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Direction de la recherche, des statistiques et de l'information

From School to the Labour Market in Québec

Analysis of Student Trajectories in Terms of Previous Learning Path and Early Labour Market Experience

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ABBREVIATIONS

ACS:	Attestation of College Studies
AVE:	Attestation of Vocational Education
AVS:	Attestation of Vocational Specialization
BCS:	Banque de cheminement scolaire
CMEC:	Council of Ministers of Education in Canada
CPRN:	Canadian Policy Research Networks
DCS:	Diploma of College Studies
DVS:	Diploma of Vocational Studies
GEA:	General education in the adult sector
GEY:	General education in the youth sector
JM:	Job market
LFS:	Labour Force Survey
MELS:	Ministère de l'Éducation, du Loisir et du Sport
NAICS:	North American Industry Classification System
NOC:	National Occupational Classification
RRCSS:	Reception, referral, counselling and support services
SSD:	Secondary School Diploma
STC:	Skills Training Certificate
TT:	Technical training
VT:	Vocational training

FOREWORD

Young Canadians are looking for more choice when it comes to learning options – before and during their careers. That was a strong message coming out of CPRN’s Youth Dialogue in November 2005. These young people told us that some form of post-secondary education should be available to everyone – whether it is university, college, trades programs or experiential learning. They told us there should be a variety of well supported learning opportunities.

CPRN is in the middle of a two year project to examine the ways young people navigate from high school through to the labour market. The goal is to identify what supports or hinders youth’s ability to find pathways that lead to good jobs, and to examine attitudes and underlying values about the different pathways.

This report, by a team of researchers at the Ministère de l’Éducation, du Loisir et du Sport of Québec, is the sixth in our series on *Pathways for Youth to the Labour Market*. The authors use data from a variety of sources, including administrative data on students enrolled in the education system in Québec as well as surveys of graduates, to examine the learning paths and early labour market outcomes of students taking vocational education at the high school level and/or technical education at the college level in Québec. Their work demonstrates the richness of research that can be derived from the use of well thought out administrative data systems. In this respect, the Ministère de l’Éducation, du Loisir et du Sport of Québec is a leader in Canada.

The authors find that both the vocational and technical graduates have much better labour market outcomes, on average, than young people (aged 15-29) who did not complete high school and are not enrolled in education when surveyed. They also find that a large share of these graduates, especially of secondary level vocational training, followed paths with interruptions or “non-linearities” (such as participating in higher education before taking a vocational program).

I would like to thank the Ministère de l’Éducation, du Loisir et du Sport, its team of researchers, and especially the lead for the project, Jean-Claude Bousquet, for their close collaboration with CPRN on this project and for their valuable contribution to our understanding of the characteristics and consequences of different pathways to the labour market in Québec. I would also like to thank the Ministère for covering the costs of translation of the report. Finally, I would also like to thank CPRN Research Associate Patrice de Broucker for his help in the planning of the project.

Sharon Manson Singer, Ph.D.
January 2008

PREAMBLE

The school/job transition is an area of special interest for the Ministère de l'Éducation, du Loisir et du Sport (MELS), which each year produces various indicators to assess the degree to which new graduates enter the labour market. It is also an area of concern for the Council of Ministers of Education in Canada (CMEC) and the Canadian Policy Research Networks (CPRN). CPRN has implemented a research project with the following objectives: (a) to recognize the paths that young people take from the school system to the labour market; (b) to document the most-used and least-used paths, by population subgroup; and (c) to identify the factors associated with a successful transition to the labour market. As part of this project, CPRN has asked the MELS to take part in joint research on school/job pathways.

This document describes the labour market integration of graduates and non-graduates of vocational and technical training programs. It also focuses on the main pathways used by young adults aged 30 and under to obtain a vocational training or technical training diploma. This study is the first of its kind in Québec, and complements the 2004 study published by the MELS, entitled *Student Flow from Secondary School to University*.¹ The same question deserves analysis at the university level, but was not dealt with here because of time constraints.

¹ Available on-line at: <http://www.mels.gouv.qc.ca/stat/Autres_doc/brochure_cheminement_scol.pdf>.

1 INTRODUCTION

The school/job transition is a critical step in every young adult's career. In addition to its individual benefits, a successful transition to the labour market makes a positive contribution to both the economy and the well-being of the community as a whole. Like educational success, the transition to the labour market is a strategic concern of primary importance.

To monitor the transition, the MELS surveys graduates from secondary-level vocational programs and college-level technical programs every year, and graduates from university programs every two years (the surveys are known as "Enquêtes Relance"). Although these surveys provide high-quality information about the labour market integration of new graduates, they do not specify the learning paths they followed.

However, the age of the graduates surveyed hints at the fact that many took a nonlinear path. Students who obtained a diploma at the expected age could only have taken a linear path, with no interruption during their program of studies. On the other hand, students who obtained a diploma at a later age had probably taken an atypical path. Until now, the various possible paths had not been analyzed in connection with the question of labour market integration. In 2004, the MELS published a study of the paths taken by students from secondary school to university, which provides some information on the various possibilities. It describes the stages in the education of young people in Québec, from secondary school until they begin university, but does not include their integration into the labour market.

This study presents a range of complementary information that is used to sketch an outline of the school/job transition. It has four main sections. After presenting the overall objective of the study and the methodology used, the first section recapitulates the main features of the Québec education system. The second section then presents the learning paths taken by graduates who obtain a Diploma of Vocational Studies (DVS) or technical Diploma of College Studies (DCS) and establishes a connection with the labour market integration of the graduates concerned. In the third section, the labour market integration of young adults who do not have a diploma and are not studying is compared to the integration of the general population in that age group, and of young adults with diplomas. A final overview links the various results presented.

2 OBJECTIVES OF THE STUDY

The objective of this study is to identify and quantify the learning paths used by young Québec graduates and, wherever possible, to establish a correspondence between the diploma obtained and integration into the labour market. It also aims to compare the labour market situation of young adults with no diploma and who are not studying to that of young adults holding a qualification in the form of a diploma.

Ideally, the analysis would have covered the entire period from secondary school to university, but because this extensive task would have taken too much time, the study is limited to:

- graduates from secondary-level vocational training programs who obtained a DVS, graduates from college-level technical training programs who obtained a DCS, and young adults without an educational qualification, and
- young adults under the age of 30

An analysis of the diplomas obtained by students exiting the education system shows that in 2003, 38% had obtained a technical DCS or a DVS, compared to 20% who exited with no diploma (Table 5.1, *Education Indicators, 2006 edition*)².

3 DATA SOURCES

Several data sources were used.

- To identify the learning paths used by students who graduated with a DVS, data from the file “Banque de cheminement scolaire” were used. This ensured that all young adults under the age of 30 who obtained a DVS in 2003 were taken into account.
- To identify the learning paths used by students who graduated with a technical DCS, data from the file “Banque de cheminement scolaire” were also used. This ensured that all young adults under the age of 30 who obtained a technical DCS in 2003 were taken into account.
- To establish a link between graduates and early labour market experience, data from the surveys *La Relance au collégial 2005* and *La Relance au secondaire 2005* were used. The surveys were completed by young people two years after obtaining a diploma, and therefore covered graduates from the 2003-2004 school year. Only people under the age of 30 who obtained a DVS or a technical DCS were taken into consideration for this study.
- To compare the integration of young graduates with that of the general population in the same age group, the Statistics Canada publication *Labour Force Survey (LFS)* was used.
- To study the labour market integration of young adults without an educational qualification who were not still studying, data from the 2001 census were used. Only young adults under the age of 30 were taken into consideration. To compare their integration with that of young adults holding a DVS, data from the survey *La Relance au secondaire 2001* were used to limit, as far as possible, the effect of economic context on the comparison.

Given the different types of data files involved, it was clear that no perfect match between pathways and labour market integration could be established. The MELs has no longitudinal file covering both education and the transition to the labour market. To examine the links between learning paths and early labour market experiences, it was necessary to make inferences, but with the degree of scientific rigour normally expected in such a study.

4 FEATURES OF THE EDUCATION SYSTEM AND LABOUR MARKET INTEGRATION IN QUÉBEC

The contribution made by education to economic, social and cultural development requires different types of interventions. In addition to measures that facilitate access to education and enhance educational success, other measures have been established to facilitate integration into the labour market.

² Québec, Ministère de l'Éducation, du Loisir et du Sport, *Education Indicators*, edition 2006.

Several paths can be taken by students to obtain a diploma and join the labour market once they have acquired educational qualifications. Diagram 1 gives an overview of all the learning paths offered by Québec's education system.³

Each educational sector has its own characteristic way of managing the school/job transition. The next few paragraphs describe the features of Québec's education system and the steps taken by educational institutions to promote labour market integration, sometimes with the support of ministerial policies.

4.1 General education

The secondary-level general education program is offered in secondary schools and is accessible to all students. It leads to the Secondary School Diploma (SSD) or Diploma of Vocational Studies (DVS). Québec issues an SSD after 11 years of schooling, compared to 12 years in the rest of Canada. A large majority of secondary-school graduates continue their education, either at the college level or in secondary-level vocational training, but a significant number of students leave school after obtaining an SSD and join the labour market in a non-specialized trade.

