993-94, a 27% drop over the ten-year period. Corresponding to the decline in enrolment of 18 year-old students was an increase in those 19 years and older. From 1986/87 to 1990/91, the 19 year-olds were the single largest age group of students. By 1991/92, the 20 year-olds became the largest single age cohort of students, a pattern that continued into 1995/96. The average peaked in 1993/94 at 26.5 and has decreased slightly over the last two years to its 1995/96 level of

Figure 6.10.1: Average Age of University and College Students, 1986/87 - 1995/96



Source: Department of Education and Office of the Registrar, Memorial University

1. Based on full-time and part-time enrolment in the following program types: pre-employment, pre-apprenticeship, diploma programs and post-diploma/degree certificates.

2. Up to and including 1993/94 public colleges data included Marine Institute.

25.4. There was no gender difference in the ages of public college students. The average age for males and females in the public system was identical in 1995/96, the most current year for which data are available.

Figure 6.10.1 shows how the average age of students changed over the ten-year period. The clear enrolment trend in the public colleges is toward increasingly older students. Students who enrolled in 1995/96 were, on average, nearly three years older than students who had enrolled ten years earlier.

Students in the private colleges, as a group, tend to be the same as those in the public college system. However, in the last two years the average age of private college students exceeded that of their public college counterparts.

Reasons for the increasing average age of public college students since 1986-87 are probably similar to those already discussed. That is,

students just out of high school encountered the waitlist problem due to the "first-come, first-served" admissions policy of the college system. It may also be possible that some students may wait a year in order to qualify for a federal training allowance. Two other plausible reasons are also likely factors. One is that many high school graduates who are not sure of the postsecondary program they wish to pursue may delay entry by a year or more until their career aspirations become more focused. The second is the now well established practice in Newfoundland of increasing numbers of high school students staying in school longer and/or returning to high school following graduation in order to obtain the credits and the marks they need to qualify for the program they do wish to pursue. Both phenomena would cause the students to be older than the traditional age of college students.

6.11 How do college and university enrolments differ by region?

Comparing university participation by region provides an indicator of the extent to which individuals, throughout the Province, are accessing university programs. In order to be consistent with the geographical areas served by the K-12 system and the public colleges in the Province, regions were designated as Avalon, South, Central, West and Labrador. Regional enrolment was identified according to the home postal codes of students. Part of the geographic area of Labrador was incorporated into the West region to conform to the common postal code listing of the areas.

Table 6.11.1 provides a profile of full-time enrolment in postsecondary programs by sector and region for the 1994/95

academic year. Included in the analysis for the university are all full-time undergraduate students. For the public and private colleges, the numbers include all students who were enrolled in programs of one year or longer falling into the seven major program clusters. Career Exploration, Personal Development and ABE programs were not included. The regional analysis shows that 58.3% of full-time undergraduate students at Memorial University came from the Avalon region. The next highest enrolments were from the Central and West regions at 16.9% and 12.7% respectively, followed by the South and Labrador regions. The fact that well over half of Memorial's full-time undergraduate students are from the Avalon is not unexpected since, according to the 1996 census counts, 45.6% of the total population of the Province reside on the Avalon Peninsula (see Figure 6.11.1).

Enrolment patterns, by region, for the public colleges paralleled the situation for Memorial University to some degree. The highest proportion of public college students were from the Avalon Peninsula (34.3%), but this proportion represented just over one-third of total public college enrolment. Compared to the University and the private college system, enrolment in the public college system is drawn more evenly from each of the five regions. For example, in 1994/95, 13.6% of public college students were from the South region, while 21.5% and 23.8% were from the Central and West regions, respectively. Students from the Labrador region accounted for 6.5% of public college enrolment, the highest relative proportion of all three postsecondary sectors.

