

Who Doesn't Go To Post-Secondary Education?

Final Report of Findings

for

Colleges Ontario

Collaborative Research Project

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The entire report will be seen: www.collegesontario.org

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Executive Summary

Introduction

This study¹ was designed to develop a better understanding of the characteristics of the young people who do not pursue post-secondary education (PSE)² directly after leaving secondary school, and the factors that shaped their decision making.

Quantitative and qualitative data were used in this study. The quantitative component relied on data files from the Ontario Ministry of Education which included demographic information and marks records for approximately 750,000 secondary school students in each of their school years from 2001-02 to 2006-07. These files included integrated data on applications and registrations in university and college which the Ministry of Education (MOE) had received from the Ontario Universities' Application Centre (OUAC) and the Ontario College Application Service (OCAS), respectively. Data were also received from OCAS which included applications, offers and registrations in Ontario's 24 Colleges of Applied Arts & Technology for 2006-07 (n=138,000).

Three types of analysis were conducted: the first involved a snapshot of all enrolled students in Ontario secondary schools in 2006-07 to gain an insight into academic achievement and PSE interest and opportunity at one point in time. The second involved the trace of students who began Grade 9 in 2001-02 and 2002-03 to their PSE destination in 2005-06 and 2006-07 (n=88,427 (2001-02); n=105,570 (2002-03)). The purpose of this analysis was to outline the path of Ontario students throughout secondary school in terms of course selection and achievement, and to describe students' characteristics in terms of their PSE destinations. The third analysis examined applications, offers and registrations with regard to direct-from-secondary-school and out-of-school applicants to Ontario colleges as well as in specific college programs.

¹ This study was initiated by Colleges Ontario and partly funded by that organization as well as by the Ontario Ministry of Training, College and Universities, the Canada Millennium Scholarship Foundation and the Higher Education Quality Council of Ontario. Furthermore, the Ministry of Education in collaboration with the Ontario Universities' Application Centre (OUAC) and the Ontario College Application Service (OCAS) provided the integrated data files essential to the study.

² Within the scope of this study, PSE includes publically funded universities, the Colleges of Applied Arts and Technology and apprenticeship.

The qualitative component consisted of the analysis of interviews with 211 young people who either went directly from secondary school into the workforce (n=111) or enrolled in college from the workforce at least one year after leaving secondary school (n=100). The qualitative component was designed to broaden our understanding of those young people who go directly to the workforce, and to identify the factors that influenced their decision making. The findings from the analyses of both the quantitative and qualitative components were intended to provide objective support for recommendations to improve the transition of young people from secondary school to PSE.

Findings

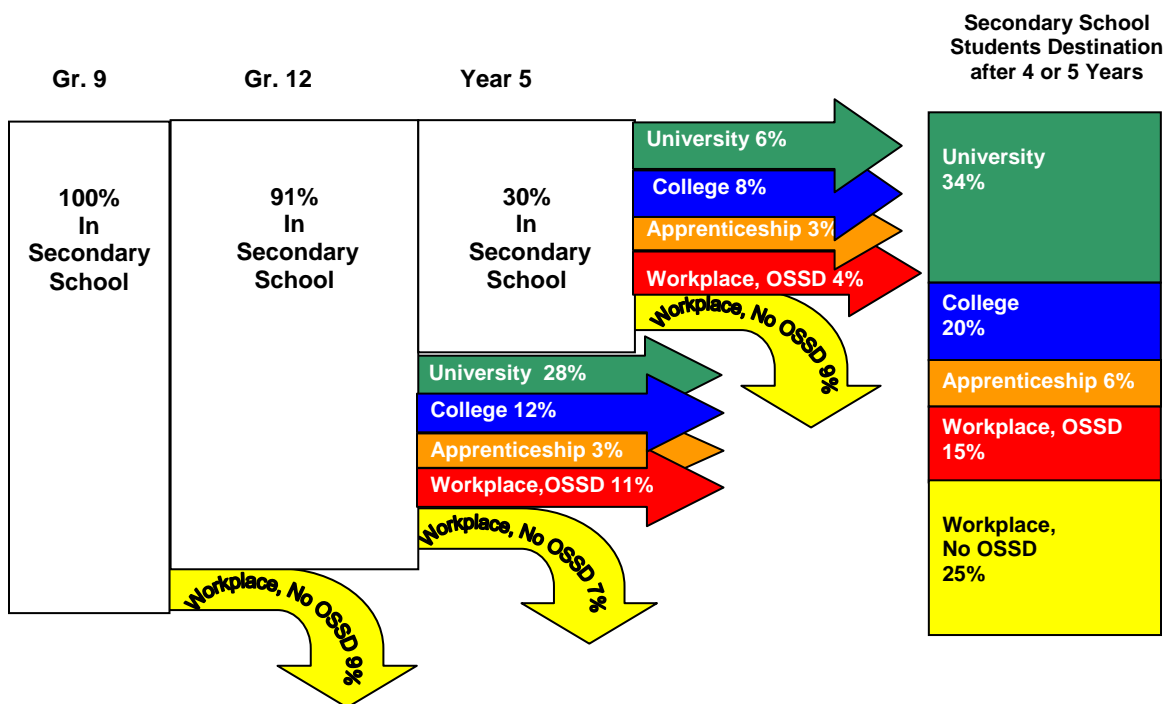
The findings have been divided into three sections: (1) the flow of students from secondary school to PSE; (2) characteristics of those who do not go to PSE; and, (3) decision making related to PSE.

A. Destination of Students after Four or Five Years in Secondary School

Figure 1 presents a trace of students from their enrollment in secondary school in the Fall of 2003 to their PSE destination four or five years later. At the end of five years of secondary school, sixty percent of students were enrolled in PSE programs (34% in university, 20% in college, and 6% in apprenticeships).

Within one or two years, a substantial number of youth from out of school will enroll in college (over 60% of first-year college enrollees do not come directly from secondary school) or university.

Figure 1: Transition of Secondary School Students from Enrollment in Grade 9 in 2003-04 to Their Post-Secondary Destinations¹ in Fall 2008



¹ The university percentages have been adjusted to include students who attended university in other provinces and the United States. Apprenticeship figures were based on 18 and 19 year olds registered in apprenticeship with MTCU. The large majority of those placed in the Workplace category were in the workforce, but the percentages also include those enrolled in private colleges and the military. University and college enrollment data were obtained from OUAC and OCAS, respectively.

The college and university enrollment numbers do not correspond exactly with other findings in the report because, when the Ministry of Education's OUAC and OCAS files were integrated to be used in the basic analysis, not all PSE enrollees were identified. In addition, Figure 1 represents the transition of students in 2008 rather than 2007, and incorporates an increase in the secondary school graduation rate and PSE enrollments. A small percentage of students remained in secondary school for a sixth year.

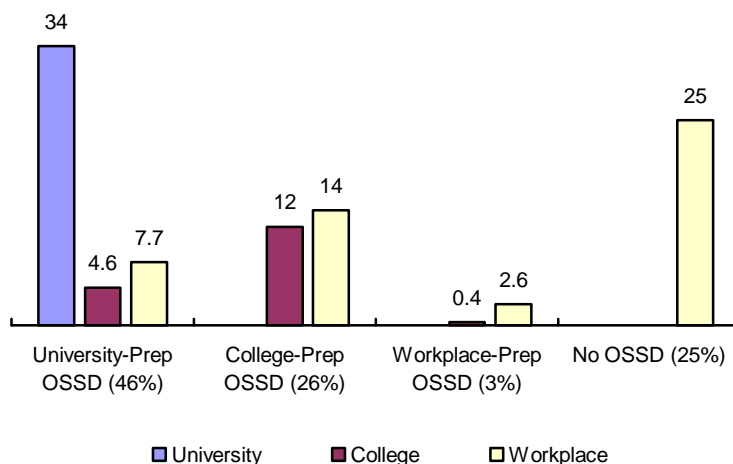
B. Who Does Not Go to PSE?

1. Type of Ontario Secondary School Diploma (OSSD)

- There was great variability in the proportions of students who go directly to PSE from secondary school depending on their secondary school program (Figure 2).
 - Eighty-four percent of those who completed an OSSD with University-Preparation courses (46% of the 2002-03 base Grade 9 population) enrolled in a PSE program. Most of the others did so in the following year.

- Less than one-half of the students with College-Preparation OSSDs (26% of the 2002-03 base Grade 9 population) went directly to college.
- Three percent of the 2002-03 base Grade 9 population completed a Workplace-Preparation OSSD.
- Apprenticeship registrants came from the College- and Workplace-Preparation OSSD groups.
- One-quarter of the 2002-03 base Grade 9 enrollment did not complete an OSSD in four or five years of secondary school. About one-quarter of this group were relatively close to completing an OSSD, but the remainder were well short of credits necessary for graduation.

Figure 2: Destination by OSSD Type After Four or Five Years of Secondary School (% Students; 2002-03 Base Grade 9 Cohort)

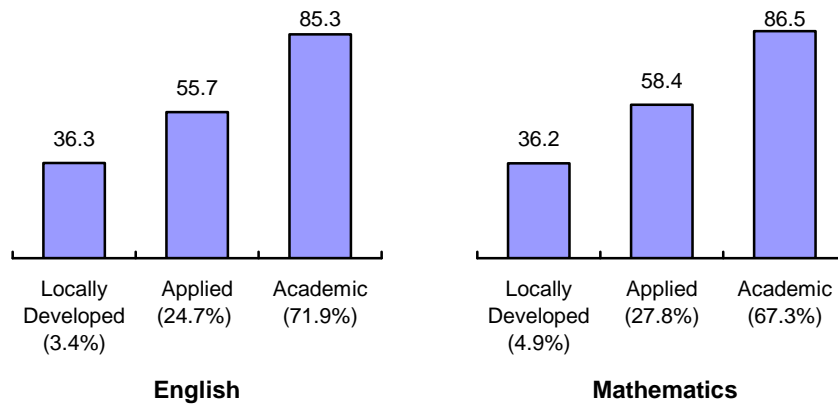


Note: Workplace includes apprenticeship, private career colleges, military.
 Source: MOE/OCAS/OUAC data file, 2006-07.

2. Secondary School Course Type

- OSSD completion and subsequent PSE enrollment are far more likely for those who took Academic English or Mathematics in Grade 9, and far less likely for those who took Applied or Locally Developed English or Mathematics in Grade 9 (Figure 3).

Figure 3: OSSD Completion in Four or Five Years, by Type of Grade 9 English & Mathematics Courses (% Students; 2002-03 Base Grade 9 Cohort)

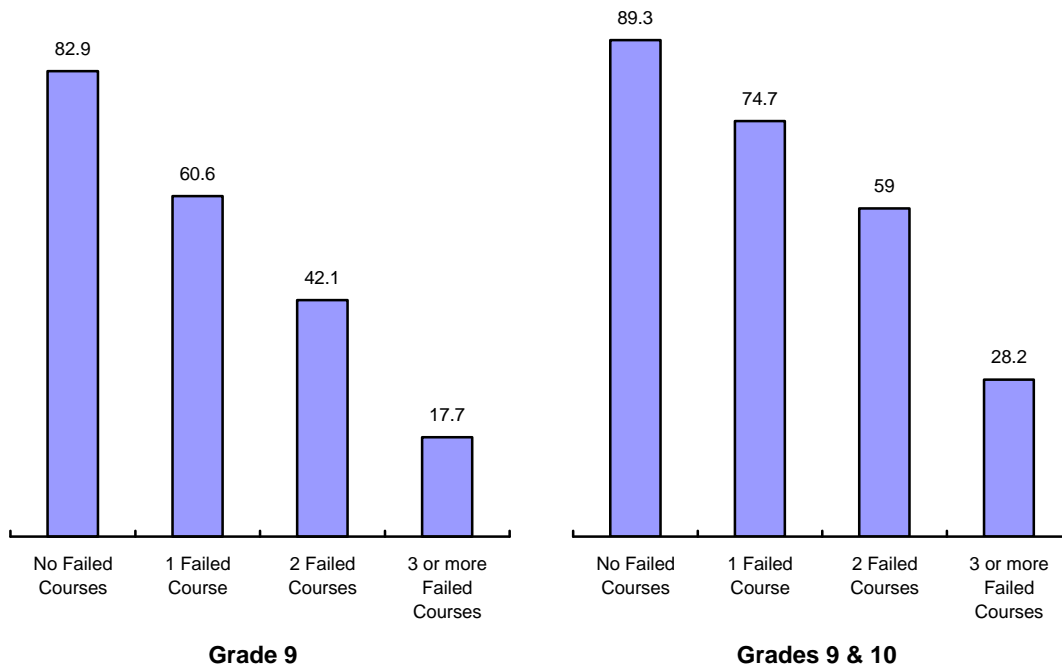


Source: MOE data file, 2006-07.