For adult students, most public-sector education is organized by the local school boards. General education in the adult sector (GEA) is offered to all adults who wish to acquire missing segments of their education in order to improve their qualifications and join or reenter the labour market. The GEA system offers complete general education services (see Diagram 1). Each year, over 100 000 adults take classes in one of more than 200 adult education centres, mainly to complete the Secondary Cycle One or Secondary Cycle Two program. Annually, over 10 000 adults obtain an SSD. In addition, over 20 000 adults register to obtain prerequisites for a vocational training program, and another 20 000, who often already have an SSD, to gain access to postsecondary education. The adult education sector appears to make a greater contribution to the awarding of secondary-level diplomas than comparable sectors in most other North American education systems.

Currently, the MELS is helping to set up reception, referral, counselling and support services (RRCSS) at each school board to help define the educational needs of individuals and promote access or a return to the labour market.

4.2 Vocational and technical training

The vocational and technical training sectors offer almost 300 programs leading to a state-awarded diploma (Diploma of Vocational Studies [DVS], Attestation of Vocational Specialization [AVS] or technical Diploma of College Studies [DCS]), as well as several so-called short programs designed by individual secondary schools or colleges (Skills Training Certificate [STC], Attestation of College Studies [ACS]). Québec's vocational and technical training system has two essential and complementary components. First, vocational training (at the secondary level) is provided by 70 school boards in 174 vocational training centres, and by 3 government-run institutions and 30 private institutions.

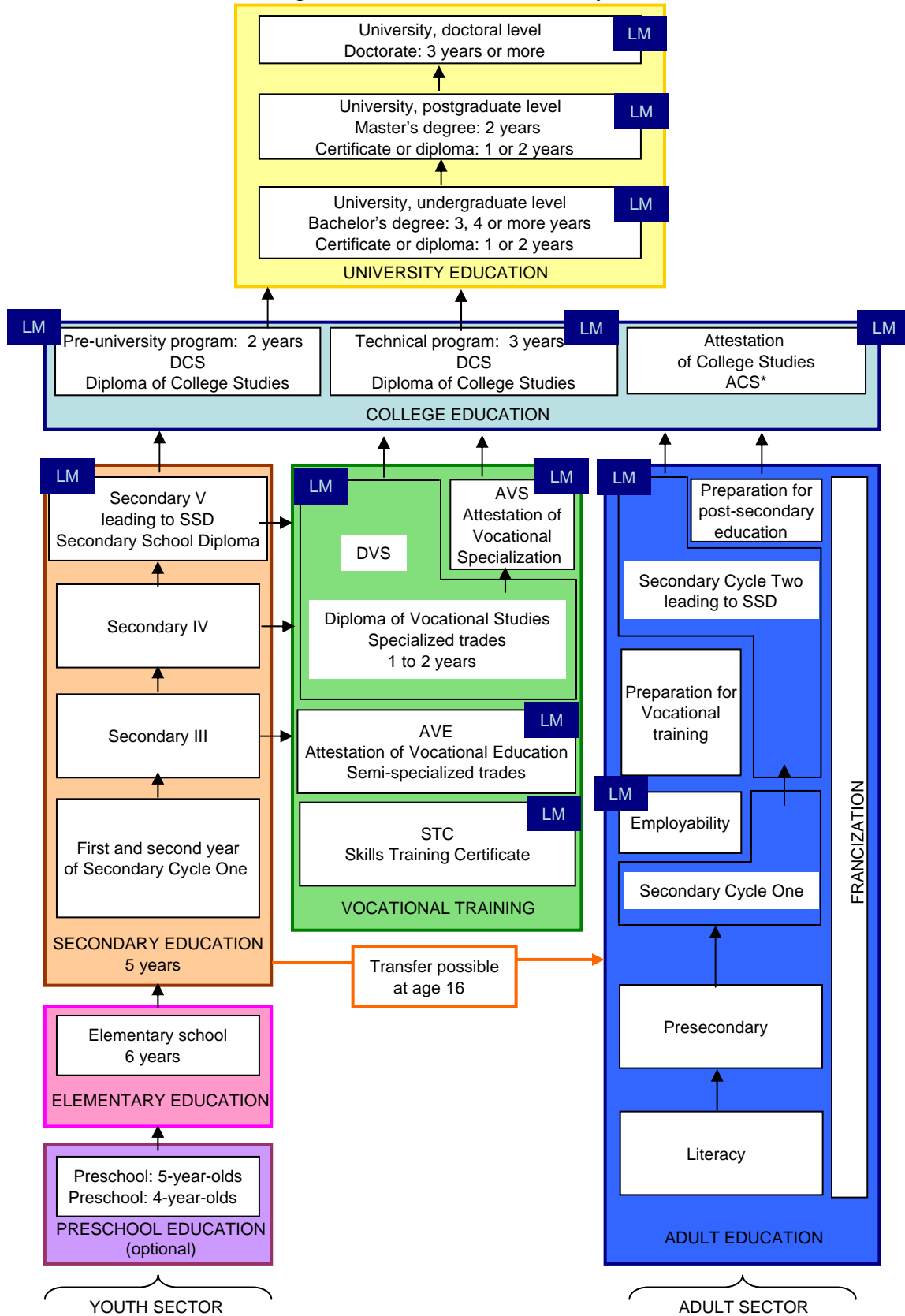
³. The diagram shows the education system as observed at the time of the study. Changes are under way in general education in the youth sector, as well as in vocational training and adult general education. The system will be substantially different in July 2007 with regard to general education at the secondary level. The elements of the diagram are explained in the appended "Explanatory notes for the diagram of the education system in Québec."

Second, technical training (at the college level) is provided by 48 CEGEPs and four government-run institutions offering programs leading to either a Diploma of College Studies (DCS) or an Attestation of College Studies (ACS). In addition, 15 private colleges offer DCS programs, and 27 non-subsidized private institutions offer the ACS only. Vocational and technical training is provided free of charge, and the state is the main funding provider.

Students leaving secondary school who wish to acquire further educational qualifications have several options. The *Education Indicators*, 2006 edition⁴ provide data on this topic.

⁴ Québec, Ministère de l'Éducation, du Loisir et du Sport, *Education Indicators*, 2006 edition, available on-line at: <<http://www.mels.gouv.qc.ca/stat/indic06/index.htm>>.

Diagram 1: Québec's education system



Note: The mark LM notes a possible access to the labour market

* Students can register without a SSD; they must have been out of school for two consecutive quarters.

Access to vocational training

Roughly 17.7% of all young adults under the age of 20 take some kind of secondary-level vocational training class; young adults make up almost one-third of all new enrollments in vocational training (32.2% in 2002-2003). Around two out of three students (under the age of 20) already hold an SSD when they enroll in vocational training.

School boards offer vocational training services to prepare students for jobs that, in the other Canadian provinces, are traditionally covered by apprenticeship programs.⁵ Almost all vocational programs in Québec can be taken as work/study programs.

Access to college-level programs

Almost 59.3% of secondary-school graduates go on to college after obtaining an SSD.

Québec's colleges offer two-year pre-university programs, and three-year technical programs that can, in some cases, lead to university programs.

Around 77.7% of graduates from the pre-university programs and 25.1% of graduates from the technical programs go on to full-time university programs the year after obtaining their DCS.

The colleges also offer technical programs of varying length that give access to a range of professional occupations or provide skills upgrading. The programs lead to an ACS, but are reserved for people who have spent time outside the education system. The average age of ACS students was 32.8 in 2004-2005.

4.3 Comparison of levels of schooling in Québec, Ontario and Canada

As indicated above, most young adults in Québec go on to postsecondary education. The comparative table below shows that 50.7% of Quebeckers aged 25 to 29 have a college or university diploma, and 14.4% have a vocational training diploma or an apprenticeship certificate. The percentage of young adults (aged 25 to 29) holding a trade school certificate or diploma or a college or university diploma is 3.8 percentage points higher in Québec than in Ontario and 4.9 percentage points higher than in Canada as a whole. A characteristic of Québec is that more people hold qualifications giving access to the labour market and fewer people have only a general secondary-level diploma.

⁵. Sandrine Prasil, *Registered Apprentices: The Class of 1992, a Decade Later*, Statistics Canada, Culture, Tourism and the Centre for Education Statistics, November 2005, catalogue no. 81-595-MIF2005035, p. 18.

Table 1: Highest degree, certificate or diploma for population aged 25 to 29, 2001 census

Diploma and level	Québec	Ontario	Canada
	(%)	(%)	(%)
No degree, certificate or diploma	16.9	14.2	16.9
High school graduation certificate	18.0	24.5	22.9
Trades certificate or diploma	14.4	8.2	11.4
College certificate or diploma	23.0	21.8	20.9
University certificate or diploma	27.7	31.4	28.0

Statistics Canada – Catalogue 97F0017XCB01006

Even though vocational and technical training is more specific in Québec than in the rest of Canada, an effort is made to facilitate the transition from vocational training to the college level. Other measures are in place to assist the transition from college to university, and to meet the training needs of individuals and local organizations. Section 4.4 gives examples of policies and measures implemented in the fields of vocational, technical and university-level education.