The pattern of enrolment by region for the private colleges was

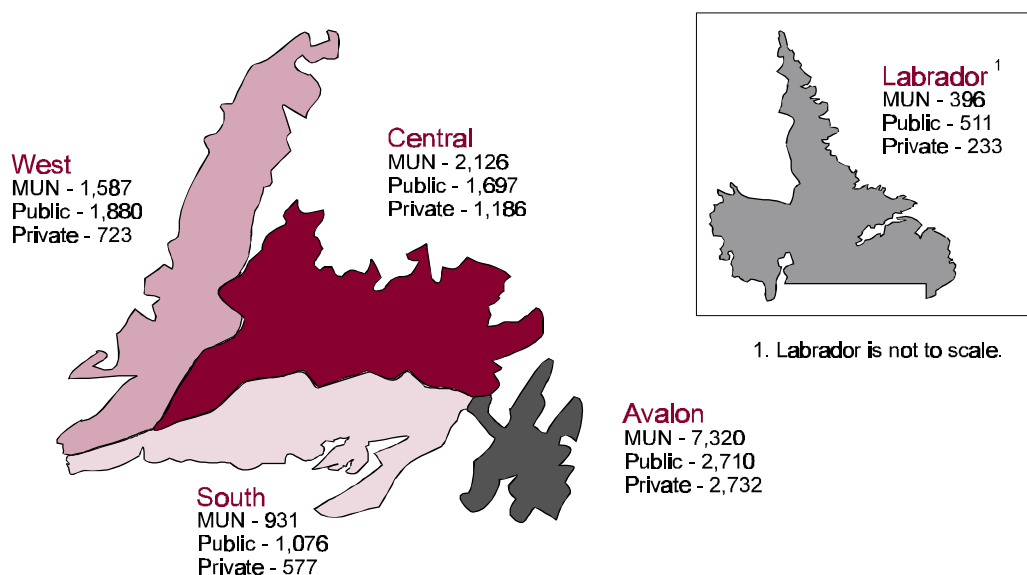
Table 6.11.1: Full-Time Postsecondary Enrolment by Sector and Region, Newfoundland, 1994/95

	Sector										
	University			Public Colleges			Private Colleges			Total	
	Enrolment	% of Region	% of Sector	Enrolment	% of Region	% of Sector	Enrolment	% of Region	% of Sector	Enrolment	% of Total Postsecondary Enrolment
Avalon	7,230	57.4 ¹	58.3 ²	2,710	21.2	34.3	2,732	21.4	50.1	12,762	49.3
South	931	36.0	7.4	1,076	41.6	13.6	577	22.3	10.6	2,584	10.0
Central	2,126	42.4	16.9	1,697	33.9	21.5	1,186	23.7	21.7	5,009	19.3
West	1,587	37.9	12.7	1,880	44.9	23.8	723	17.3	13.3	4,190	16.2
Labrador	396	34.7	3.16	511	44.8	6.5	233	20.4	4.3	1,140	4.4
Out-of-Province	487	84.6	1.49	28	12.7	0.4	6	2.7	0.1	221	0.9
Total	12,547	48.4	100	7,902	30.5	100	5,457	21.1	100	25,906	100

¹ 57.4% of all postsecondary students for the Avalon region went to university.

² 58.3% of all university students came from the Avalon region.

Figure 6.11.1: Postsecondary Enrolment, Memorial University, Public and Private Colleges by Region, 1994/95



- 11 students were proportionally assigned to a region in the Private Sector.
- 3 students were proportionally assigned to a region in the Public Sector.
- The university enrolment is the full-time undergraduate enrolment in September 1994.
- The private and public enrolment is a measure of the number of full-time students in the following major program types: pre-employment, pre-apprenticeship, diploma programs and post-diploma/degree certificate programs during the academic year 1994/95.

somewhat similar to that of the public colleges and university. The private college system accounted for 21.1% of total postsecondary enrolment in 1994/95. Across the five regions the proportion of postsecondary students attending private colleges was surprisingly similar ranging from 17.3% in the West region to 23.7% in the Central region. However, half of all students attending private colleges in the Province were from the Avalon region, followed in descending order by the Central, West, and Labrador regions.

As a proportion of total full-time enrolment in all postsecondary institutions within the Province, Memorial University held the largest share of students at 48.4%. The

public college system had 30.5% while the private colleges accounted for 21.1% of students. The regional picture, however, is markedly different than the enrolment breakdown for the Province, as a whole. Of the postsecondary students from the Avalon region, 57.4% attended Memorial while the proportion attending the public and privates colleges was virtually the same at 21.2% and 21.4%, respectively. A similar pattern was evident for the Central region also, where the highest percentage of students in the region attended Memorial, followed by the public colleges and the private colleges. However, a greater proportion of students from the South, West and Labrador regions attended public colleges

(41.6%, 44.9% and 44.8%, respectively) with Memorial University enrolments ranking second followed by private college enrolments.