3. The Role of Academic Achievement in OSSD Completion and PSE Destination

- The number of courses failed in Grades 9 and 10 was directly related to OSSD completion within five years (Figure 4). For example, one failed course in Grade 9 reduced the graduation rate by over 20 percent.

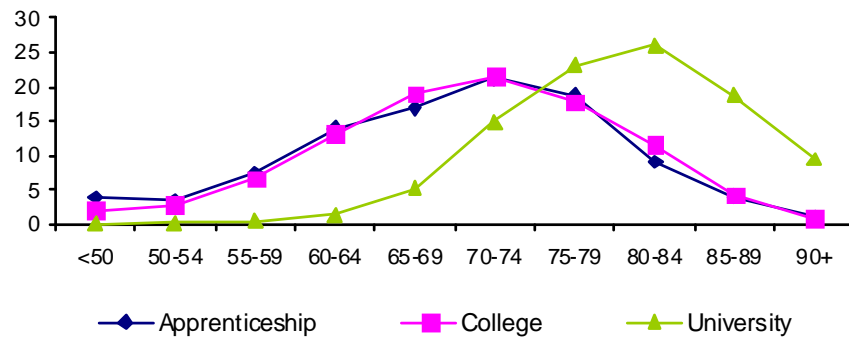
Figure 4: OSSD Completion in Four or Five Years, by Number of Courses Failed in Grades 9 & 10 (% Students; 2002-03 Base Grade 9 Cohort)



Source: MOE data file.

- Grade 9 marks were a strong predictor of OSSD completion. Students with marks between 50% and 59% were less than half as likely to graduate as those with marks over 75%.
- The majority of the university-registrant group had average secondary school marks much higher than those of the other two groups (Figure 5).

Figure 5: Student Average Marks Distributions (Grades 11 & 12), by PSE Destination (%; 2006-07)



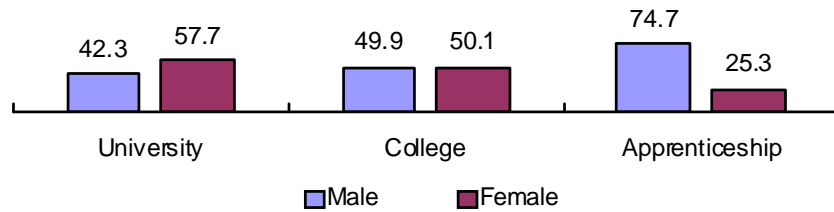
Source: MOE/OCAS/OUAC data file.

- Students who registered in an apprenticeship had a similar marks distribution to that of college registrants, except that the apprentices were more likely to have had marks below 60 percent (14.8% compared to 11.6%) and to have taken Workplace-Preparation courses.
- The lower the average secondary school marks the less likely that students enrolled in PSE.
- The average secondary school marks distributions of those who applied but did not register in college and those who registered in a college program directly from secondary school were very similar.
- The average secondary school marks distributions of direct and non-direct registrants in college programs were very similar, suggesting that other factors play a role for those who choose not to go directly to college after secondary school.

4. Gender

- More females than males registered in university directly from secondary school (Figure 6).

Figure 6: Secondary School to Post-Secondary Education Destination Directly from Secondary School, by Gender (%; 2006-07)



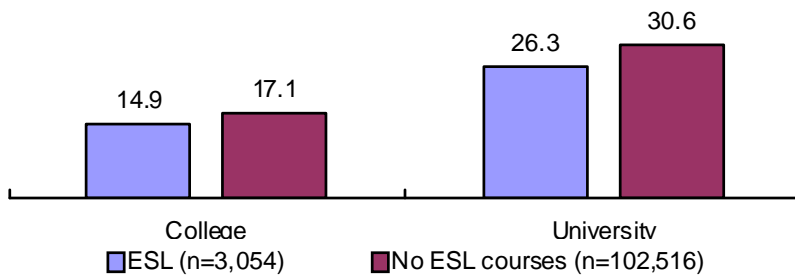
Source: MOE/OCAS/OUAC data file.

- Similar proportions of males and females registered in college directly from secondary school.
- Three times as many males as females took up an apprenticeship directly from secondary school.
- More males than females did not complete an OSSD within five years.
- Females were more likely than males to have taken Academic courses in Grades 9 and 10, and University-Preparation courses in Grades 11 and 12.
- Female secondary school graduates were less likely than male graduates to have taken a Grade 12 Mathematics course (63% to 74%).
- Females obtained higher average marks on all secondary school English, Mathematics and Science courses, except Grade 9 Locally Developed Mathematics.

5. ESL Courses

- ESL students were less likely than non-ESL students to complete an OSSD (62.6% compared to 75.7%) and to enroll in university and college (Figure 7).

Figure 7: Post-Secondary Education Destination of ESL & Non-ESL Students Directly from Secondary School (%; 2002-03 Grade 9 Cohort)



Source: MOE/OCAS/OUAC data file.

6. PSE Destination by Language Spoken at Home

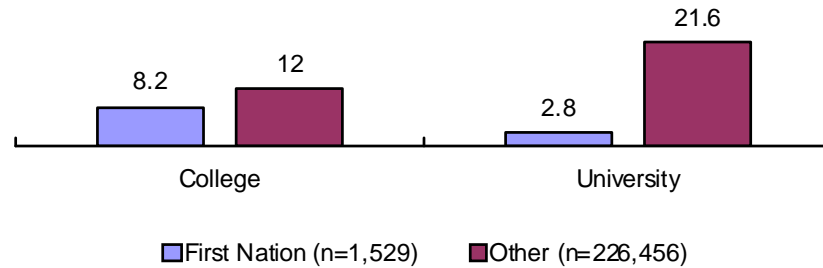
- Students from some language groups were more likely to attend university and others college, although the combined PSE enrollments were similar for many of the language groups – 40 to 50 percent.
- In general, students whose main language spoken in the home was other than French or English were less likely to enroll in PSE, but there was great variability across language groups. For example, students whose main language spoken in the home originated in China, Korea, Russia, and South Asia were most likely to complete an OSSD and go on to PSE. Students who had Spanish and Portuguese mainly spoken in their homes were least likely to do so.

7. First Nation Students

- First Nation students enrolled in Ontario public, Catholic and private secondary schools and funded by Indian and Northern Affairs, Canada (INAC) were far less likely than other³ students to complete an OSSD, to enroll in university, and to enroll in college (Figure 8).

³ 'Other' students refers to all secondary school students who were not receiving funding from INAC, including off-reserve First Nation, Métis, and Inuit students.

Figure 8: First Nation & Other Students Who Registered in Ontario Colleges & Universities Directly from Secondary School (% Eligible Students;^a 2005-06)

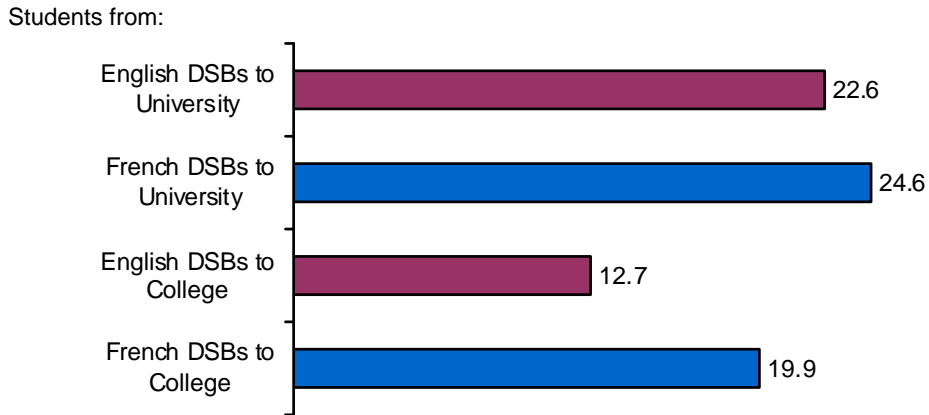


^a Eligible students include those in their fourth and fifth years of secondary school.
Source: MOE/OCAS/OUAC data file.

8. French-Language District School Boards

- Students from French-Language District School Boards were more likely to attend college and slightly more likely to attend university than students from English-Language school boards (Figure 9).

Figure 9: Registrations in College & University Directly from Secondary School, by Students from French- & English-Language District School Boards (%; 2006-07)

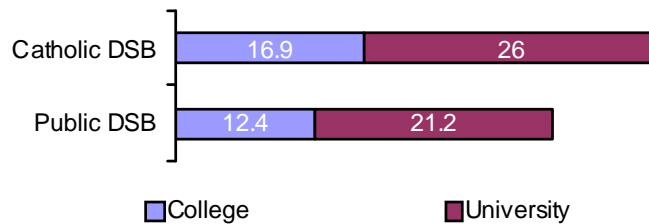


Source: MOE/OCAS/OUAC 2006-07 and OCAS 2006 data files.

9. Region and Type of School Board

- In general, students from Catholic District School Boards were more likely than students from Public District School Boards to attend university and college directly from secondary school (Figure 10).

Figure 10: Students Who Registered in College & University Directly from Secondary School by Type of School Board (%; Fall 2006-07)



Source: MOE/OCAS/OUAC 2006-07 and OCAS 2006 data files.

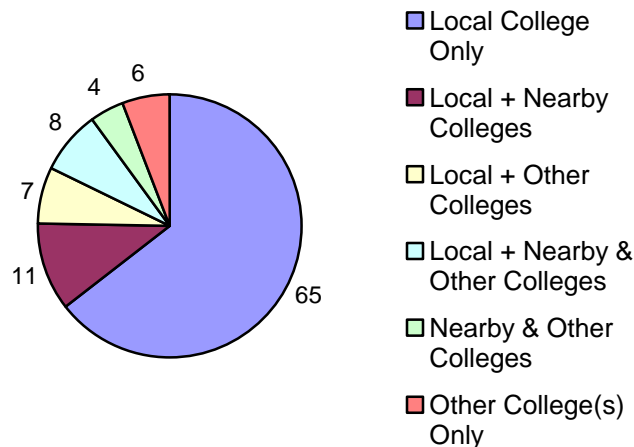
- Pronounced school board differences from one region to another were evident in the proportions of Grade 12 and Year 5 students who applied to and registered in college and university; these differences ranged from 6.4% to 24.5% for college and 6.9% to 38.4% for university.

- Generally, rural and northern Ontario students were less likely to apply to and register in PSE.

10. Interest in Local PSE Institution

- Pronounced regional differences were evident in the proportion of applicants who registered in their local university ranging from 8.4 percent to 85.4%.
- College offer rates (i.e., offer rates to all programs in a college) ranged from 47.2% in one college to 85.5% in another – excluding offers to programs not applied to.
- College program offer rates were notably lower in the Toronto and Ottawa-Carleton regions.
- Generally, college applicants preferred to remain in their home community to attend college, but there were exceptions. Figure 11 shows an example of the application pattern for two school boards (combined) in the southwestern region of the province in relation to their local college.