4.4 Policies and measures

Policies and measures in vocational training

At the level of ministerial policy, the Vocational and Technical Training Collaboration Plan is intended to maintain access to training in a context shaped by population decline and shifts in the regions; to meet the pressing need for a qualified work force; to enable students to make a smooth transition from one level of education to another; to lead more young people and adults to acquire training that will qualify them for a trade or profession; and to consolidate the Québec vocational and technical training system by making it more coherent and efficient.

Policies and measures in technical training

In the field of technical training, over 220 institutional agreements form part of the “Integrated DCS-BAC program,” which is based on agreements between colleges and universities that have harmonized the technical and university-level programs they offer so that students are able to obtain a technical Diploma of College Studies (DCS) and an undergraduate (Bachelor’s) degree in five years rather than six. The program is open to students who study without interruption and those who spend time on the labour market between the two programs.

Policies and measures at the university level

Québec’s universities have been active in implementing programs that reflect actual job market conditions. Paid placements as part of undergraduate engineering programs, clinical internships in hospitals as part of health sciences programs, and practical training periods in schools as part of teacher training programs are all examples of coordination with the labour market. Since the late 1990s, several universities have included “international” programs as part of their curriculum to prepare students for international careers; these include a trilingual (French, English, Spanish) Bachelor’s degree in business administration, combined with a period of study outside Québec.

The MELS supports these initiatives through several programs including support for labour market integration (\$10 million per year), scholarships for studies outside Québec (\$10 million per year), and support for basic teacher training (\$4.8 million per year). The programs were introduced in the wake of the Québec Policy on Universities, *Priorities for Our Future*.

5 LEARNING PATHS AND LABOUR MARKET INTEGRATION FOR GRADUATES

This section looks at the learning paths taken by vocational and technical training graduates. The previous learning path of graduates is analyzed by gender and by three age groups between the ages of 15 and 29, using the following variables:

- **educational continuity**, referring to whether or not a student enrolls each year, without interruption, from the start of secondary school to graduation with a diploma
- **educational linearity**, referring to whether or not a student follows the “expected” path, with or without interruption, from the start of secondary school to graduation with a diploma (see below for the precise definition of each group of graduates)
- when there is an interruption (non-continuity) in a student’s progress, the following variables are used to further define the previous learning path:
 - whether the interruption occurs in general education in the youth sector
 - whether the student has an SSD when the interruption occurs in general education in the youth sector
 - the level of education at which the student was enrolled at the last interruption

5.1 Vocational training graduates

5.1.1 Learning path

Table 2 shows that in 2003-2004, 22 432 students below the age of 30 obtained a vocational training (VT) diploma. This number can be broken down as follows:

- Roughly nine out of ten graduates obtained a DVS, while just over 2 000 obtained an AVS. The percentage was similar for both males and females.
- Given that students must hold a DVS to enroll for an AVS, it is no surprise that more of the older students obtained an AVS (6% among students under the age of 19 and 14.5% among students aged 25 to 29). This observation applies to both males and females.
- Regardless of age, roughly three out of five vocational training graduates are males. The percentage varies little across the age groups.
- However, among students who obtain an AVS, the percentage of females is closer to the percentage of males. In addition, in the 19 or under age group, women form in the majority of AVS graduates. Besides the greater educational persistence of females, it is possible to advance the hypothesis that they are more likely to choose more complex vocational specializations.
- Roughly half of all vocational training graduates, both male and female, under the age of 30 in 2003-2004 were aged 20 to 24, regardless of the type of diploma obtained (DVS or AVS). As discussed below, the characteristics of the previous learning paths of these graduates inevitably have repercussions on the breakdown of VT graduates by age group.
- Among the graduates who obtained a DVS, roughly as many were aged 19 and under as were aged 25 to 29—around 25%. On the other hand, more graduates aged 25 to 29 than graduates aged 19 and under obtained an AVS.

Table 2: Breakdown of vocational training graduates under the age of 30, by gender, age group and type of diploma, Québec as a whole, 2003-2004

Gender	Type of credential	Age group								<i>Distribution by age group (%)</i>		
		All ages		19 years and under		20-24 years		25-29 years		19 years and under	20-24 years	25-29 years
		N	%	N	%	N	%	N	%			
Total	Total	22,432		5,242		11,642		5,548		23.4	51.9	24.7
	DVS	20,175	89.9	49.27	94.0	10,502	90.2	4,746	85.5	24.4	52.1	23.5
	AVS	2,257	10.1	315	6.0	1,140	9.8	802	14.5	14.0	50.5	35.5
Male	Total	13,523		3,130		7,242		3,151		23.1	53.6	23.3
	DVS	12,226	90.4	2,981	95.2	6,517	90.0	2,728	86.6	24.4	53.3	22.3
	AVS	1,297	9.6	149	4.8	725	10.0	423	13.4	11.5	55.9	32.6
Female	Total	8,909		2,112		4,400		2,397		23.7	49.4	26.9
	DVS	7,949	89.2	1,946	92.1	3,985	90.6	2,018	84.2	24.5	50.1	25.4
	AVS	960	10.8	166	7.9	415	9.4	379	15.8	17.3	43.2	39.5
<i>Distribution by gender (%)</i>												
Male	Total		60.3		59.7		62.2		56.8			
	DVS		60.6		60.5		62.1		57.5			
	AVS		57.5		47.3		63.6		52.7			
Female	Total		39.7		40.3		37.8		43.2			
	DVS		39.4		39.5		37.9		42.5			
	AVS		42.5		52.7		36.4		47.3			

Source: Ministère de l'Éducation, du Loisir et du Sport, Banque de cheminements scolaires, December 2006

Previous learning path of graduates who obtained a DVS

The graduates aged 15 to 19, who made up roughly a quarter of the vocational training graduates who obtained a DVS, displayed the following characteristics (Table 3):

- Almost all had studied continuously, with no interruption. Roughly a quarter (a little less among males and a little more among females) had taken the continuous, linear “high road.”
- The remaining three-quarters had taken a nonlinear path. Most had spent time in general education for adults. This observation demonstrates the “flexibility” of the Québec system, which encourages students who experience difficulty in general education in the youth sector to continue their education and obtain qualifications.
- In contrast to the other age groups, a large majority of graduates aged 19 and under who had taken a non-continuous path had interrupted their education during their secondary studies or, for many, immediately after obtaining an SSD.

Over half of the graduates who obtained a DVS were in the 20 to 24 age group. They displayed the following characteristics:

- Roughly half, both male and female, had taken a continuous path with no interruption.
- A large majority of the graduates who had taken a continuous path had also chosen nonlinearity. They did not take the “expected route,” in other words they did not move directly from general education in the youth sector to vocational training. Roughly 20% of these graduates spent time in higher education.

- Almost all the students who had interrupted their studies for at least one year (non-continuous path) had also taken a nonlinear path.
- Roughly three out of ten graduates (29.8%) had interrupted their studies, but not during their general education in the youth sector. The interruption generally occurred late, at the secondary level (in vocational training or general education for adults) or at the college level.
- Among the graduates who had interrupted their general education in the youth sector, roughly two out of five had already obtained their secondary-level diploma (SSD or DVS).

Lastly, the graduates aged 25 to 29, also representing roughly a quarter of the vocational training graduates who obtained a DVS, displayed the following characteristics:

- A large majority had interrupted their studies for at least one year, and nine out of ten had interrupted their studies for at least two years.
- More than three out of five graduates had followed a non-continuous path, without interrupting their general education in the youth sector. Consequently, it appears that students who obtain a vocational training diploma at an advanced age (a DVS between the age of 25 and 29) are not necessarily young students who dropped out of secondary school. Many of these “mature” graduates are people who took a nonlinear path and interrupted their studies at least once after their secondary education.

Table 3: Previous learning path of vocational training graduates, having obtained a DVS, by gender and age group, Québec as a whole, 2003-2004