It would appear that choice of postsecondary institution is very much regionally determined. Proximity to a given institution is obviously a determining factor in whether a student will attend. The success of Memorial in attracting so many students from the Avalon is likely to be, in part, due to the location of the main campus in St. John's. We also know that many students who attend university in the West and Labrador regions do so at institutions outside the Province. This raises the question of accessibility to postsecondary

ENROLMENT CHANGE BY TRADE, 1990-1995

Trade Cluster	Trades	Enrolment Change
Auto Repair	Auto Body Repair	↓
	Motor Vehicle Repair	↓
Carpentry and Bricklaying	Boilermaker	↓
	Bricklaying	↓
	Carpentry and Joinery	↑
	Painting and Decorating	↑
Cooking (Commercial)		↑
Electrical Trades	Electrical Construction	↑
	Industrial Electrical	↑
	Industrial Instrumentation	↑
	Electronic Repairman	Same
	Power Systems Operator	↓
	Power Engineer	↓
Heavy Equipment	Truck and Transport Mechanic	↑
	Heavy Equipment Operator	↑
Mechanical Trades	Industrial Mechanic (Millwright)	↓
	Oil Burner Mechanic	↑
	Heavy Duty Repair	↓
	Small Equipment Repair	↓
Hairstylist/Beauty Culture		↓
Metal Work	Machinist	↓
	Welder	↓
Lines Work	Construction Linesman	↑
	Operating Linesman	↓
Plumbing/Heating/Ventilation	Plumbing and Domestic Heating	↓
	Sheet Metal Worker	↓
	Refrigeration and Air Conditioning	Same
	Steamfitter/Pipefitter	↓
	Sprinkler/Filter	↑

programs. The costs associated with obtaining a postsecondary education have been escalating. Close access to postsecondary programs allows students to obtain their education while minimizing costs and may be a significant factor influencing the decision to obtain higher education.

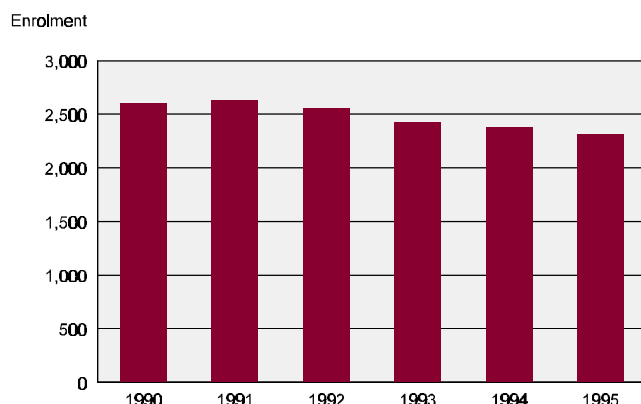
6.12 How has enrolment in apprenticeship training changed over time?

Apprenticeship training is a program whereby apprentices undergo alternating periods or "blocks" of education and work experience. Training related to the academic aspect of apprenticeship

is normally provided through the Province's public and private college system. Apprentices attend one of the college campuses for a period of weeks after which they return to work with their employer. Workers, however, may obtain certification without taking formal training in a public college. Because of a history of work experience in a specific trade, individuals may qualify to write an interprovincial journeyman examination. If they succeed in achieving a passing grade, they are awarded the respective Certificate of Qualification. If not, they may upgrade their knowledge by studying on their own and take the examination at a later time. The number of apprentices is generally subject to the level of industrial activity ongoing in the Province each year and to the level of funding received annually for this type of human resource development.

Participation in the Apprenticeship Training Program is measured by the number of individuals registered as apprenticing for a given trade. The annual number of registered apprentices is affected by the number of new registrations or reinstatements, the number of completions (as defined by success in the national Red Seal examination) and the number of cancellations. There are also a number of non-registered "apprentices" or "trades qualifiers" who challenge the Red Seal examinations for certification as a tradesperson but who are not registered. Section 2.9 provides an analysis of the success rates of registered apprentices and trades qualifiers.