Figure 11: Applicants to Their Local & Other Colleges from a Catholic District & Public District School Boards in Southwestern Ontario (%; Fall 2006)

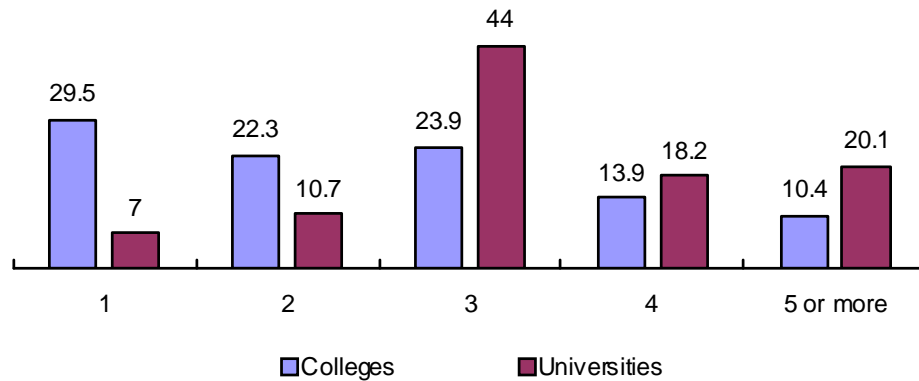


Note: Local = within School Board area; Nearby = generally within commuting distance; Other = typically means a student would have to live away from home.
Source: OCAS data file.

- The combination of “interest” in remaining at home to attend college and relatively low offer rates to applications from some colleges raises the issue of accessibility to college for prospective college enrollees.

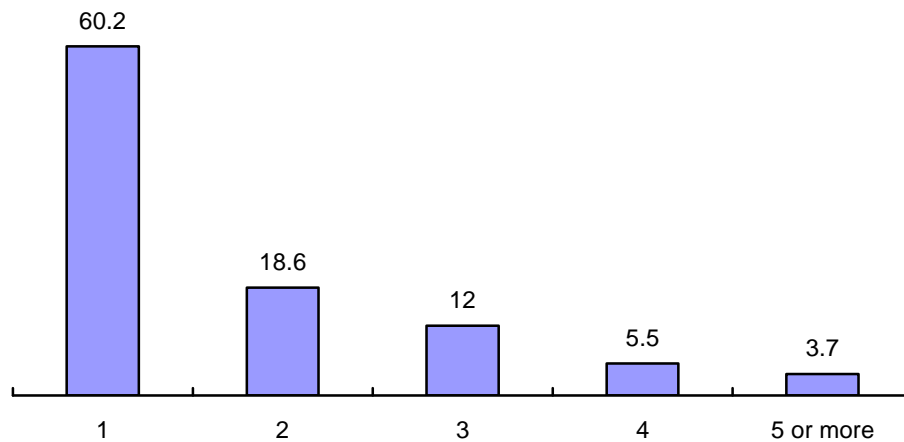
- Students applying to college directly from secondary school were more likely to apply only to their local college than were students applying to university to their closest university (Figure 12). This pattern was even more pronounced for the over 60 percent of college applicants who did not apply directly from secondary school (Figure 13).

Figure 12: Number of Ontario Colleges or Universities Applied to by Students Directly from Secondary School (%; Fall 2006)



Source: OCAS data file (2006); university data adapted from King & Warren (2006).

Figure 13: Number of Ontario Colleges Applied to by Out-of-School (Non-Direct) Applicants (%; Fall 2006)



Source: OCAS, 2006

- The college system only registers about 60 percent of applicants, even though over 80 percent of the applicants typically receive offers, regardless of how many colleges and programs to which they applied.

C. Decision Making of Young People Who Do Not Go to PSE

- Eligible students who did not enroll in college directly from secondary school cited the following factors that influenced their decision:
 - uncertainty about career direction;
 - concern about financing a college education; and,
 - dissatisfaction with their secondary school experience (e.g., because of lack of academic success, having moderate to low marks, lack of support from teachers and guidance counsellors, and lack of involvement in school life).
- Workplace interviewees, with and without PSE plans, cited the following factors that influenced their decision:
 - cost-benefit concerns about the advantages of a college education (i.e., the time taken away from making money while having to go into debt to finance it);
 - the need to continue holding a job to support themselves; and,
 - lack of success in secondary school.
- Delayed College Enrollees cited as incentives to return to formal education the following:
 - realization of few opportunities for advancement in jobs that they held;
 - lack of career opportunities without PSE;
 - clarification of career focus as a result of workplace experience;
 - less concern about financial issues; and,
 - witnessing of peers' academic success in a college program, and consequent interesting, financially rewarding career.

Recommendations

The recommendations that follow are premised on the findings of this study as well as other related research findings.

1. Apprenticeship

Although reviews have taken place regarding the delivery of apprenticeship programs in Ontario, no research has been conducted in the depth required to provide the necessary direction for restructuring in response to systemic difficulties (e.g., problems in securing training placements, and variations in opportunity related to the economy).

We recommend that a comprehensive study be undertaken on apprenticeship training in Ontario by the Ontario Ministry of Training, Colleges and Universities. The study should examine such areas as: the roles and responsibilities of the colleges, employers, MTCU, and trade unions; the application and placement processes; and communication about apprenticeship opportunities and requirements. The outcome of this study would provide clear directions on the restructuring required to produce an effective apprenticeship system and the strategies required to implement the necessary changes.

2. Secondary Schools

To improve the transition of young people who go directly to college from secondary school, it is necessary to develop strategies to respond to ineffective secondary school-to-college programming, and the need for timely exposure to career options as circumstances affect students' career aspirations.

We recommend the following:

- **Increase student exposure to possible careers and college programs through current initiatives – Cooperative Education, Dual Credit courses, and enhanced learning options such as Specialist High Skills Majors. Make available opportunities for a wide-range of students to access those programs, not only for those who are planning to enroll in specific college programs and/or who have a satisfactory record of secondary school academic achievement. (Ministry of Education, Colleges)**

- **Increase the viability of secondary school College-Preparation courses, for example, by integrating senior (Grade 11 & 12) courses and by combining the courses with across-board secondary school-to-college programs. (Ministry of Education)**
- **Provide focused career counselling in Grades 10, 11 & 12 that includes comprehensive information about the range of and requirements for college programs and apprenticeship. (Ministry of Education; school and college partnerships participating in Student Success programs)**
- **Provide information to secondary school students about how to manage their finances for college education. (Ministry of Education, Ministry of Training, Colleges and Universities)**
- **Increase financial awards, bursaries, and scholarships at college entry. (Ministry of Training, Colleges and Universities)**

The Ministry of Education has recognized as a basic concern the differences in achievement between males and females in the Ontario school system, and has made improving the opportunities and life chances of male students part of their Reach Every Student initiative; nevertheless, there remains the need to design and implement specific programs to reach that target objective.

We recommend that the Ministry of Education develop and implement strategies to improve the achievement of males from elementary school through secondary school.

3. First Nation Students

The findings from this study are useful in that they carefully identify the patterns of secondary school course selection and academic achievement of First Nation students who were funded by Indian and Northern Affairs Canada and enrolled in Ontario private, public and Catholic schools. In 2007, the Ontario government announced a special initiative to respond to these concerns. The document describing the initiative is called *Ontario First Nation, Métis, and Inuit Education Policy Framework*.

We recommend that the findings of this study related to First Nation students be made available to the French Language, Aboriginal Learning and Research Division, Ministry of Education and to the Ministry of Training, Colleges and Universities. In addition, we recommend that further research be undertaken on the factors that affect the educational achievement of these students and their off-reserve peers.

4. Equitable PSE Access

Pronounced regional differences were found in the proportions of young people who pursued PSE. It would be difficult to make a case that all Ontario universities were established to serve their local communities, but the colleges were established and structured to be community-based and were placed throughout the province to achieve this goal. Since most college-planning students preferred to remain in their home communities, relatively low offer rates from colleges in some parts of Ontario were of particular concern, raising questions about the ability of all regions of the province to equally serve all interested applicants.

We recommend that the Ministry of Training, Colleges and Universities ensure that all colleges have the capacity to provide equitable opportunities for access.

5. Further Research

A number of issues derive from this research program that require further attention and research; for example, issues related to: (1) Public and Catholic District School Board differences in PSE enrollments; and, (2) strategies necessary to facilitate the re-entry of out-of-school youth into the education system.

Chapter 1: Introduction

This study *Who Doesn't Go to Post-Secondary Education?* was initiated by Colleges Ontario and partly funded by that organization as well as the Ontario Ministry of Training, College and Universities, the Canada Millennium Scholarship Foundation and the Higher Education Quality Council of Ontario (see Appendix A). Furthermore, the Ministry of Education in collaboration with the Ontario Universities' Application Centre (OUAC) and the Ontario College Application Service (OCAS) provided the integrated data files essential to the study.

The *Transition to College* study (King & Warren, 2006) was mainly based on a survey of 21,385 Grades 11, 12 and Year 5 students in 73 Ontario secondary schools. The purpose was to identify secondary school students' perceptions of college as a possible post-secondary educational (PSE) destination along with the factors that shaped their perceptions.

The primary focus in this was to develop a better understanding of the characteristics of the young people who do not pursue post-secondary education (PSE) directly or shortly after leaving secondary school. The study's rationale is based on the assumption that in order to meet the future workforce needs of the province, the proportion of young people who go on to PSE must be increased. Consequently, it is necessary to understand the characteristics of those who do not pursue PSE so that the factors that have shaped their decision making about furthering their education can be identified, and strategies can be developed to increase their PSE participation and to facilitate their transition to PSE. The characteristics of those who did not pursue PSE opportunities were examined in the context of the characteristics of those who did go on to college and university, and enter an apprenticeship program.

In order to provide some direction for initiatives to improve the transition of youth to PSE, an effort was made to identify incentives, disincentives (deterrents) and barriers (obstacles) that youth may experience. However, since the specific PSE destination they choose *not to seek* could not possibly be known, it was necessary to compare those who did not attend with those who did attend university or college and register as apprentices. Even more confounding for the analysis is the fact that many young people decide on PSE in secondary school, but first plan on working or travelling for one to two years before further studies. Others have no plans for PSE while in secondary school, but eventually enroll in college or university, or take up an apprenticeship, after some time in the workforce. And others will attend college after completing

or partially completing university, or attend university after completing or partially completing college. An important focus of the study was to determine the characteristics and motives of the ‘delayed college enrollees’ to better understand the factors involved in the decision making of young people who postpone applying to PSE.

A. Purpose of the Study

It is important to be clear about what is meant by ‘post-secondary education’ (PSE) for the purposes of this study. There is a vast array of PSE destinations available to young people in Ontario. Some are partially funded by government, others completely privately funded and, of course, young people may attend a PSE institution outside the province. This study involves only those institutions that are publicly funded: the 18 publicly-assisted universities that are full members of the Council of Ontario Universities (COU), the Ontario College of Art and Design (a COU Associate Member), the 24 Colleges of Applied Arts and Technology that are members of Colleges Ontario, and the Ontario Apprenticeship System under the jurisdiction of the Ontario Ministry of Training, Colleges and Universities. The Royal Military College of Canada, under the jurisdiction of the federal Department of Defense, the Michener¹ Institute for Applied Health Services do attract Ontario secondary school graduates, as well as three publicly-funded colleges affiliated with a university: Kemptville Campus, Campus d’Alfred and Ridgetown Campus (all three are part of the Ontario Agricultural College at the University of Guelph) have not been included. The many private colleges² operating in the province have also not been included. More information about Ontario’s universities, colleges, and apprenticeship programs appears later in this chapter.

¹ The Michener Institute is also publicly-funded and offers specialized programming in health care. Most programs at this institution require some post-secondary education (e.g., one year of a Bachelor’s Degree), and they also offer some post-secondary programs in conjunction with universities (e.g., University of Toronto, Ryerson University, Dalhousie University).

² More than 500 Private Career Colleges (PCCs) exist in Ontario. They are governed by the *Private Career Colleges Act* (2005). Tuition in these colleges is generally high, and intake occurs at various times throughout the year. Many of their programs are compressed into less than one year, and timetabling is flexible to respond to the work patterns of their enrollees. OSSDs are not necessarily required for admittance (R.A. Malatest & Associates, 2009).