	All graduates			19 years and under			20-24 years			25-29 years		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number of graduates (N)	20,175	12,226	7,949	4,927	2,981	1,946	10,502	6,517	3,985	4,746	2,728	2,018
Distribution of graduates (%)												
Continuous path	52.1	53.3	50.3	95.3	96.1	94.1	51.5	52.5	49.8	8.7	8.7	8.8
Linear (direct transition from general education in the youth sector to vocational training)	6.3	5.5	7.7	24.8	21.5	30.0	0.5	0.4	0.7	0.0	0.0	0.0
Nonlinear	45.8	47.9	42.6	70.5	74.6	64.1	50.9	52.0	49.1	8.7	8.7	8.8
Via adult general education	32.3	35.2	27.9	61.5	67.0	53.1	31.1	33.5	27.1	4.7	4.5	5.1
Via higher education	13.5	12.7	14.7	8.9	7.6	11.0	19.9	18.5	22.0	4.0	4.2	3.8
Non-continuous path	47.5	46.4	49.2	4.6	3.8	5.8	48.2	47.3	49.7	90.5	90.8	90.2
Linear (direct transition from general education in the youth sector to vocational training)	2.4	2.3	2.5	2.4	2.1	3.0	2.6	2.6	2.5	2.0	2.0	2.0
Nonlinear	45.1	44.1	46.7	2.1	1.7	2.8	45.7	44.7	47.2	88.5	88.7	88.2
Duration of interruption of studies												
One year	15.5	15.4	15.6	4.2	3.4	5.3	23.6	23	24.2	9.1	9.6	8.5
Two or more years	32.0	31.0	33.7	0.4	0.4	0.4	24.6	24.0	25.5	81.4	81.2	81.7
Interruption during general education in the youth sector												
Without SSD	17.7	17.7	17.8	4.0	3.4	5.0	19.5	19.6	19.3	28.1	28.7	27.3
With SSD	10.8	11.3	10.1	1.6	1.5	1.8	10.8	11.4	9.8	20.6	21.9	18.8
Last interruption: higher education	6.9	6.4	7.7	2.4	1.9	3.2	8.7	8.3	9.5	7.5	6.7	8.4
Last interruption: secondary education	1.1	1.0	1.2	0.0	0.0	0.0	0.9	0.8	1.1	2.5	2.7	2.3
Last interruption: secondary education	16.7	16.7	16.7	4.0	3.4	5.0	18.6	18.9	18.1	25.5	26.0	24.9
No interruption during general education in the youth sector												
Last interruption: higher education	29.8	28.7	31.4	0.5	0.4	0.7	28.7	27.7	30.5	62.5	62.1	62.9
Last interruption: secondary education (vocational training or adult general education)	11.7	10.5	13.7	0.2	0.2	0.3	11.7	10.2	14.2	23.7	22.4	25.6
Last interruption: secondary education (vocational training or adult general education)	18.1	18.2	17.8	0.3	0.3	0.5	17.0	17.5	16.3	38.7	39.7	37.4
Undetermined	0.4	0.3	0.5	0.1	0.1	0.2	0.3	0.3	0.4	0.7	0.5	1.0

Source: Ministère de l'Éducation, du Loisir et du Sport, *Banque de cheminements scolaires*, December 2006

5.1.2 Labour market integration

Over the years, the MELS has conducted recurrent surveys of the employment situation of graduates of Québec's education system. An annual survey, *La Relance au secondaire en formation professionnelle*,⁶ provides data on the situations of graduates around nine months after they receive a DVS.

The 2005 survey was a telephone survey of 19 816 people aged 29 and under who had obtained a DVS during the 2003-2004 school year. The overall response rate was 71.7%, which meets the recognized standards for this type of survey.

- Almost nine months after graduating with a DVS, the employment rate was 78.0% (Table 4). There was little variation among the age groups: the results varied from 75.1% to 79.0%. The employment rate of DVS graduates under the age of 30 was well above the rate for the same age group in the Québec population as a whole (61.6%).

⁶ Available on-line at: <<http://www.mels.gouv.qc.ca/Relance/Secondaire/RelSec.htm>>.

- On the labour market, 86.0% of these graduates were in the active population (78.0% employed and 8.0% seeking employment). Their average unemployment rate was 9.3%, with a range from 7.9% to 11.1% depending on the age group. Their unemployment rates, for Québec as a whole, were below those recorded for the reference 15-29 age group, which was 12.0% in March 2005 (see Table II in the Appendix). If all young adults on the labour market are considered, their activity rate was over 16 percentage points lower and their unemployment rate over three percentage points higher than for the graduate group.

Table 4: Labour market situation, March 2005, of individuals aged 29 and under who obtained a DVS in 2003-2004

DVS graduates (aged 29 and under)	In employment	Seeking employment	Studying	Inactive	Unemployed	Job linked to training	Full time	Average gross weekly wage
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(\$)
Overall	78.0	8.0	10.4	3.6	9.3	78.5	88.6	534
Gender								
Male	77.9	8.9	10.4	2.8	10.2	79.0	95.0	587
Female	78.1	6.6	10.3	5.0	7.8	77.6	78.5	428
Age group								
19 and under	75.1	6.4	15.8	2.7	7.9	77.2	88.3	493
Age 20 to 24	79.0	8.1	9.1	3.8	9.3	77.7	89.5	536
Age 25 to 29	79.0	9.9	6.5	4.6	11.1	82.1	86.6	580

- At the end of March 2005, 78.0% of DVS graduates had a job. Within this group, 88.6% worked full-time (30 or more hours per week). The percentage varied little among the age groups, ranging from 86.6% to 89.5%. For all young adults under the age of 30 in Québec, the full-time employment rate was barely 65%. It also varied extensively depending on age (from 25% in the under 20 age group to 85% in the 25-29 age group) and gender (51% for females and 70% for males).
- Among the DVS graduates with a job, 78.5% said there was a link between their job and their training. A significantly higher score, 82.1%, was recorded for the 25-29 age group.
- Overall, in 2005, the average gross weekly wage for DVS graduates in full-time salaried employment was \$534. It increased significantly with age, from \$493 in the 19 and under age group to \$536 in the 20-24 age group and \$580 in the 25-29 age group.

A comparison with the major groups in the National Occupational Classification (NOC) shows that 48.1% of DVS graduates worked in jobs in the Trades, Transport and Equipment Operators group, followed by Sales and Service (17.3%) and Health Occupations (13.5%).

Table 5: Main occupations of DVS graduates with training-related jobs

Type of employment (NOC)	(%)
Management occupations (0)	0.1
Business, finance and administration occupations (1)	9.3
Natural science and applied science and related occupations (2)	3.9
Health occupations (3)	13.5
Occupations in social science, education, government service and religion (4)	0.1
Occupations in art, culture, recreation and sport (5)	1.8
Sales and service occupations (6)	17.3
Trades, transport and equipment operators and related occupations (7)	48.1
Occupations unique to primary industry (8)	2.8
Occupations unique to processing manufacturing and utilities (9)	3.1

In terms of the skill level⁷ generally required to occupy a job and perform job tasks, almost 70.0% of the training-related jobs occupied by DVS graduates required a college education or apprenticeship training, while 30.4% required between one and four years of secondary education.

Table 6: Skill level generally required for the type of job

Skill level (NOC)	(%)
Management (0)	0.1
Occupations usually requiring university education (Skill level A)	0.2
Occupations usually requiring college education or apprenticeship training (Skill level B)	68.5
Occupations usually requiring secondary school and/or occupation-specific training (Skill level C)	30.4
On-the-job training is usually provided for occupations (Skill level D)	0.9

By applying the North American Industry Classification System (NAICS) to the results of the Relance survey, the types of businesses that hire DVS graduates with training-related jobs can be identified. Businesses in the Construction sector (20.4%), followed by Manufacturing (16.8%) and Health Care and Social Assistance (15.2%), hire the highest percentages of DVS graduates with jobs linked to their training.

⁷ Skill levels are generally defined by the level and type of academic and practical training required to perform the tasks associated with a particular job.

Table 7: Main business sectors hiring DVS graduates with training-related jobs

Sector of activity of hiring business (NAICS)	(%)
Agriculture, Forestry, Fishing and Hunting (11)	2.9
Mining and Oil and Gas Extraction (21)	0.5
Utilities (22)	0.4
Construction (23)	20.4
Manufacturing (31-33)	16.8
Wholesale Trade (41)	2.3
Retail Trade (44-45)	10.7
Transportation and Warehousing (48-49)	3.9
Information and Cultural Industries (51)	0.6
Finance and Insurance (52)	0.7
Real Estate and Rental and Leasing (53)	0.6
Professional, Scientific and Technical Services (54)	3.6
Management of Companies and Enterprises (55)	0.0
Administrative and Support, Waste Management and Remediation Services (56)	1.4
Educational Services (61)	1.0
Health Care and Social Assistance (62)	15.2
Arts, Entertainment and Recreation (71)	0.4
Accommodation and Food Services (72)	5.2
Other Services (except Public Administration) (81)	12.0
Public Administration (91)	1.5

5.2 Technical training graduates

5.2.1 Learning path

Table 8 shows that in 2003-2004, 16 846 students below the age of 30 obtained a technical DCS. This number can be broken down by age and gender as follows:

- In contrast to the vocational training graduates, roughly three out of five technical training graduates were women (60.4%), a proportion that was similar for all three age groups.
- Around one out of seven technical training graduates in 2003-2004 was aged 25 to 29 (13.5%), and even fewer were aged 19 and under (7.6%). As expected, roughly four out of five technical training graduates were aged 20 to 24 (78.9%).

Previous learning paths of graduates who obtained a DCS

The previous learning paths of all technical training graduates resemble those observed for the 20-24 age group, which accounts for almost 80% of graduates. The main characteristics are as follows:

- A large majority of graduates (81.8%), both males and females, had studied continuously, with no interruption. In the 20-24 age group, the percentage was 89.4%.

- Almost half (49.6%) the graduates had taken a continuous, linear path⁸ (53.1% for males, 47.2% for females). In the 20-24 age group, half (52.4%) the graduates had gone directly into a college technical program, mainly from general education in the youth sector.
- For all graduates, roughly half those whose path was not continuous had experienced an interruption of one year (8.6% of the graduates had experienced a one-year interruption, compared to 8.5% who had experienced an interruption of at least two years). In the 20-24 age group, this was the case for a majority of graduates.
- For all graduates, roughly one out of seven (13.8%) had followed a non-continuous path, but had not experienced an interruption during general education in the youth sector.
- For graduates aged 20 to 24, roughly 25% switched programs at the college level before obtaining a technical DCS (22.3% for males and 26% for females).