Figure 6.12.1: Total Enrolment in Apprenticeship Training, Newfoundland, 1990-1995



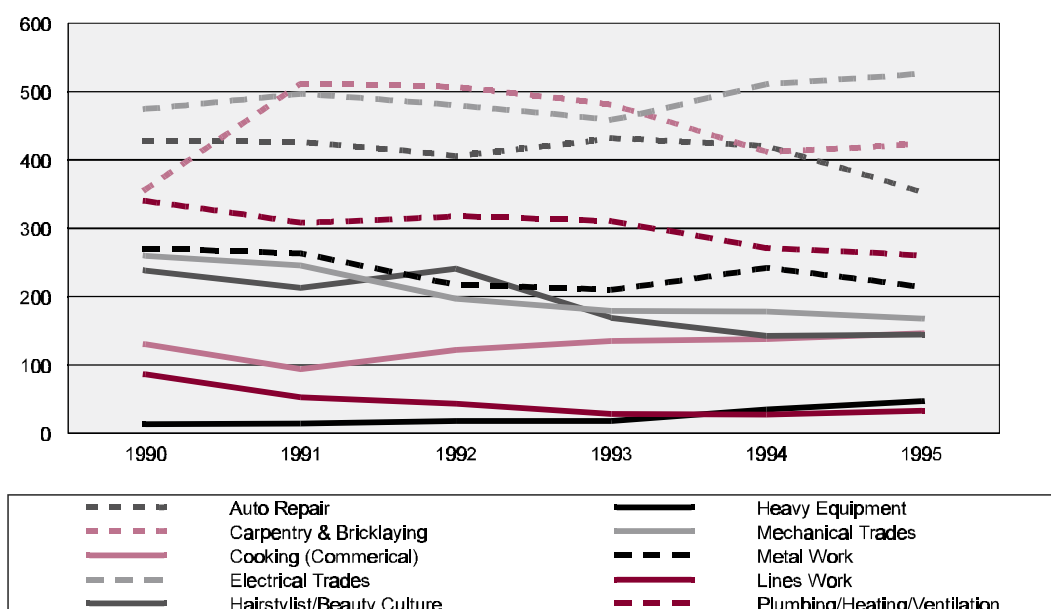
For the purpose of the current analysis, the 29 trades for which registered apprentices have been categorized have been grouped into 10 clusters as illustrated in the box insert. Figure 6.12.1 shows that over

the period 1990 to 1995 total enrolment in the 10 trade clusters dropped steadily from 2,626 to 2,317, a decline of 11.8% over the last five years. However the decline has not been uniform across all

trade clusters (Figure 6.12.2). Declines in enrolment over 1990 levels were seen in the following trades clusters: Auto Repair, Hairstylist/Beauty Culture, the Mechanical Trades, Metal Work, Lines Work and Plumbing/ Heating/ Ventilation. Increases in enrolment were seen in Carpentry and Bricklaying (although 1995 enrolment levels were down substantially from 1991 and 1992), Commercial Cooking, the Electrical Trades and Heavy Equipment.

Apprentices in the Auto Repair, Carpentry and Bricklaying, and Electrical Trades continue to be the most popular trades, accounting for 56.3% of the total number of registered apprentices in 1995. Trades with relatively few apprentices include Heavy Equipment and Lines Work.