To be specific, the study seeks answers to the following research questions:

1. What are the characteristics of secondary school students who do not apply to PSE directly from secondary school (i.e., gender, regional location, OSSD completion, secondary school marks and courses taken, First Nation designation, and language spoken in the home)?
2. What are the characteristics of those who apply to but do not receive an offer of acceptance from a college program?
3. What are the characteristics of young people who enroll in college having been in the workforce?
4. What are the factors that act as disincentives or barriers for young people to decide not to further their education directly after secondary school (e.g., academic background, level of engagement in school, other school experiences, demographics, financial and family considerations, distance from desired college programs, career aspirations, and influence of significant individuals in their lives)?
5. What are the factors that act as incentives, barriers or disincentives to enroll or not to enroll in PSE while young people are in the workforce after leaving secondary school?
6. What are the attitudes about PSE of young people who go directly into the workforce after leaving secondary school, and those who enroll in college after some time out of secondary school?
7. How much do young people know about PSE programs, and what are their sources of information (e.g., friends, guidance counsellors, college websites)?
8. How do young people's PSE decisions evolve from their time in secondary school to their time in the workforce?

A fundamental question related to the purpose of this study is: why undertake such an intensive investigation when there have been so many studies conducted on the issue of 'who is not attending PSE, and why?'³ What more can this current study offer? This current study has many advantages over the studies reviewed because it includes: (1) a comprehensive data base with all eligible secondary students in given years represented; (2) provision for longitudinal data analyses; (3) an integration between quantitative and qualitative data; (4) focus groups and

³ A recent survey of North American literature reviews 101 research studies and 39 reports on this theme (Canadian Council on Learning, 2007). The findings consistently link non-attendance to distance from post-secondary education institutions, lack of financial aid, and parents' education. Recommendations from the literature typically include: increasing financial support, improving marketing strategies, increasing collaboration between secondary schools and post-secondary institutions, and promoting a culture of lifelong learning.

interviews with young people who did not go directly to PSE after secondary school; (5) analyses of specific categories of students – First Nation, English as a second language, males and females; (6) analyses of regional PSE participation rates; (7) parallel analyses of student transition to college, university and apprenticeship; and (8) specific recommendations regarding timely, practical interventions.

B. Why Increase Enrollments in Post-Secondary Education?

1. Changing Needs of the Workforce

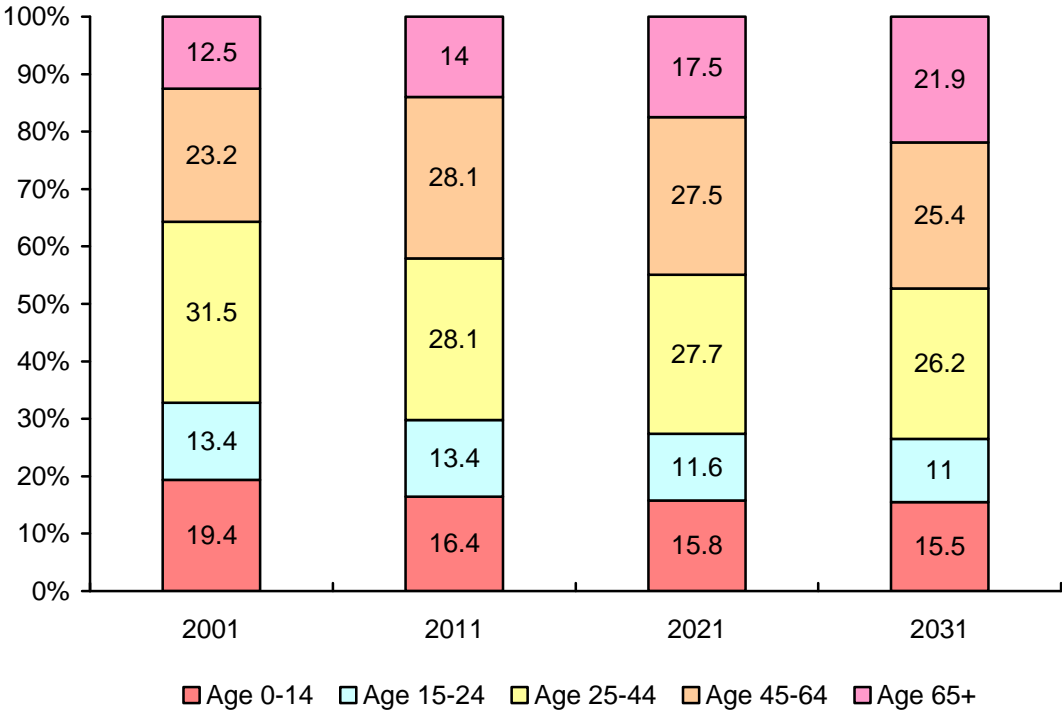
Why should we be concerned about those who leave secondary school without directly taking steps to further their education? The answer in part is related to the needs of Ontario's economy, but, as importantly, to a person's satisfaction with a work life in an interesting occupation. A persuasive argument can be made that Ontario needs to expand its skilled workforce and retrain workers to respond to the currently pressing economic crisis affecting job availability. The province of Ontario is in the midst of rapidly changing conditions in terms of the type of work preparation required and the number of available workers. In particular, it has been widely reported that Ontario is in need of more skilled tradespeople as well as health care personnel; workers for these positions require PSE. The Conference Board of Canada estimated that by 2025, Ontario could face a shortage of 364,000 workers (2007, p.2).

Service Canada, through the Job Futures website (www.jobfutures.ca), regularly projects employment needs in all job sectors and lists the most promising occupations and job opportunities across Canada. An examination of the current list of projected employment needs in 2009 shows that most job opportunities will require PSE (university, college or apprenticeship).

2. Demographic Changes

Figure 1.1 presents the age distribution of the Ontario population based on the 2001 census and projected to 2031. Some fundamental demographic changes are taking place that will have implications for the number and type of PSE opportunities.

**Figure 1.1: Distribution of Ontario Population, by Age Groups
2001 Projected to 2031**

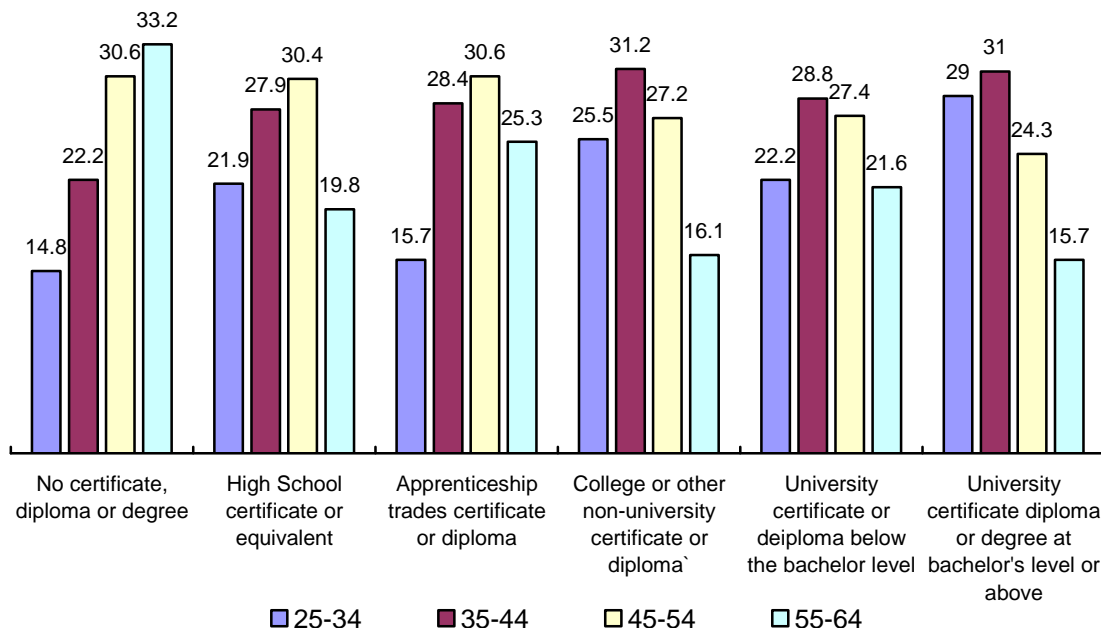


Source: Statistics Canada, 2001, and Ministry of Finance projections, Spring 2008.

The population in Ontario is projected to continue to grow; however, the median age will also rise as the baby boomers enter the 65+ age range (Figure 1.1). Consequently, employment opportunities will reflect an increased need to replace baby boomers who will be leaving the workforce, as well as the types of jobs that are needed to provide services to this population.

Figure 1.2 represents the breakdown by educational attainment of Ontarians by age groups from ages 25 to 64. Most of those with a trades certificate or diploma are 45 or older, while most with a college or university credential are under 45. The 25-34 group only contributes 16 percent to the group with apprenticeships, trades certificates or diplomas.

Figure 1.2: Distribution of Educational Attainment of Ontarians Aged 25 to 64, by Age Group (%; 2006)



Source: Statistics Canada, 2006.

The demographic information in this figure draws attention to the need for the secondary and post-secondary educational sectors to provide opportunities for those who are interested and qualified to pursue PSE, and ensure that those under-qualified for PSE have the opportunity to seek academic upgrading. The regional implications of these demographic changes are considered in Chapter 5.

In providing a detailed description of those young people who do not go on to PSE directly from secondary school, it is important to understand what the categories of students are and their approximate numbers in each category. These will become evident in Chapter 2 (Figure 2.7).

C. Facilitating the Transition of Youth to PSE

What is the pattern of transition of youth to PSE? That is, what proportion go directly from secondary school to college, university and apprenticeship, and should these proportions for each be increased? A strong argument can be made that time in the workforce helps to clarify career directions and, for some youth, provides the necessary financing for further education. Generally, however, a direct transition to PSE is the most efficient and effective route to a career. While the majority of young people who attend university do so directly after secondary

school, approximately 35 percent of college first-year enrollees enter directly from their fourth and fifth years of secondary school (p.9). In the case of apprenticeships, the majority of those becoming apprentices are in their mid-to late-twenties. In this report, we provide a description of the process undertaken by young people in their decision to go directly to work after secondary school or to continue with their education, and make recommendations that will help them in making their decision.

D. Post-Secondary Education in Ontario

1. Colleges⁴

The Ontario Colleges of Applied Arts and Technologies (CAATs) were established in 1967, over one hundred years after the installation of the Ontario's first university (19 colleges in 1967; 3 in 1968). Each college was established to serve the needs of its respective district, and Ontario colleges currently have campuses throughout the province. Two French-speaking colleges, La Cité collégiale and Collège Boréal, were established in 1990 and 1995, respectively (with a Toronto campus for Boréal established in 2002). (See Appendix B for a list of the colleges.)

The colleges were established in an attempt to meet the demands of the growing manufacturing-based economy which needed skilled workers (Fleming, 1971). Minimum admissions requirements of OSSD or mature student status are regulated by the Ontario Colleges of Applied Arts and Technology Act (2002).

Credentials available through the Ontario Colleges of Applied Arts and Technology include:

1. Certificates (one year in length).
2. Two-year and Advanced (three-year) Diplomas, including some Co-op Diplomas.
3. Graduate Certificates for those who have already completed a post-secondary diploma or degree.
4. Bachelor's Degrees in applied areas of study.
5. Joint college-university programs (Collaborative Degree programs) that generally allow students to earn both a College Diploma and a University Degree.

⁴ When the term 'college' is used in the analyses throughout this report it refers to the 24 Colleges of Applied Arts and Technology; the college programs referred to in much of the data include: Certificate, Diploma and Applied Degree Programs. Colleges' Graduate Certificate and Collaborative Degree Programs are only referred to in Table 1.1.

The majority of full-time college students are enrolled in Diploma or Advanced Diploma programs and Certificate programs (as of the 2006-07 academic year; see Table 1.1).