Lastly, graduates aged 25 to 29, who accounted for 13.5% of all technical training graduates, displayed the following characteristics:

- Almost three out of ten graduates (27.7%) had not interrupted their studies, reflecting their academic perseverance. The percentage for males was 32.4%, compared to 24.5% for females.
- A significant percentage (8.2%) of graduates who had followed a continuous path changed direction after starting a university-level program.
- Despite their age, 6.2% of this graduate group had followed a continuous, linear path.
- Half this graduate group (49.8%) had experienced an interruption of two or more years.
- Over half this graduate group had experienced an interruption during their higher education. This indicates that, as was the case for vocational training graduates, students who obtain a technical training diploma at a late age are not necessarily secondary school non-completers, but rather higher education non-completers.

⁸. Linearity for technical training graduates was measured in terms of recent linearity. The graduates with a linear path were those who made a direct transition from general education in the youth sector to a technical college program, whether or not they previously moved from adult general education to vocational training. If, as is the case for vocational training graduates, the time spent in adult general education was considered to create a nonlinear path, the percentage of technical training graduates with a linear path would drop by a few percentage points.

Table 8: Previous education of technical training graduates, by gender and age group, Québec as a whole, 2003-2004

	All graduates			19 years and under			20-24 years			25-29 years		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number of graduates (N)	16,846	6,678	10,168	1,275	458	817	13,291	5,296	7,995	2,280	924	1,356
Distribution of graduates (%)												
Continuous path	81.8	82.9	81.0	99.3	99.6	99.1	89.4	90.2	88.8	27.7	32.4	24.5
Linear	49.6	53.1	47.2	97.2	97.8	96.8	52.4	57.3	49.3	6.2	9.4	4.1
Direct transition from general education in the youth sector to technical college program	46.6	48.7	45.2	96.6	96.7	96.6	49.5	52.5	47.5	1.8	3.0	1.0
Direct transition from vocational training to technical college program	3.0	4.4	2.0	0.5	1.1	0.2	2.9	4.7	1.8	4.4	6.4	3.0
Nonlinear	32.2	29.5	34.0	2.1	1.7	2.3	36.9	33.0	39.5	21.4	22.9	20.4
Transfer from another college program	20.2	18.6	21.2	0.9	1.1	0.9	24.5	22.3	26.0	5.6	6.5	5.0
Transfer from adult general education	8.1	7.1	8.8	1.2	0.7	1.5	8.9	7.5	9.8	7.6	7.9	7.4
Transfer from university	3.9	3.8	4.0	0.0	0.0	0.0	3.6	3.2	3.8	8.2	8.5	8.0
Non-continuous path	17.1	16.1	17.7	0.3	0.0	0.5	9.6	9.0	10.1	69.9	65.3	73.1
Linear	7.0	7.5	6.6	0.3	0.0	0.5	4.6	5.0	4.3	24.3	25.8	23.4
Nonlinear	10.1	8.6	11.1	0.0	0.0	0.0	5.0	3.9	5.7	45.6	39.5	49.7
Duration of interruption of studies												
One year	8.6	8.2	8.9	0.2	0.0	0.4	7.4	6.9	7.8	20.1	19.6	20.5
Two or more years	8.5	7.9	8.8	0.1	0.0	0.1	2.2	2.0	2.3	49.8	45.7	52.6
Interruption during general education in the youth sector												
Without SSD	1.0	1.0	1.0	0.2	0.0	0.4	0.8	0.8	0.8	2.9	2.7	3.0
With SSD	2.2	1.8	2.5	0.1	0.0	0.1	2.1	1.6	2.5	3.9	3.5	4.3
Last interruption: higher education	0.4	0.3	0.5	0.0	0.0	0.0	0.2	0.1	0.2	2.3	1.7	2.7
Last interruption: secondary education	2.8	2.5	3.0	0.3	0.0	0.5	2.8	2.4	3.0	4.6	4.4	4.6
No interruption during general education in the youth sector												
Last interruption: higher education	11.9	11.7	12.1	0.0	0.0	0.0	6.1	6.0	6.2	52.4	49.7	54.2
Last interruption: secondary education (vocational training or adult general education)	1.9	1.7	2.0	0.0	0.0	0.0	0.5	0.5	0.6	10.7	9.4	11.6
Undetermined	1.2	1.0	1.3	0.4	0.4	0.4	1.0	0.8	1.2	2.4	2.4	2.4

Source: Ministère de l'Éducation, du Loisir et du Sport, Banque de cheminements scolaires, December 2006

5.2.2 Labour market integration

The survey *La Relance au collégial en formation technique* is conducted annually to obtain information on the employment situation of holders of a technical Diploma of College Studies (DCS), around 10 months after graduation.

The 2005 survey was a telephone survey of 15 811 people aged 29 and under who had obtained a DCS during the 2003-2004 school year. The overall response rate was 72.2%, which meets the recognized standards for this type of survey.

Table 9: Labour market situation, March 2005, of individuals aged 29 and under who obtained a DCS in 2003-2004

DCS graduates (aged 29 and under)	In employment	Seeking employment	Studying	Inactive	Unemployed	Job linked to training	Full time	Average gross weekly wage
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(\$)
Overall	64.6	3.6	29.5	2.3	5.3	81.3	85.6	550
Gender								
Male	58.1	5.0	34.9	1.9	8.0	75.0	91.4	581
Female	68.7	2.7	25.9	2.6	3.8	84.7	82.5	532
Age group								
19 and under	50.5	2.3	45.6	1.6	4.4	82.6	83.4	516
Age 20 to 24	63.8	3.6	30.4	2.2	5.3	80.9	86.0	546
Age 25 to 29	79.4	5.0	11.9	3.8	5.9	82.7	84.7	587

- Almost ten months after obtaining their technical Diploma of College Studies (technical DCS), 64.6% of graduates had a job.
- The employment rate varied widely depending on age, from 79.4% in the 25-29 age group to 63.8% in the 20-24 age group and 50.5% in the 19 and under age group. The number of graduates studying rose inversely to age: younger graduates were more likely to be studying. For graduates aged 19 and under, 45.6% were studying at the end of March 2005, compared to 30.4% in the 20-24 age group and only 11.9% in the 25-29 age group.
- In terms of gender, there were significant differences in activity rate among technical DCS graduates (63.1% for males compared to 71.4% for females), as well as in employment rate (58.1% for males compared to 68.7% for females) and the percentage studying (34.9% for males compared to 25.9% for females).
- At the end of March 2005, 64.6% of technical DCS graduates had a job. Within this group, 85.6% worked full-time (30 or more hours per week). The range among the age groups was small, from 83.4% to 86.0%.
- Male graduates were far more likely to be in full-time employment. Although they were less likely to have a job, that job was more likely to be full-time (91.4% for men compared to 82.5% for women).

- Among the technical DCS graduates with jobs, 81.3% said there was a link between their job and their training. Men were less likely than women to report a link (75.0% versus 84.7%).
- Overall, in 2005, the average gross weekly wage for technical DCS graduates in full-time salaried jobs was \$554. It increased significantly with age, from \$516 in the 19 and under age group to \$546 in the 20-24 age group and \$587 in the 25-29 age group.

A comparison with the major groups in the National Occupational Classification (NOC) shows that 26.2% of technical DCS graduates worked in jobs in the Health occupations group, followed by Natural science and applied science and related occupations (18.1%) and Occupations in social science, education, government service and religion (17.0%).

Table 10: Main occupations of technical DCS graduates with training-related jobs

Type of employment (NOC)	(%)
Management occupations (0)	1.3
Business, finance and administration occupations (1)	10.5
Natural science and applied science and related occupations (2)	18.1
Health occupations (3)	26.2
Occupations in social science, education, government service and religion (4)	17.0
Occupations in art, culture, recreation and sport (5)	6.4
Sales and service occupations (6)	12.6
Trades, transport and equipment operators and related occupations (7)	4.4
Occupations unique to primary industry (8)	1.4
Occupations unique to processing manufacturing and utilities (9)	2.2

In terms of the skill level⁹ required to occupy a job, 63.4% of the training-related jobs occupied by technical DCS graduates required a college education or apprenticeship training.

In addition, 18.5% required a university education. Almost 90% of these were nursing graduates, since nursing generally requires a university education in the rest of Canada.

Table 11: Skill level generally required for the type of job

Skill level (NOC)	(%)
Management (level 0)	1.3
Occupations usually requiring university education (Skill level A)	18.5
Occupations usually requiring college education or apprenticeship training (Skill level B)	63.4
Occupations usually requiring secondary school and/or occupation-specific training (Skill level C)	15.9
On-the-job training is usually provided for occupations (Skill level D)	0.9

⁹ Skill levels are generally defined by the level and type of academic and practical training required to perform the tasks associated with a particular job.

By applying the North American Industry Classification System (NAICS) to the results of the Relance survey, the types of businesses that hire technical DCS graduates with training-related jobs can be identified. Businesses in the Health Care and Social Assistance group (39.4%), followed in distant second place by Professional, Scientific and Technical Services (13.6%) and Manufacturing (12.1%), hire the highest percentages of DVS graduates with training-related jobs.