Figure 6.12.2: Enrolment by Trade Cluster, Newfoundland, 1990-1995

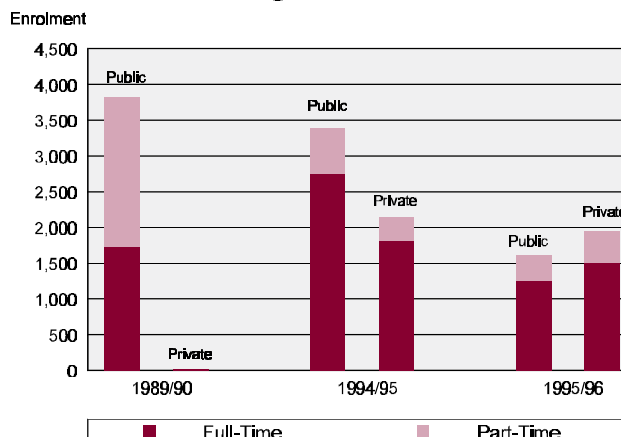


6.13 What is the profile of Adult Basic Education enrolment in Newfoundland?

Adult Basic Education (ABE) is a program whereby learners progress through three levels of instruction leading to an ABE Level 3 certificate which is accepted as the equivalent of a high school graduation diploma. ABE is typically offered on a continuous basis in each public college campus and in a number of private colleges and has become an alternative for adult learners who did not finish high school. In the past, ABE programs have normally attracted large numbers of students, for both full-time and part-time attendance. In recent years, however, full-time attendance in ABE programs has become the norm. Enrolment data for 1994/95 and 1995/96 indicate that approximately 80% of ABE students were full-time.

The delivery of ABE programs has undergone a great deal of change

Figure 6.13.1: Adult Basic Education Enrolment by Full-Time and Part-Time Status and College Sector, 1989/90, 1994/95 and 1995/96



since 1989/90. In that year most learners were part-time and virtually all instruction was conducted through the public college system. However, by 1994/95 the private college sector had emerged as a significant provider of ABE instruction in the Province and in both college sectors proportionately

fewer learners were studying ABE part-time. By 1995/96 the public colleges fell behind the private sector in terms of ABE enrolment. In that year, enrolment in the private colleges accounted for about 55% of total enrolment.

Figure 6.13.2: Adult Basic Education Enrolment by Gender and Full-Time and Part-Time Status, 1989/90, 1994/95 and 1995/96

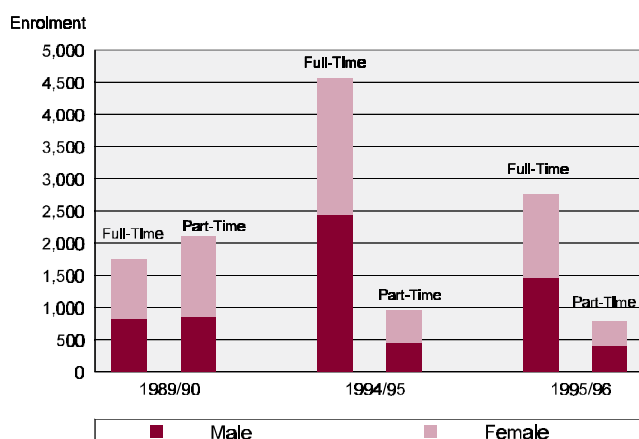


Figure 6.13.1 presents a profile of ABE enrolment by full-time/part-time status and college sector for the years 1989/90, 1994/95 and 1995/96. In terms of absolute numbers, there were 1,743 full-time and 2,092 part-time students in 1989/90, a number which increased substantially during the peak of the TAGS training in 1993/94. Reliable data for the private college system are not available for 1993/94, however combined full-time and part-time ABE enrolment in the public college system increased to more than 5,000 in that year. After 1993/94 enrolment in ABE programs declined somewhat. The most current data sets available combined full-time and part-time enrolment at 3,553 for 1995/96.

The trend towards increasing numbers of full-time students in ABE is certainly related again to the availability of ABE programs under the active programming provision under TAGS. This report has already documented that a large proportion of TAGS clients had not attained a high school education at the beginning of the program and that there were gains in the percentage of clients with a high school certificate as a result of TAGS training. These would have been a result of certification through ABE

programs. Private training institutions offering ABE were established in a number of centres around the Province during the period when demand for such programs through TAGS sponsorship was great. This explains why the private system increased its enrolment share over such a short period of time. The decline in enrolment, especially during 1995/96, may be related to a winding down of the active programming component of TAGS which was curtailed in August

1996. However, this is more likely to show up in data from the 1996/97 academic year which are not yet available.

In terms of gender differences, Figure 6.13.2 shows enrolment patterns were not consistent over time. In 1989/90 there was a higher proportion of females enrolled in both full-time and part-time ABE programs. In 1994/95 and 1995/96 males outnumbered females in full-time study. A pattern in part-time ABE enrolment was not evident.