Table 1.1: Registrants in College Programs, by Credential Type (%; 2006-07)

Credential Type	Registration (%)
Certificate	19.4
Diploma/Advanced Diploma	73.8
Graduate Certificate	3.8
Degree (Applied)	3.0
Total	100

OCAS, 2006. (Three colleges' programs do not distinguish between two-year Diploma and three-year Advanced Diploma programs. Therefore, Diploma and Advanced Diploma program registrations have been combined.)

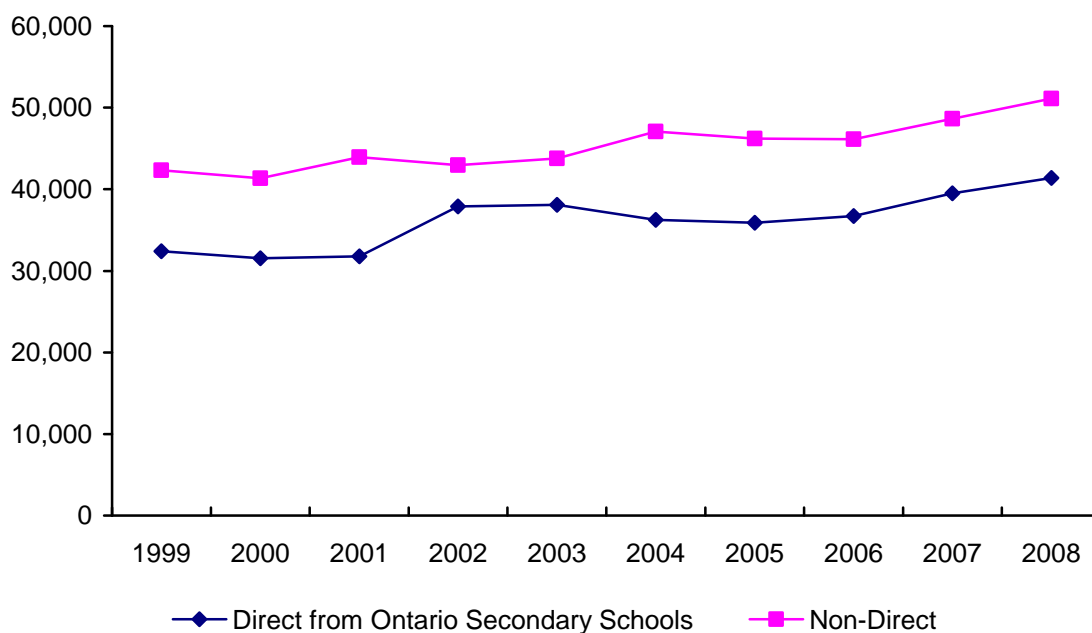
Colleges also provide in-class training for registered apprentices who come to the college to take courses required for their apprenticeship certification.⁵ Although these programs may be listed in a college course calendar, a prerequisite for entrance is registration as an apprentice with the Ontario Ministry of Training, Colleges and Universities.

Colleges have responded to the changing job market by creating an array of new programs (click on 'Find' in www.ontariocolleges.ca to see lists of college programs). They have also tried to accommodate as many students as possible through expansion of various campuses and the creation of satellite campuses.

Except during the double cohort period (2001-04), the enrollment ratio between direct and non-direct registrants has remained about the same (Figure 1.3; see registrant numbers in Table D-1 in Appendix D). The definition of 'direct' students used by OCAS is different from the one used in this report's analyses. OCAS includes all individuals who come from an Ontario secondary school, including schools that enroll adults. Their 'direct' definition includes older students, part-time students, and students who have returned to school part- or full-time. Our analyses include only those students with continuous secondary school records who have been in secondary school four or five years. As a result, the OCAS figure for applicants direct from secondary school is approximately 40 percent, while the one in this report is approximately 35 percent.

⁵ See Chapter 8 on Apprenticeship for further description of this post-secondary program.

Figure 1.3: New Registrants in Ontario Colleges¹ (1999-2008)



¹ Fall enrollees.

Source: OCAS, 2009.

2. Universities

Universities have a long history in western society. The establishment of Ontario's first universities took place in the 1800s, as the University of Toronto, Queen's University, McMaster University, and the University of Western Ontario were established between 1827 and 1887. Currently, there are 19 publicly-funded universities in Ontario (see Appendix C for the list of Ontario universities and their dates of establishment).

In general, unlike the variety of credentials that can be achieved in college after secondary school, universities mostly provide Degree programs.⁶ The liberal arts (Arts and Science) programs remain a large component of the undergraduate program, and elective courses in the liberal arts are still a significant requirement even in specialized undergraduate fields.

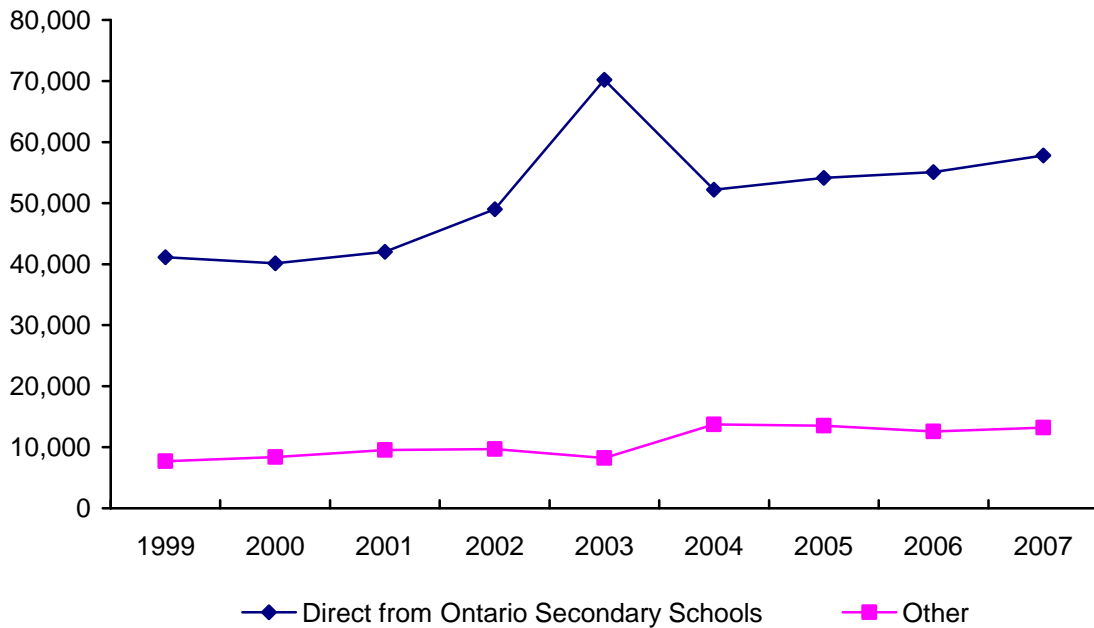
Universities provide a number of undergraduate programs in specialized areas (e.g., Human Kinetics, Commerce), but still remain loyal to their liberal arts roots. University undergraduate programs are generally four years in length and lead to a Bachelor's Degree. Students then

⁶ Some universities offer Diploma Programs as well (e.g., Lakehead University, University of Guelph).

proceed into the workplace or other professional programs (e.g., Law, Medicine), or Graduate Studies.

Since the key double cohort year of 2003, university registrations have steadily increased from pre-double-cohort levels (Figure 1.4; see registrant numbers in Table D-2 in Appendix D).

Figure 1.4: New Registrants in Ontario Universities (1999-2007)



Source: COU, 2008.

The vast majority of applicants seeking admission to university do so directly from Ontario secondary schools (Table 1.2). Nearly one-fifth of the 'other' registrant groups had applied and been accepted in a previous year. Even most of those coming from out of province did so directly from a secondary school. This is quite different from the college pattern, and the reasons for the difference are explored throughout this report.

Table 1.2: University Registrants Direct from Secondary School and 'Other', by Source (2007)

Registrants	N	%
Direct from secondary school	57,809	81.5
Ontario secondary school deferred applicants from a prior year	2,411	3.4
Out-of-province applicants ¹	3,786	5.3
Other Ontario applicants ²	6,963	9.8
Total	70,969	100

¹ Out-of-province applicants: rest of Canada secondary school applicants from a prior year, Senior Matriculation from other Canadian provinces, Senior Matriculation from other countries, Quebec CEGEPs, Canadian colleges & universities, Non-Canadian colleges, and unqualified secondary school applicants from a prior year.

² Other Ontario applicants: Ontario night school and correspondence courses, Ontario CAATs, Ontario colleges & universities, and Adult Day schools.

Sources: MOE/OCAS/OUAC; COU, 2008 (adapted).

3. Apprenticeship⁷

Apprenticeship has been included in this study as it is considered a post-secondary destination by the Ministry of Training, Colleges, and Universities and because of its link to the colleges (i.e., the colleges provide in-school training for 85% of apprenticeship programs). However, this program has many complexities in terms of the delivery modes and classifications (e.g., regulated and non-regulated trades), as well as being governed by two acts (the Trades Qualification and Apprenticeship Act, and the Apprenticeship and Certification Act).

There are two basic categories of trades: regulated and non-regulated. A regulated or certified trade is one that requires a compulsory Certificate of Qualification (e.g., plumber, electrician, and hairdresser); this kind of trade can also be known as a compulsory or restricted trade. Regulated apprenticeships require a provincial Certificate of Qualification which is often awarded after successful completion of an examination.

To write the provincial qualification exam, applicants must prove they have experience in the trade. Examples of proof include completion of an apprenticeship contract, documentation showing that training time meets at least minimum industry standards, or proof of sufficient relevant experience as a skilled worker.

(Trade Certification, MTCU website, www.edu.gov.on.ca)

⁷ See Chapter 8 on Apprenticeship for more details.

A non-regulated trade does not require a Certificate of Qualification; therefore, the candidate does not have to complete the apprenticeship in order to work in that trade (see www.apprenticeshipsearch.com). These trades are also known as voluntary or non-restricted trades. Currently, there are more than 140 apprenticeship programs in Ontario spanning the construction, industrial, motive power and service sectors, of which only 21 are regulated trades (T.E. Armstrong Consulting, 2008).

There are several ways that one can enter an apprenticeship: one can seek an apprenticeship with an employer, through a trade union, in high school through the Ontario Youth Apprenticeship Program (OYAP), or through a college. More detail on apprenticeships and apprenticeship enrollment is presented in Chapter 8.

E. Research Design

This study had four main components: (1) a trace of two cohorts of Ontario Grade 9 students to their post-secondary school destinations, based on their demographic and transcript information; (2) a snapshot of students enrolled in all grades in 2006-07 including college and university application and registration information, also based on demographic and transcript information; (3) an analysis of the characteristics of first year applicants, offer recipients and registrants in Ontario colleges for 2006-07; and (4) interviews and focus group discussions with young people aged 18-23 who did not go directly to PSE after secondary school, but had since either returned to college, remained in the workplace, or were currently seeking work through a youth employment centre. The data for the first three components were provided by the Ministry of Education, who provided two files that contained records of all secondary school students enrolled from 2001-02 through 2005-06 and 2002-03 through 2006-07 respectively. There were approximately 750,000 students in each file. Each component of the study is described in the following section.

1. Trace Analyses

a. Cohort Trace Analysis

This phase of the research required that a database be established to enable a detailed trace of two cohorts of students from their first year in secondary school to their destination after their fifth year of secondary school, whether it be in college, university, apprenticeship or other. The Ontario Ministry of Education's Information Management Branch provided the data by year for the two cohorts of students – those enrolling in Grade 9 for the first time in 2001-02 and in 2002-

03. The basic data files (MOE) for each student included student birth date, marks, gender, school, school board attended, and language spoken in the home. The MOE data files also included information on secondary school graduates who took up apprenticeships, but it was incomplete. (Further details on apprentices, some based on the limited MOE information available, are discussed in Chapter 8, Apprenticeship.)