Table 12: Main business sectors hiring technical DCS graduates with training-related jobs

Sector of activity of hiring businesses (NAICS)	(%)
Agriculture, Forestry, Fishing and Hunting (11)	1.8
Mining and Oil and Gas Extraction (21)	0.4
Utilities (22)	0.6
Construction (23)	1.5
Manufacturing (31-33)	12.1
Wholesale Trade (41)	1.2
Retail Trade (44-45)	3.3
Transportation and Warehousing (48-49)	1.4
Information and Cultural Industries (51)	2.7
Finance and Insurance (52)	1.8
Real Estate and Rental and Leasing (53)	0.3
Professional, Scientific and Technical Services (54)	13.6
Management of Companies and Enterprises (55)	0.0
Administrative and Support, Waste Management and Remediation Services (56)	
Educational Services (61)	6.5
Health Care and Social Assistance (62)	39.4
Arts, Entertainment and Recreation (71)	1.1
Accommodation and Food Services (72)	2.3
Other Services (except Public Administration) (81)	1.5
Public Administration (91)	6.9

6 LABOUR MARKET INTEGRATION OF YOUNG ADULTS WITHOUT A SECONDARY SCHOOL DIPLOMA WHO ARE NO LONGER STUDYING

The objective of this section is to examine the labour market integration of non-completers and to compare their situation with, first, all people in the same age group, and second, people having obtained an educational qualification for the labour market, namely a DVS. For this purpose, a “non-completer” is defined as a person aged 15 to 29 who is no longer in the education system and has not obtained an SSD.¹⁰ Data from the 2001 census and the 2001 MELS Relance survey were used. Since there are no data on the learning paths followed, it is not possible to compare labour market integration with possible paths; in general, the target group dropped out from general education in the youth sector, vocational training or general education for adults.

6.1 Main labour market indicators

People aged 15 to 29 who have no diploma and are no longer studying have a lower employment rate than the general rate for their age group (53% compared to 61%). Only non-completers aged

¹⁰. The holders of secondary school diplomas or certificates, or trade diplomas or certificates, are considered to be graduates.

15 to 19 have a higher employment rate than the general rate for their age group, clearly because many people of this age are still at school. The unemployment rate confirms this picture; non-completers aged 15 to 19 have an unemployment rate 9 points higher than the general rate for their age group (24.6% compared to 15.6%).

The labour market situation improves with age, although non-completers do not progress as fast as their age group. Female non-completers are less present on the labour market than males and females in general. In addition, the labour market indicators show that the situation of female non-completers is more precarious (lower activity and employment rates, higher unemployment rate).

If the situation of non-completers is compared to that of DVS graduates, the gap is even wider, regardless of age or gender. DVS graduates have a clearly more favourable employment situation than the under-30s as a whole. More than three out of four DVS graduates have a job, and nine times out of ten it is a full-time job.

Table 13:
Labour market situation of people aged 15 to 29
by age group and gender:
non-completers no longer in the education system,
total population for the same age group, and
DVS graduates
Québec as a whole, 2001

	Age group			Gender		Total
	15-19	20-24	25-29	Female	Male	
Non-completers no longer in the education system						
Activity rate	56.6%	73.5%	72.3%	53.3%	79.1%	69.0%
Employment rate	41.2%	56.0%	58.1%	39.0%	62.4%	53.2%
Proportion of full-time jobs	66.2%	87.0%	88.9%	72.4%	88.5%	83.9%
Unemployed	24.6%	19.5%	15.8%	20.9%	18.2%	19.0%
Number of individuals	43 485	67 480	68 140	70 385	108 715	179 105
Total population aged 15 to 29						
Activity rate	43.1%	79.1%	85.0%	66.6%	71.3%	69.0%
Employment rate	36.4%	69.7%	77.9%	59.7%	62.6%	61.2%
Proportion of full-time jobs	21.8%	60.1%	83.4%	55.5%	68.0%	62.0%
Unemployed	15.6%	11.9%	8.3%	10.3%	12.1%	11.3%
Number of individuals	460 400	485 215	438 870	684 025	700 465	1 384 485
DVS graduates aged 15 to 29						
Activity rate	80.1%	83.7%	88.9%	83.1%	84.1%	83.7%
Employment rate	72.6%	75.3%	79.0%	74.7%	75.6%	75.3%
Proportion of full-time jobs	89.9%	89.7%	88.7%	80.5%	95.5%	89.5%
Unemployed	9.3%	10.1%	11.1%	10.1%	10.1%	10.1%
Number of individuals	4 289	10 742	3 650	7 646	11 035	18 681

Source: Statistics Canada, 2001 Census and MELS, *La Relance au secondaire*, 2001.

6.2 Main features of the jobs held

The difference between non-completers and their contemporaries on the labour market is not limited to the quantitative aspects. Other notable differences exist in terms of the jobs held and the sectors of activity involved.

Table 14 shows that almost three out of four non-completers with jobs worked in fields with no particular training requirements. More specifically, 30.7% had jobs requiring elementary-level skills, and 44% had jobs requiring between one and four years of secondary school (intermediate skill level). This situation contrasts strongly with that of the 15 to 29 age group in general, in which only one person out of two (57%) had a job of this type (Tables 14 and 15).

The proportion of jobs in the elementary category declines with age. For non-completers, these jobs are replaced by intermediate level or technical occupations. For the age group as a whole, the improvement is even greater for technical, professional and management occupations. One out of four non-completers aged 25 to 29 has an elementary job, compared to one person out of ten for the 25 to 29 age group as a whole.

Almost all people under 30 years of age with a DVS from their vocational training have a technical (67.1%) or intermediate (30.4%) job. Their training has therefore allowed them to join the labour market at a skill level that matches their qualifications.

Table 14: Skill level of the experienced labour force without educational qualifications and not at school, by age group and gender, Québec (in %)

Skill level	Age group			Gender		Total
	15-19	20-24	25-29	Female	Male	
Management (level 0)	0.3	2.3	4.6	3.4	2.6	2.8
Professional (level A)	0.4	0.6	1.2	1.2	0.6	0.8
Technical (level B)	15.3	21.3	25.3	17.9	23.5	21.7
Intermediate (level C)	39.6	45.2	45.1	44.3	43.9	44.0
Elementary (level D)	44.4	30.6	23.8	33.2	29.5	30.7
Total	%	100	100	100	100	100
	N	25 680	51 415	40 320	87 245	127 570

Source: 2001 Census, Statistics Canada.

Table 15: Skill level of the experienced labour force, by age group and gender, Québec (in %)

Skill level	Age group			Gender		Total
	15-19	20-24	25-29	Female	Male	
Management (level 0)	0.3	3.0	6.7	3.6	4.3	3.9
Professional (level A)	1.0	8.9	21.1	14.6	9.9	12.1
Technical (level B)	15.9	28.5	31.5	24.6	29.6	27.2
Intermediate (level C)	38.5	39.1	30.9	37.9	33.7	35.7
Elementary (level D)	44.3	20.5	9.7	19.3	22.6	21.0
Total	%	100.0	100.0	100.0	100.0	100.0
	N	185 440	373 465	364 935	440 385	483 450 923 840

Source: 2001 Census, Statistics Canada.

Given that non-completers tend to hold jobs requiring few qualifications, it comes as no surprise that a high percentage of them work in the manufacturing (27%), retail trade (17%) and accommodation and food services (12%) sectors (Table 16). These sectors are slightly less in evidence for the 20-24 and 25-29 age groups. Differences between the genders exist in some sectors such as manufacturing (21% for females compared to 30% for males), retail trade (23% for females compared to 14% for males) and accommodation and food services (22% for females compared to 8% for males).

The average salary of non-completers is below the average salary for their age group as a whole. Their average employment income is \$21 374, compared to \$27 105 for the 15-29 age group as a whole (Table 17). The distribution by wage level depends on age: 72% of non-completers aged 15 to 19 earn less than \$20 000, compared to 52% in the 20 to 24 age group and 33% in the 25-29 age group. Average salary depends on age, varying from \$15 306 for the 15-19 age group to \$24 391 for the 25-29 age group. A comparison by gender shows that, among non-completers, 63% of females earn less than \$20 000, compared to just 38% of males.

In short, people without educational qualifications experience difficulty on the labour market. Almost one-third are inactive, and among job-seekers, one-fifth are unemployed. Employed non-completers have low-paid jobs that require few skills and are concentrated in a small number of economic sectors.