The Ministry of Education then integrated the MOE files to matching files from the Ontario Colleges Application Service (OCAS) and Ontario University Application Centre (OUAC) to create two sets of continuous files from Grade 9 to first-year college or university applications and registrations. Only those students from schools with complete Grade 9 to Year 5 records were used for the cohort trace analysis (MOE/OCAS/OUAC data file). There were missing pieces of data over the years: e.g., boards not reporting consistently, student records missing or duplicated, errors in reporting or recording, and inconsistent use of course names and credit weighting. In order to make the data files workable and retain data validity, the research team, in collaboration with the Ministry, cleaned them to identify a useable subset of schools ensuring that a complete set of students' records existed for each of the two cohorts.

Although the original MOE data files included approximately 160,000 student records each year corresponding to a Grade 9 cohort), the cleaned data files used for the cohort trace analysis in the study included 88,427 for the 2001-02 Grade 9 cohort and 105,570 for the 2002-03 Grade 9 cohort. The reduction in cohort size is primarily attributed to missing pieces of data for particular schools in one or more years. It is important to emphasize that the match between the OCAS data file and the Ministry's MOE files was approximately 95 percent, resulting in a corresponding under-representation of college applicants and registrants in the data files used in the study. The OUAC and the Ministry's MOE files had an approximately 97 percent matching rate with corresponding under-representation of university registration rates.

The two MOE/OCAS/OUAC data files used to conduct the cohort trace analyses for this study included the following information for each student record:

1. birth date;
2. gender;
3. Grades 9, 10, 11 and 12 and Year 5 courses and marks;
4. application and/or registration in an Ontario college or university directly from secondary school;

5. mother tongue;
6. school and school board designation;
7. post-secondary apprenticeship destination; and,
8. OSSD completion.

A file listing identification numbers for First Nation students in the 2005-06 file was provided by the Ministry of Education. This file allowed the matching of First Nation designation to biographical and marks data and was used for the Chapter 7 First Nation student analyses.

For most of the analyses, data for comparable French and English courses were integrated. For example, FRA courses were integrated with ENG courses when marks distributions were considered in language courses. Where there were significant differences, as in the case of the regional analysis, a separate analysis was conducted for students enrolled in French-language District School Boards.

b. Course Enrollment/Failure Rate Analyses

A second trace analysis was undertaken to examine course achievement over time in particular courses. The enrollments and student record of achievement in Grades 9 and 10 English and Mathematics courses from each school year were used to determine the failure rates in these courses (and how they might have impacted graduation rates) over time. These analyses are presented in Chapter 2.

2. Snapshot Analysis

The integrated MOE/OCAS/OUAC files described above were also used for a snapshot analysis – that is, an analysis that examined all students enrolled in Ontario secondary schools at one point in time. This analysis was conducted iteratively as files were made available, with the final presentation data based on the 2006-07 school year. The data for previous years, though not presented, were used for validation purposes. This file was more complete than the trace data file in that all available students were used for each analysis. For example, all Grade 9 course success records that were available were used to present gender differences in achievement.

a. Applicants-to-PSE Snapshot

To examine the transition of students directly from secondary school to PSE, and considering that students may have applied at the end of Grade 12 or Year 5, a snapshot analysis based on birth year was used. While it is true that some students in Grade 12 may have returned for a fifth year and may not have been eligible for PSE when in Grade 12, and some students were not in the grade that typically corresponded to their birth year, this snapshot analysis does provide a useful proxy for the number of students who were eligible for PSE.

b. Secondary School Course Enrollment and Achievement Snapshots

A second snapshot analysis was undertaken to examine students in secondary school at one point in time. This analysis focused on course enrollments and student achievement, with regard to gender, ESL enrollments, First Nation status, and apprenticeship destination.

3. OCAS Application/Offer/Registration Data File for 2006-07

The Ontario College Application Service provided a data file for the study that included detailed information on individuals applying to the Ontario Colleges of Applied Arts and Technology system for the 2006-07 school year. Only Fall first-year applicants for that year were included in the analysis. The most important components of this file that made it different from the integrated MOE/OCAS/OUAC files were that it included information on: (1) whether an individual received an offer to a program; (2) the characteristics of those applying to Ontario colleges from out of secondary school (non-direct); and, (3) the actual programs applied to, those programs for which offers were received by applicants, and programs in which applicants were registered. The file included the following information on each college applicant (both 'direct,' i.e., applications from within secondary school, and 'non-direct' from out of school):

1. birth date;
2. gender;
3. all program(s)/colleges applied to;
4. all program offers received including programs not applied to but offered;
5. college and program registrations;
6. school board designation; and,
7. secondary school courses and marks (incomplete for the non-direct/out-of-school group).

Data sets from earlier application years (2003-2005) which provided application/ registration as well as demographic data were used for validation purposes.⁸

4. Focus Group and Individual Interviews

Qualitative research techniques were used to gather first-hand accounts of the experiences of young people who did not enter PSE directly after high school. Interviews and focus group discussions with young people aged 18-23 were conducted in seven colleges, in workplace locations in six cities across the province, and in three employment centres in two cities.

Ontario Colleges of Applied Arts and Technology were the focus of most of the qualitative data collection and analyses and to a lesser extent apprenticeship, rather than universities.

Subjects for the qualitative component of this study included two groups: (1) those who had returned to college after at least one year out of secondary school (n=100), and (2) those in the workforce (including those looking for work via employment centres; n=111). The interviewees were recruited to represent the broad work-to-college category as well as job types, and an effort was made to balance the number of males and females. They were identified mainly through 'snowball' techniques, but electronic and poster requests were also used to obtain volunteers. (See Appendix E for more details about the qualitative methodology.)

The interviews were designed to determine and elaborate on the following:

1. factors that contributed to participants' decisions to delay entrance to college or pursue other avenues rather than PSE directly after leaving secondary school (factors such as secondary school achievement; the influence of parents, teachers and friends; financial constraints; and knowledge and information about college programs);
2. the interviewees' attitudes about the economic and personal satisfaction benefits of PSE; and,
3. their future career goals and circumstances that influence or could influence their realization.

The interviews consisted of open-ended questions about study participants' current status vis-à-vis work, PSE plans and the topics listed above. Participants were also asked to complete a short closed-ended questionnaire that asked questions on demographic information, as well as

⁸ Offer data were only available in the OCAS 2006-07 data file.

the type of secondary school courses taken, whether or not they received an Ontario Secondary School Diploma (OSSD), and when they had decided on their post-secondary destination. (See Appendix E for a copy of the six focus group and interview schedules and Background Questionnaires.)

5. Data Analysis

The data from the two quantitative data files (OCAS and the Ministry of Education) are presented in table and figure format. Much of the analyses are based on comparisons (e.g., gender, English as a Second Language students vs other students). The analyses are either presented in tables, or in polygons or histograms (e.g., Grade 12 marks distributions).

The interview data were content analyzed for recurrent themes using a concept or thematic analysis technique (Neuendorf, 2002; Krippendorf, 2004; Ryan & Russell, 2000). The major themes are discussed followed by selected, illustrative comments that were excerpted directly from the interviews, and tables illustrating job types and career plans are presented. Under each comment, some interviewee characteristics are identified (e.g., F (female), 21, OSSD, College: Business Administration; M (male), 23, no OSSD, PSE plans, Workforce).

The qualitative data are linked to the qualitative analyses through descriptions of the characteristics of the entire group from which the interviewees were drawn. For example, the secondary school achievement pattern of those with an OSSD who went directly to work from secondary school is reviewed during the discussion of interviewees' marks.

Probability statistics are not applied to the data presented because the main quantitative data files represent actual populations and the interviewees were not selected randomly.

F. Summary

The study was designed to characterize the young people who do not go on to PSE in order to determine why they do not enroll in college or university or take up an apprenticeship either directly from secondary school or later from the workforce. Characterizing these young people involved an examination of such factors as where they live in the province, the kinds of school they attend, their gender, their record of school achievement, and the process of their decision making about PSE while in secondary school and in the workforce.

Chapter 2: Ontario Education Today

A. Introduction

The Ontario educational system is in transition, and as a result represents a moving target in the effort to determine who goes or does not go to PSE. Therefore, it is necessary to view this study and the recommendations derived from it in the context of changes currently underway, particularly those changes designed to facilitate the secondary school to PSE transition.

The secondary school system was completely restructured in 2000-01 creating a double cohort of secondary school graduates who sought to enter PSE after four years in secondary school later at the same time as graduates from the former system who typically took five years. With the Reorganized Program, problems arose which mainly related to student achievement and graduation rates. However, major changes have been instituted in the secondary schools in response to the concerns, and, as a result, secondary school graduation rates have been increasing with direct implications for PSE.

This chapter is designed to bring the reader up to date on the Ontario educational system as it is evolving in terms of: secondary school-to-PSE programs, apprenticeship programs; the flow through of students into college, university and apprenticeships; and the aspirations of secondary school students.

B. The Ministry of Education Initiatives to Promote Student Success

The Ministry of Education response to the concerns created by the secondary school restructured program was immediate. The first target was high failure rates, especially in Grades 9 and 10 Applied courses. Greater attention to student evaluation and some curriculum modifications resulted in immediate declines in failure rates for subsequent Grade 9 cohorts.

The introduction of a 'Student Success Strategy' with appropriate funding appears to have had far-reaching effects. Credit recovery programs, school-to-college and to-apprenticeship programming, Specialist High Skills Major programs, and Dual Credit programs in which students can take courses for credit at both secondary school and college were introduced. Student Success teachers were identified for each secondary school.

What will be the effect of the recent Ministry of Education initiatives on graduation rates?

Analysis of Grades 9 and 10 English, Mathematics and Science course success rates from 2001-02 to 2006-07 indicated that graduation rates will continue to grow slowly over the next few years (Tables D-3 to D-5 in Appendix D). Although it is difficult to determine the impact of all the Student Success programs, one indicator of impact is a change in PSE registration rates. The steady increase in university and college registrations of students directly from secondary school (Figures 1.3 and 1.4 in Chapter 1) suggests that the Student Success programming may be not only increasing secondary school graduation rates but also encouraging greater numbers of students to apply to and enroll in PSE.

C. Apprenticeship

The Ministries of Education and Training, Colleges and Universities have revamped the Ontario Youth Apprenticeship Program (OYAP), and effective school-to-work programming has been made a priority. Schools are now playing an important role in identifying student apprenticeship candidates and helping to identify employer placements for interested students. The Specialist High Skills Major programs combine work experience with credit recovery and seem to have been particularly effective in attracting students who may have been at risk of not graduating. The expanded definition of Cooperative Education¹ will enable more students to obtain credits through this route. In-school registrations in apprenticeship programs have grown (see Chapter 8). School-to-college and to-workplace apprenticeship settings have been formalized, and as a result have improved the school-to-apprenticeship transition. The actual magnitude of these changes and the impact on apprenticeship completions has not been determined, but growth in the absolute numbers of young people registering as apprentices is apparent (see Chapter 8). However, the recent downsizing of the economy may put a damper on placement opportunities, and the traditional roadblocks to program completion are still present. Apprenticeship programming is discussed in more depth in Chapter 8.

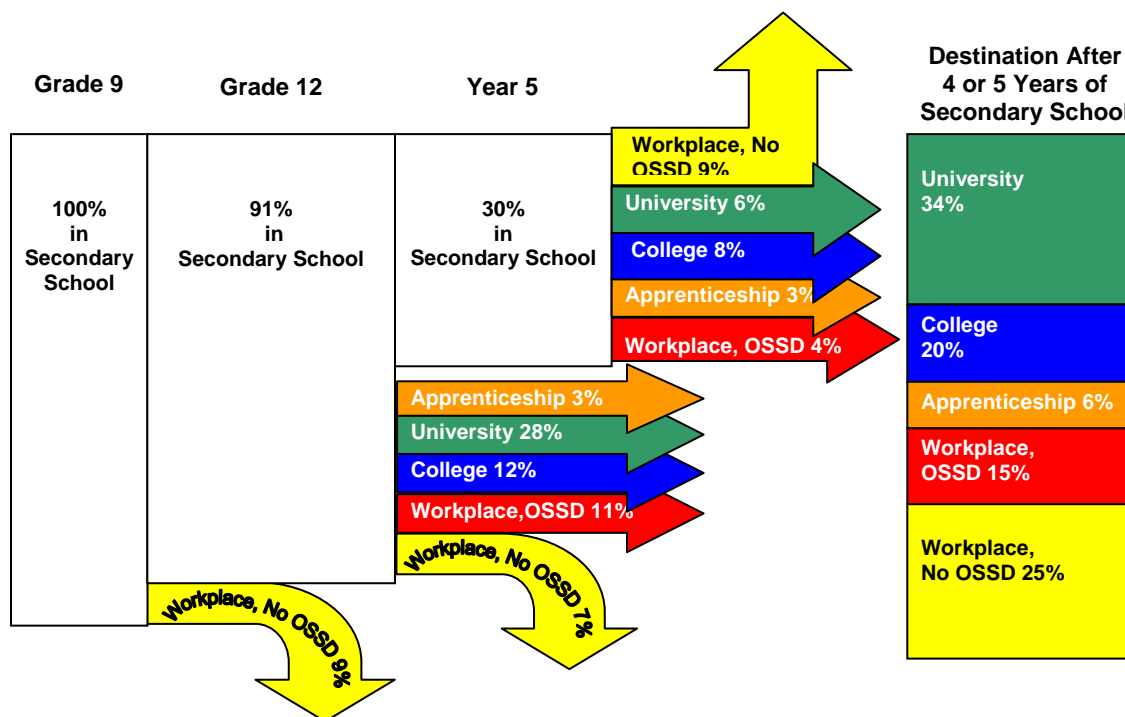
¹ The Expanded Co-op Program allows students to apply two co-op credits towards their compulsory high school graduation requirements, with no limit on earning optional Co-op credits (Ministry of Education, 2009).

D. The Transition of Secondary School Students to PSE

Where are we in Ontario at this point in time with regard to the transition of young people to PSE? What change would we like to see in this pattern?

Figure 2.1 is a representation of the transition of a cohort of Grade 9 students (enrolled in 2003-04) to their post-secondary school destinations in the Fall of 2008. The information for the university and college figures comes from the 2005-06 and 2006-07 integrated Ministry of Education OCAS and OUAC data files augmented by actual first year university and college direct-from-secondary-school enrollments for four- and five-year graduates from OCAS and OUAC. The MOE numbers had to be modified to take into account errors in matching (see Chapter 1). The university percentages have been adjusted by 1.6 percent to include students who attended university in other provinces and the United States. This information came from university websites (3) and phone calls to university registrars (3). College enrollments outside the province were too small to affect the percentages.

Figure 2.1: Secondary School to Post-Secondary Destinations, Fall 2008



Note: The large majority of those in the Workplace category were in the workforce, but the percentages also include those in private colleges and the military.
Sources: MOE; MTCU (apprenticeship percentages); OCAS; and OUAC.

The apprenticeship percentages in Figure 2.1 come from the Training Branch of the MTCU and the MOE data file. The percentage of 18 and 19 year olds registered in regulated and non-regulated apprenticeships was used as the proportion based on 160,000 estimated Grade 9 students, and those registering after four or five years of secondary school was used to determine the proportion of students coming from each year. Enrollments in other post-secondary institutions (mainly private vocational colleges) were obtained from Statistics Canada (mostly out of age range).

The graduation rate after five years has been estimated at 76 percent – increased by 1 percent to take into account the later year for this analysis (Fall 2008). This figure would be 1 to 2 percent greater if youth who were enrolled six or seven years in secondary school were included.

If college and university enrollees who had been out of secondary school one or two years before enrolling in college and university had been included in the proportions enrolled in post-secondary education before they reached the age of 21, the transition to university numbers would be slightly greater, but the college numbers would be much greater. A substantial percentage of the colleges' enrollment comes from out-of-school youth 20 and under.

In facilitating the flow of students into PSE, the most obvious targets include OSSD graduates who go from secondary school into the workplace (many of whom will later attend a college) and the relatively weak flow into colleges and apprenticeships. The term 'weak' in this context refers to the relatively high proportion of these groups who remain in secondary school for a fifth year and the relatively low proportions who go directly into college and apprenticeship. This study provides a greater understanding of the characteristics and motivation of those young people who choose to go into the workforce directly from secondary school in comparison with those who do not.

E. Alignment of Student Aspirations with Post-Secondary Education Expansion and Economic Needs

What is the fit between the PSE aspirations of Ontario's youth and the need for growth in the post-secondary education sector? Previous studies point to the clear understanding among young people of the importance of further education in terms of job satisfaction and economic returns. For example, this understanding is apparent in the *Transition to College Study* (King &

Warren, 2006) where nearly 80 percent of senior secondary school students planned on college or university, and 6 percent planned on apprenticeships (see Table 2.1); in Phase 4 of the Double Cohort Study (King, Warren, Boyer & Chin, 2005) where a similar percentage for Grade 10 students planned on PSE; and in the *In and Out of High School* Study (Community Health Systems Resource Group, 2005) where similarly high proportions of young dropouts realized the importance of education. Even surveys of secondary school dropouts reinforce the value that young people place on education:

At 15, most dropouts (81%) believed that getting a good job later in life depended on their success in school, and 77 percent wanted to obtain some form of post-secondary education.

(Bushnik, Barr-Telford & Bussière, 2004)

In order to help young people turn their post-secondary aspirations into reality, it is necessary to understand and, if possible, overcome the disincentives and barriers that prevent them from doing so.

Table 2.1: Post-Secondary Plans: Responses to ‘What do you expect to do in the future?’ (% Grade 12 & Year 5 Students)^a

Plans After High School	Grade 12	Year 5	Total
	%	%	%
Graduate from high school and go directly to work	2.4	4.7	2.9
College	27.2	37.0	29.2
University	54.1	36.9	50.4
Apprenticeship	5.4	7.3	5.8
Leave before graduation	0.3	0.4	0.3
Other ^b	10.6	13.7	11.4

^a Source: King & Warren (2006).

^b Examples of the category ‘other’ were: military, travel, professional athlete, and return to high school for more courses.

F. Summary

In the past three years, since the first graduating group of the Reorganized Program in 2000-01, major initiatives have taken place in Ontario’s secondary school system. These changes have been designed, in part, to increase the number of secondary school graduates and facilitate the transition of students to apprenticeship programs and college. Structural change has been introduced in the form of an integrated secondary-school-to-college (and to-apprenticeship) program (Dual Credit system). New secondary school programs have been introduced (e.g., Credit Recovery, Specialist High Skills Major programs). Apprenticeship registrations have

increased (see Chapter 8), and college registration rates have increased (see Chapter 1). However, if Ontario needs to attract more youth to PSE and most young people value such goals and plan on attending college and/or university when they are in Grades 9 and 10, what are the factors that prevent what seems to be a reasonable fit between student aspirations and perceived economic needs. Understanding why 16 percent of OSSD graduates (based on Grade 9 enrollments) do not pursue PSE directly after high school is a key impetus to any strategy aimed at improving school-to-college pathways, increasing access to and participation in PSE, and motivating young people to graduate from high school. A fuller understanding from this study's findings of the perspectives of the young people who do not pursue PSE, and the barriers and disincentives faced by some of them to pursuing further education in the context of educational changes currently underway can contribute to the goal of achieving a higher secondary school graduation rate and an increase in PSE participation.

Chapter 3: Secondary School Course Selection & Achievement

A. Introduction

What role does secondary school achievement play in facilitating access to PSE? Although an Ontario Secondary School Diploma (OSSD) is not required to register in certain apprenticeships, and it is possible to enter either college or university as a 'mature student' without an OSSD, generally the minimum requirement for admission to a PSE program is successful completion of an OSSD. Beyond that, required courses and levels of achievement are typically required. In this chapter, we outline some of these 'conditions' for admission, but the main purpose is to compare the secondary school academic achievement and course selection of those who go or do not go directly from secondary school to college or university.¹ As noted in Chapter 1, over 60 percent of those who attend college do so having been out of secondary school a year or longer. Since the decision to take time off after secondary school appears to be part of the plan of many before attending college, it was also important to describe the secondary school academic achievement and course selection patterns of this out-of-school-to-college group.

It was the intent of this analysis to determine the approximate proportions of young people who were generally academically qualified, but chose not to go on to PSE directly after secondary school and to compare them with their PSE-enrolling peers in terms of secondary school achievement. Although 80 percent of Grade 12 and 74 percent of Year 5 students planned on college or university (Table 2.1), and nearly three-quarters of students graduated from secondary school, just over 50 percent of students went directly to PSE in the fall of 2007. To what extent is the difference in PSE plans versus reality related to secondary school achievement?

The first level of the analysis in this chapter involves a comparison of the final school year academic averages of secondary school graduates who had taken University-Preparation, College-Preparation, and Workplace-Preparation course combinations. The second looks at the PSE destinations of these three categories of students. The role that secondary school marks play in admission to colleges and universities as well as to specific college and university programs is then examined. The final level of analysis is designed to identify stages in

¹ Characteristics of the secondary-school-to-apprenticeship group are examined in Chapter 8.

secondary school achievement and course selection that not only predict whether a student will graduate or not but also indicate points in the secondary school system where interventions to improve graduation rates and encourage direct-from-secondary-school applications to PSE may be most appropriate. It should be noted that the ‘Student Success’ initiatives have been based on a similar analysis of students’ secondary school progress.

1. Course Combinations of Students Completing an OSSD Within Five Years

In theory, each secondary school student selects a combination of courses consistent with his/her needs and interests; however, required courses, course availability, and course success inevitably shape student timetables. In Grades 9 and 10, the majority of courses offered are either Applied or Academic along with a few interest courses (Open). A relatively small number of students take Locally Developed courses – mostly in English and Mathematics, but some may also take Science (see Tables D-6 to D-11 in Appendix D). The picture changes sharply for Grades 11 and 12 where the core courses are labeled in post-secondary goal-specific terms – University-Preparation, College-Preparation, and Workplace-Preparation. Students may also take University/College (M) courses designed to serve the needs of both university- and college-bound students. We noted that these M courses have the effect of increasing the number of students eligible for university, but they may make it more difficult for students who are eligible for college.² Open courses are also available in Grades 11 and 12.³

While a vast array of course combinations is available to students, in terms of OSSD completion and PSE potential, students can be classified into four broad groups:⁴

1. Those with an OSSD who meet the course requirements for university admission (not necessarily the marks),⁵ i.e., the University-Preparation group;

² *Double Cohort Study: Phase 3*, King AJC (2004); and *Phase 4*, King AJC, Warren WK, Boyer JC & Chin P (2005).

³ Details of secondary school course types are available in the Ministry of Education Guidelines on their website (<http://www.edu.gov.on.ca>).