Table 16: Distribution of the experienced labour force, non-completers and not attending school, by sector of activity, age group and gender, Québec (in %)

Business sector	Age group			Gender		Total
	15-19	20-24	25-29	Female	Male	
Agriculture, forestry, fishing and hunting	5.7	5.0	5.0	2.0	6.6	5.1
Mining and oil and gas extraction	0.3	0.5	0.6	0.0	0.7	0.5
Utilities	0.0	0.1	0.1	0.1	0.1	0.1
Construction	4.5	5.4	7.3	0.9	8.3	5.9
Manufacturing	23.7	28.9	27.1	21.1	29.9	27.2
Wholesale trade	5.0	5.6	6.2	3.1	6.9	5.7
Retail trade	21.1	17.2	14.3	23.3	13.9	16.8
Transportation and warehousing	2.4	4.8	6.7	1.7	6.6	5.1
Information and cultural industries	1.4	0.9	1.0	1.3	0.9	1.0
Finance and insurance	0.2	0.5	0.5	0.9	0.2	0.4
Real estate and rental and leasing	1.1	0.9	1.0	1.0	1.0	1.0
Professional, scientific and technical services	1.1	1.3	1.3	1.2	1.3	1.2
Management of companies and enterprises	0.0	0.0	0.0	0.0	0.0	0.0
Administrative and support, waste management and remediation services	5.7	5.2	5.5	3.7	6.2	5.4
Educational services	0.6	0.6	0.8	1.1	0.4	0.6
Health care and social assistance	2.3	3.0	3.9	7.7	1.2	3.2
Arts, entertainment and recreation	2.4	1.5	1.6	2.1	1.6	1.7
Accommodation and food services	16.4	12.2	10.6	22.3	7.9	12.4
Other services (except public administration)	4.8	4.8	4.7	5.0	4.7	4.8
Public administration	1.3	1.5	1.8	1.6	1.6	1.6
Total	%	100	100	100	100	100
	N	25 690	51 415	50 480	40 305	87 280
						127 585

Source: 2001 Census, Statistics Canada

Table 17: Wage and salary groups of non-completers not attending school and having worked all year full-time,¹ by age group and gender, Québec (in %)

Wages and earnings	Age group			Gender		Total
	15-19	20-24	25-29	Female	Male	
With wages and earnings	96.6	93.9	92.6	93.0	93.7	93.6
\$1 - \$9 999	21.6	11.5	8.0	13.9	9.6	10.7
\$10 000 - \$19 999	50.6	40.9	24.7	49.1	28.8	33.9
\$20 000 - \$29 999	18.9	29.1	32.5	21.2	32.7	29.8
\$30 000 - \$39 999	4.3	9.3	17.2	6.5	14.8	12.7
\$40 000 - \$49 999	0.7	2.1	6.8	1.7	5.1	4.3
\$50 000 - \$59 999	0.2	0.7	2.1	0.3	1.7	1.4
\$60 000 and over	0.3	0.2	1.3	0.2	1.0	0.8
Without wages and earnings	3.4	6.0	7.3	7.0	6.2	6.4
Average wages and earnings \$	15 306	19 157	24 391	17 025	22 818	21 374
Median wages and earnings \$	14 990	18 212	23 269	15 923	22 031	20 400
Total	%	100	100	100	100	100
	N	4 615	20 725	12 445	37 405	49 855

1. People having worked 49 to 52 weeks during the reference year (2000), mainly full-time (30 or more hours per week)

Source: 2001 Census, Statistics Canada

7 OVERVIEW

This study clearly demonstrates the advantage of obtaining a diploma to gain access to the labour market. The holders of an educational qualification (DVS or technical DCS) enjoy better job prospects than non-completers.¹¹ In other words, DVS and DCS holders, compared to non-completers, already have a form of “winning” trajectory for labour market integration, regardless of their learning path—in terms of access to jobs, but above all in terms of quality of the job obtained. This includes job characteristics, and also the choices made by individuals in terms of their training. An education that provides qualifications is profitable for both individuals and society.¹²

With regard to learning paths, the situation varies according to the diploma obtained. Technical training graduates follow more continuous, more linear paths than vocational training graduates, who often have atypical paths. Table 18 shows that half of all technical training graduates have followed a continuous, linear path, compared to only a small number of vocational training graduates. With regard to the age of graduates, the results are variable and predictable. Younger (age 19 and under) DVS and DCS graduates have often followed a continuous, linear path; in addition, they are more likely than older graduates to continue their education. On the other hand, for both DVS and DCS graduates, the percentage in or seeking employment increases with age. Although there are no major differences in the behaviour of male and female DVS graduates in terms of learning paths and labour market integration, the reverse is true for DCS graduates. For this group, male graduates are more likely to have followed a continuous, linear path (53% compared to 47%), and are also more likely to continue their education after obtaining a diploma (35% compared to 26%) (Table 18).

Despite the rigorous approach used, this study has limitations that should be noted here. It is not a complete longitudinal study. The MELS does not have the longitudinal data that would allow student paths to be monitored right up to the labour market. The study relies on various sources of data (MELS, Statistics Canada, etc.), and it was not possible to link the academic path of each individual graduate to his or her entry onto the labour market. It would therefore be unwise to draw conclusions concerning the effects of various learning paths on labour market integration. This study is a first step towards two further research possibilities. First, the results presented here could be broken down to identify a small number of winning trajectories, especially based on the program, region and socio-demographic profile of individual graduates. Second, the learning paths of other groups could be analyzed, including the holders of Bachelor’s degrees, secondary school non-completers (or dropouts), those who obtain college or university certificates, and those who complete training that does not provide a secondary or college level qualification.

¹¹. Technical DCS and DVS graduates accounted for 38% of people leaving the education system in 2003. Roughly 20% left without a diploma (Table 5.1, *Education Indicators 2006*, p. 108).

¹². Education Statistics Bulletin no. 32, *The Return on a Bachelor’s Degree*, is available on-line at: <<http://www.mels.gouv.qc.ca/stat/index.htm>>. See also Bulletin no. 16, *Education pays!*

Table 18: Previous learning paths of vocational training and technical training graduates in 2003-2004 and their labour market situation in 2005, by gender and age group, Québec as a whole

Vocational training graduates who obtained a DVS in 2003-2004							
	Learning path			Employed	Labour market situation in 2005		
	Continuous and linear	Intermediate	Non-continuous, nonlinear		Seeking employment	Studying	Not in the labour force
All	6.3	48.6	45.1	78.0	8.0	10.4	3.6
Gender							
Male	5.5	50.4	44.1	77.9	8.9	10.4	2.8
Female	7.7	45.6	46.7	78.1	6.6	10.3	5.0
Age groups							
19 and under	24.8	73.1	2.1	75.1	6.4	15.8	2.7
20-24 years	0.5	53.8	45.7	79.0	8.1	9.1	3.8
25-29 years	0.0	11.5	88.5	79.0	9.9	6.5	4.6
Technical training graduates in 2003-2004							
	Learning path			Employed	Labour market situation in 2005		
	Continuous and linear	Intermediate	Non-continuous, nonlinear		Seeking employment	Studying	Not in the labour force
All	49.6	40.3	10.1	64.6	3.6	29.5	2.3
Gender							
Male	53.1	38.3	8.6	58.1	5.0	34.9	1.9
Female	47.2	41.7	11.1	68.7	2.7	25.9	2.6
Age groups							
19 and under	97.2	2.8	0.0	50.5	2.3	45.6	1.6
20-24 years	52.4	42.6	5.0	63.8	3.6	30.4	2.2
25-29 years	6.2	48.2	45.6	79.4	5.0	11.9	3.8

Source: Ministère d'Éducation, du Loisir et du Sport, Banque de cheminements scolaires, décembre 2006, La Relance des diplômés de la
 Note: Continuous and linear: Graduates who took the "high road," studying without interruption and following an "expected" path.

APPENDIXES

Table I: Previous learning paths of vocational training graduates holding an AVS, by gender and age group, Québec as a whole, 2003-2004

	All graduates			19 years and under			20-24 years			25-29 years		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number of graduates (N)	2,257	1,297	960	315	149	166	1,140	725	415	802	423	379
Distribution of graduates (%)												
Continuous path	46.2	47.4	44.5	94.6	94.0	95.2	57.5	59.3	54.5	11.0	10.6	11.3
Linear (direct transition from general education in the youth sector to vocational training)	2.0	1.5	2.6	14.0	12.8	15.1	0.1	0.1	0.0	0.0	0.0	0.0
Nonlinear	44.2	45.9	41.9	80.6	81.2	80.1	57.5	59.2	54.5	11.0	10.6	11.3
Via adult general education	31.4	33.8	28.1	73.3	72.5	74.1	39.5	43.4	32.5	3.4	3.5	3.2
Via higher education	12.8	12.1	13.8	7.3	8.7	6.0	18.0	15.7	21.9	7.6	7.1	8.2
Non-continuous path	50.2	50.5	49.9	5.4	6.0	4.8	41.9	40.7	44.1	79.7	83.0	76.0
Linear (direct transition from general education in the youth sector to vocational training)	1.6	1.5	1.7	2.5	3.4	1.8	1.1	0.6	2.2	1.7	2.4	1.1
Nonlinear	48.7	49.0	48.2	2.9	2.7	3.0	40.8	40.1	41.9	77.9	80.6	74.9
Duration of interruption of studies												
One year	13.6	14.8	12.1	4.8	5.4	4.2	19.3	19.6	18.8	9.1	9.9	8.2
Two or more years	36.6	35.7	37.8	0.6	0.7	0.6	22.6	21.1	25.3	70.6	73.0	67.8
Interruption during general education in the youth sector												
Without SSD	6.8	7.4	5.9	2.5	2.0	3.0	5.4	5.8	4.6	10.5	12.1	8.7
With SSD	5.0	4.9	5.2	2.2	3.4	1.2	5.9	5.1	7.2	4.9	5.0	4.7
Last interruption: higher education	1.5	1.0	2.2	0.0	0.0	0.0	0.6	0.6	0.7	3.4	2.1	4.7
Last interruption: secondary education	10.3	11.3	9.0	4.8	5.4	4.2	10.6	10.3	11.1	12.0	14.9	8.7
No interruption during general education in the youth sector												
Last interruption: higher education	19.1	16.8	22.2	0.0	0.0	0.0	12.4	10.5	15.7	36.2	33.6	39.1
Last interruption: secondary education (vocational training or adult general education)	19.4	21.4	16.6	0.6	0.7	0.6	18.3	19.3	16.6	28.2	32.4	23.5
Undetermined	3.6	2.1	5.6	0.0	0.0	0.0	0.5	0.0	1.4	9.4	6.4	12.7

Source: Ministère de l'Éducation, du Loisir et du Sport, Banque de cheminements scolaires, December 2006

Table II: Main labour market indicators for the under-30s by age group and gender, Québec as a whole, March 2005

	Age group			Gender ¹		Total ¹
	15-19	20-24	25-29	Female	Male	
Population	454 000	496 300	519 000	707 400	750 500	1 469 300
In the labour force	214 100	381 400	435 100	471 400	543 400	1 030 600
Employed	168 600	332 500	404 400	421 800	467 100	905 500
Full-time employment	42 500	204 600	343 800	214 300	326 000	591 000
Part-time employment	126 100	127 900	60 600	207 400	141 000	314 600
Unemployed	45 500	48 900	30 800	49 600	76 400	125 200
Not in the labour force	239 800	114 900	83 900	236 000	206 900	438 600
Unemployed	21.3	12.8	7.1	10.5	14.1	12.1
Labour force participation rate	47.2	76.8	83.8	66.6	72.4	70.1
Employment rate	37.1	67.0	77.9	59.6	62.2	61.6

1: Data obtained by adding the totals for the three age groups.

Source: Statistics Canada, EPA 2006, CD1T01mn.

Sheet 1: Non-completion of technical college programs

http://www.mels.gouv.qc.ca/stat/abandon_coll/BrochureAbandonTechnique30_01_04.pdf

Detailed tables: http://www.mels.gouv.qc.ca/stat/abandon_coll/Abandon_coll_tabldet.pdf

The main reasons for non-completion of technical college programs are the programs' failure to meet students' expectations, and the attraction of the labour market. These findings are taken from a survey of non-completion¹³ conducted by the MELS and covering 15 000 students who dropped out between 1998 and 2000. Other factors of lesser importance included academic difficulties, financial problems and living away from home, all of which played a role in the decision to drop out from college. The study shows that when they dropped out, a significant percentage of these students had few or no financial difficulties (65%), but worked 25 or more hours per week (41%) and drew most of their income from employment. Two years after dropping out, most of these students (84%) were in paid jobs, of which one-third were related to their last program. The 20-29 age group were more integrated into the labour market than the 16-19 age group and the over-30 age group. The survey also showed that many students considered the interruption of their program to be "temporary." One out of five had resumed their education at the time of the survey, mainly to obtain a Diploma of Vocational Studies (26%), a technical Diploma of College Studies (19%), an Attestation of College Studies (12%), a pre-university Diploma of College Studies (10%) or a Bachelor's degree (10%). They had done this in order to obtain a qualification and improve their job prospects.

Sheet 2: Vocational training

http://www.mels.gouv.qc.ca/stat/recherche/doc05/REGARDFP_44289.pdf

Only 15% of Secondary Cycle Two students intend to complete a Diploma of Vocational Studies, compared to 55% who hope to obtain a university degree, as reported in a MELS survey¹⁴ of 5 000 students that focused on their academic and career projects. The survey shows that the students were thinking about their future, and that the influence of their mother, and to a lesser extent of their father and their friends, was an important factor in their career choices. The reasons given by students intending to register for a vocational training (VT) program included an interest in a specific trade, good job prospects, hands-on manual training, and the possibility of leaving school quickly. The students who did not intend to enroll in VT intended to go on to higher education, knew little about VT and the careers to which it gave access, and were undecided about their future. However, 75% of students said they had seen VT advertising in their schools and 60% said they had seen it on television; the rates were higher for French-speakers than for English-speakers. Boys, students at French-language schools and students in public schools were more likely to plan to enroll in VT. However, overall, the influence of their parents was paramount. Along with academic results, the attitudes, positive remarks and academic aspirations of the parents concerning their children's education were the main variables influencing students in their choice of path.

¹³. Québec, Ministère de l'Éducation, du Loisir et du Sport, *L'abandon des études à la formation collégiale technique: résultats d'une enquête*, overview, 2004.

¹⁴. Valérie Sayset and Sylvie Rhéault, *Regard sur la formation professionnelle: une enquête auprès d'élèves du 2^e cycle du secondaire*, Québec: Ministère de l'Éducation, du Loisir et du Sport, 2005.

Sheet 3: Dynamics of the creation and consolidation of an employment link among non-completers

<<http://www.fqrsc.gouv.qc.ca/recherche/pdf/rapp-mt-malenfant.pdf>>

Non-completers see the labour market as a way to escape an education system they do not enjoy. This finding is taken from a qualitative survey¹⁵ of the employment link of 34 non-completers aged 16 to 24, conducted by university researchers in the Chaudière-Appalaches and la Montérégie regions. These non-completers had left secondary school without a general education or vocational training diploma, or with a general education diploma, or had started but not finished a college program. The interviews revealed that, despite their lack of qualifications, most had found jobs quickly. However, the jobs were unsatisfactory, and they all hoped they would find better jobs that they could enjoy after a few years of work. They admitted that they did not know much about the consequences of dropping out on their career trajectory when they made their decision, or about their prospects on the labour market. The study also showed no employment link. The non-completers wanted to have a stable job and be part of a working environment where they were appreciated and recognized, but their employers took a different view. In this situation, the fact that several had resumed their education was understandable and justifiable, given their unsatisfactory working conditions and their goal of obtaining an educational qualification to improve their employment situation.

¹⁵. Romaine Malenfant et al., *La dynamique de la création et de la consolidation d'un lien d'emploi chez les jeunes non-diplômés*, November 2006, Recherche sur les impacts psychologiques, organisationnels et sociaux du travail (RIPOST), Université du Québec en Outaouais.

Explanatory notes for the diagram of the education system in Québec¹⁶

General education – youth sector

Mandatory schooling begins at age six with elementary education, which lasts six years. Students then go on to secondary education, which lasts five years. After completing their secondary education, students can be awarded the Secondary School Diploma (SSD). If they have the required prerequisites, students can also start a vocational training program before they obtain an SSD.

General education – adult sector

All individuals aged over 16 can register for adult education. Depending on their educational attainment, they can be enrolled in:

1. Francization classes
which provide language support to help adults whose mother tongue is not French to improve their skills in French, language of instruction.
2. Literacy classes
which give students access, where applicable, to other educational services, increase their abilities in various areas of learning, and help them perform their family and social duties.
3. Presecondary classes
to give students access to secondary education.
4. Secondary Cycle One classes
which correspond to the three first years of youth-sector secondary education and are designed to help adult students develop their knowledge in basic subjects and electives and gain access to Secondary Cycle Two or vocational training.
5. Employability classes
are intended to give adults with a mental, intellectual, social or physical disability access to a personalized path to improve their acquisition of basic skills for their activities and social duties, to acquire the skills needed to join and remain on the labour market, or to continue with their education.
6. Secondary Cycle Two classes
are intended to help adults continue their education by mastering knowledge in the basic subjects and electives and obtain a Secondary School Diploma or enter vocational training or postsecondary education.
7. Preparation for vocational training
is intended to give adults the prerequisites they need to meet the admission requirements of their chosen program.
8. Preparation for postsecondary education
is intended to give adults the necessary prerequisites.

Vocational training

Vocational training offers programs leading to the Diploma of Vocational Studies (DVS), Skills Training Certificate (STC), Attestation of Vocational Education (AVE) or Attestation of Vocational Specialization (AVS), all of which have different admission requirements.

¹⁶. The diagram shows the education system as it existed at the time of the study. Changes are under way in general education in the youth sector, vocational training and adult general education. The system will be substantially different in July 2007 with regard to general education at the secondary level. Another description of Québec's education system can be found in the brochure *Education in Québec: an Overview*, available on-line at: <<http://www.mels.gouv.qc.ca/daic/pdf/educqcfra.pdf>>.

College education

College education is offered to SSD or DVS holders who meet the general and specific admission requirements for a college-level program. There are two types of training: two-year pre-university programs that lead to university education and three-year technical programs that lead to specialized technical trades and the labour market. Technical DCS holders can also enter university. Colleges also offer shorter ACS programs leading to specialized trades.

University education

DCS holders can enter undergraduate university programs provided they meet the admission requirements of the university concerned. Applicants without a DCS may also be admitted to an undergraduate program, on certain conditions.

The requirements for admission to Master's and Doctoral programs are similar to those in force in most other North American universities.



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