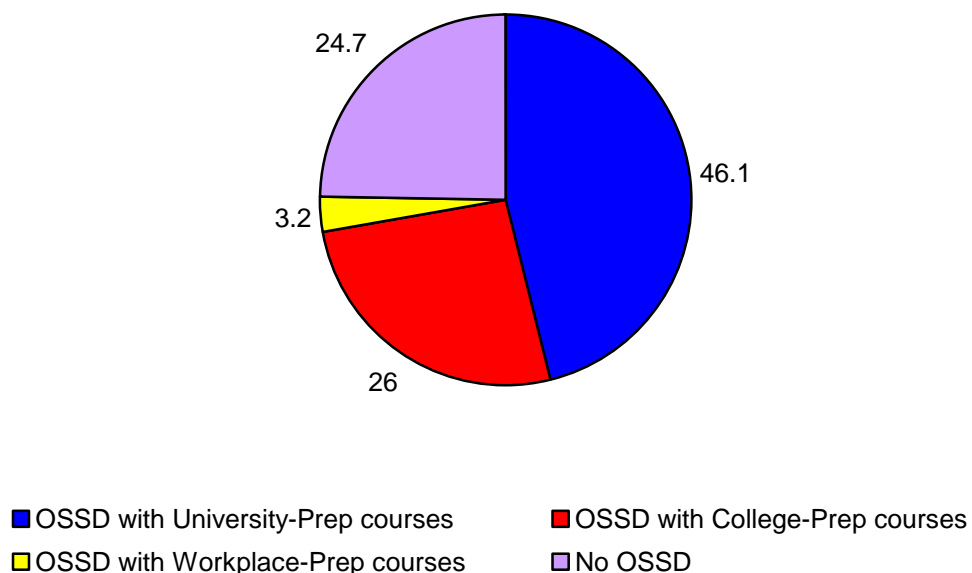
⁴ More specifically, the students who started Grade 9 in 2001 were divided into four categories in terms of their status in 2005-06: (1) University-Preparation OSSD = students with an OSSD and 6 Grade 12 (Year 4) U or U/C (M) courses including English 4U; (2) College-Preparation OSSD = students with an OSSD including U or C English but insufficient U or U/C (M) courses to qualify for university admission; (3) Workplace-Preparation OSSD = students with an OSSD including a Grade 12 Workplace-Preparation English or 3 Workplace-Preparation courses; and (4) No Diploma = students who at the end of 5 years had not qualified for an OSSD.

⁵ Some universities specify a minimum number of University-Preparation courses (e.g., Queen’s University requirements to the Arts program include English 4U and two additional 4U courses).

2. Those with an OSSD who meet the course requirements for college admission, i.e., the College-Preparation group;
3. Those with an OSSD with a Workplace-Preparation course emphasis (i.e., the Workplace-Preparation Group); and,
4. Those who have not completed an OSSD within 5 years (see Section B).

The proportions for these four groups after four or five years in secondary school are summarized in Figure 3.1. This figure is based on the incoming Grade 9 population in 2002-03 and their graduation status after four or five years (2005-06 or 2006-07). The largest group (46.1%) had taken a combination of courses in their senior years that prepared them for university admission (this does not mean that they had the necessary marks to gain admission to all universities and programs). The next largest group (26%) had a mix of courses that met the minimum requirements for college admission. The Workplace-Preparation group made up only 3.2 percent of the total. Slightly less than one-quarter of the cohort starting Grade 9 in 2002-03 had not obtained an OSSD within five years. The actual direct-from-secondary-school-to-PSE destinations of these groups are considered in the next section.

Figure 3.1: Four Student Groups by OSSD Designation & Course Types (% of 2002-03 Grade 9 Cohort After 4 or 5 Years in Secondary School; n=105,570)



Source: MOE/OCAS/OUAC data file.

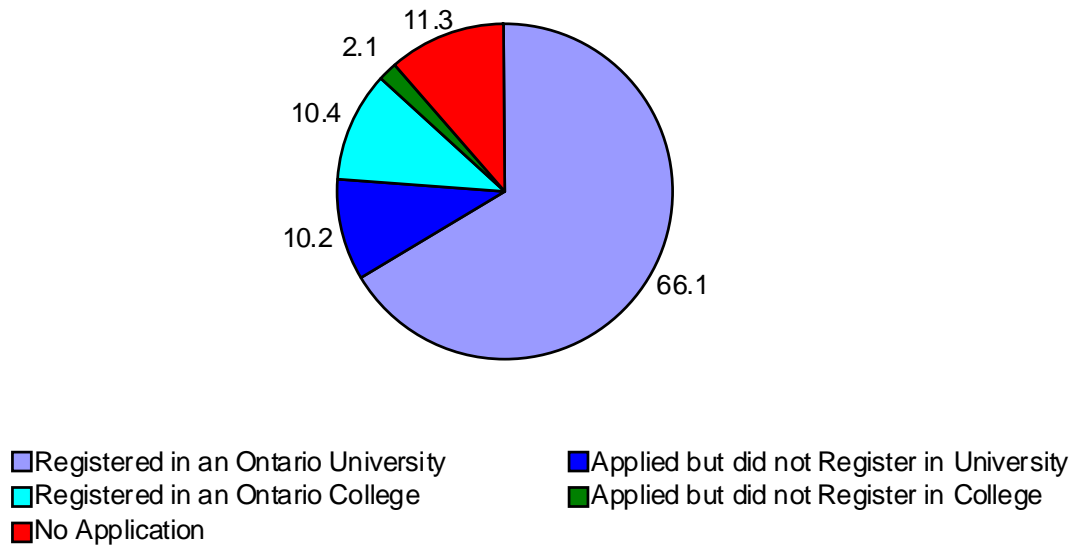
2. PSE Destinations and Secondary School Achievement of Students with a University-Preparation OSSD

What proportion of the University-Preparation OSSD group attends university directly after secondary school? As can be seen from Figure 3.2, two-thirds of the University-Preparation OSSD group attended university directly from secondary school. When we add to that group those who attended university the following year from out of school but from the same cohort, the figure rises to over 72 percent.⁶ Also, approximately 2,000 students from this cohort registered in a university outside Ontario⁷ adding another 1.5 percent to the total, resulting in about three-quarters of this group who attended university within five years of beginning Grade 9. In addition, 10 percent of the University-Preparation OSSD group registered in an Ontario college. When all the subsets of the University-Preparation OSSD group are combined (direct from secondary school to university or college, and within one year after leaving secondary school to university or college), it can be estimated that at least 90 percent of this group attend PSE within one year of leaving secondary school.

⁶ Estimated from Ontario university enrollments of out-of-school youth by age group.

⁷ Estimate based on phone call interviews with registrars from three universities outside Ontario who provided numbers of Ontario students identified as 'incoming' students.

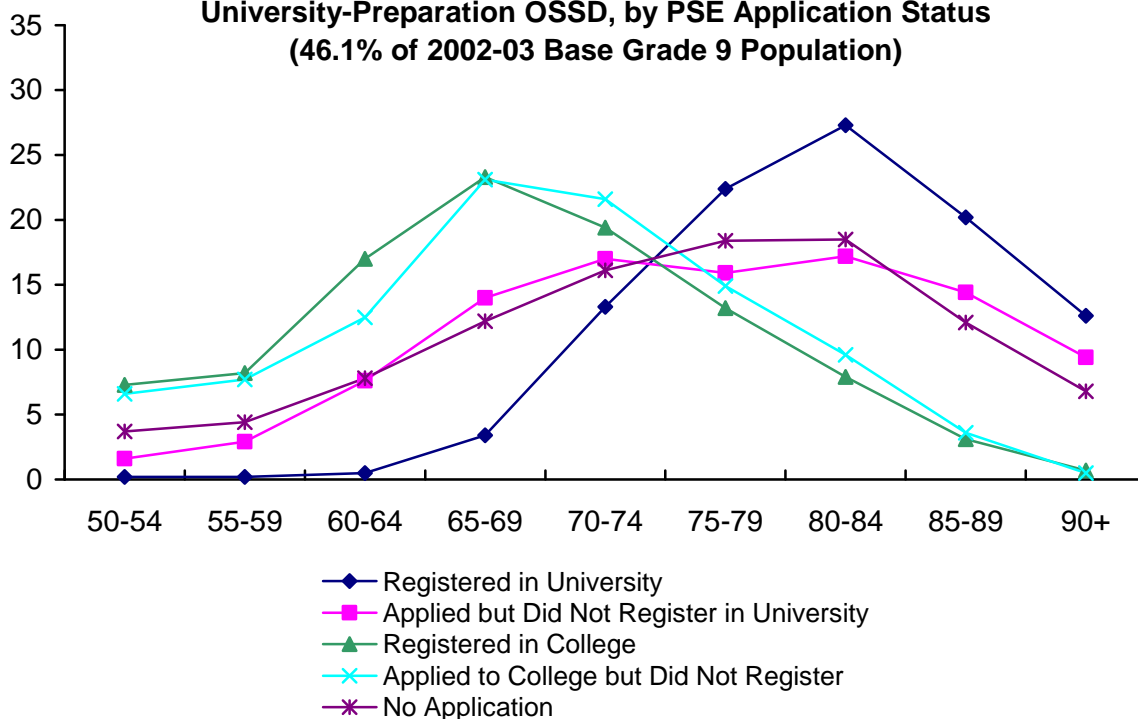
Figure 3.2: Destination of Students with University-Preparation OSSD Directly from Secondary School (46.1% of 2002-03 Base Grade 9 Population)



Note: The out-of-province University-Preparation group totaled approximately 2,000 students or 1.5% of the total.
 Source: MOE/OCAS/OUAC data file.

Figure 3.3 presents the Grade 12 average marks of the students with University-Preparation courses and an OSSD by their PSE status after four or five years in secondary school.

Figure 3.3: Grade 12 Average Marks Distribution of Students with University-Preparation OSSD, by PSE Application Status (46.1% of 2002-03 Base Grade 9 Population)



Note: Students who applied to both, and did not register in either are included in 'Applied but did not Register in College'.

Source: MOE/OCAS/OUAC data file.

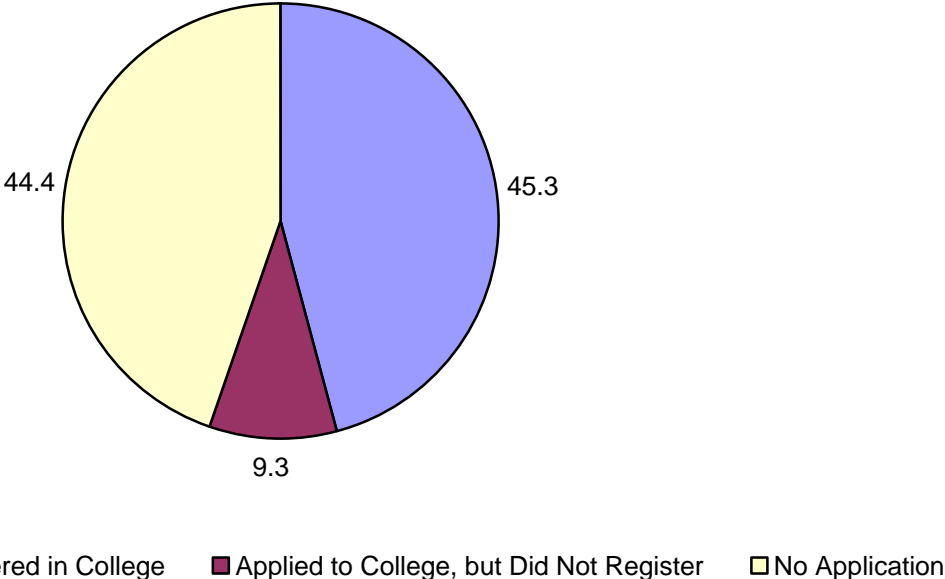
The average marks of the university registrant group were higher than those of the other four groups, but there was still some overlap. The marks distribution of the 'Registered in College' and 'Applied but did not Register in College' groups were remarkably similar, and were generally lower than the 'Registered in University' group. Some students with quite high marks applied but did not register in university, although they may have enrolled in a university out of province. A closer analysis of the Grade 12 transcripts of the 10.2 percent who did not apply to PSE noted, in about 50 percent of the cases, low marks in general or in English or Mathematics in particular which may have prevented them from qualifying for most university programs.

3. PSE Destinations and Secondary School Achievement of Students with a College-Preparation OSSD

Figure 3.4 summarizes the PSE destinations of the 26 percent of the base cohort who after four or five years in secondary school completed an OSSD with courses that qualified them for college, but not university. Of this group, 45.3 percent registered in college directly after secondary school, a much smaller proportion than for the University-Preparation OSSD group

that registered in university. In addition, 44.4 percent of students with a College-Preparation OSSD did not apply to any PSE programs. While this pattern could have been anticipated to some extent based on the educational plans of Grade 12 and Year 5 students (Table 2.1), it does raise the question of why the decision not to apply is made by so many college-eligible students. Based on the number and academic characteristics of out-of-school college registrants from this cohort, many of these college non-registrants will attend college at a later date and some from this cohort will have registered as apprentices.

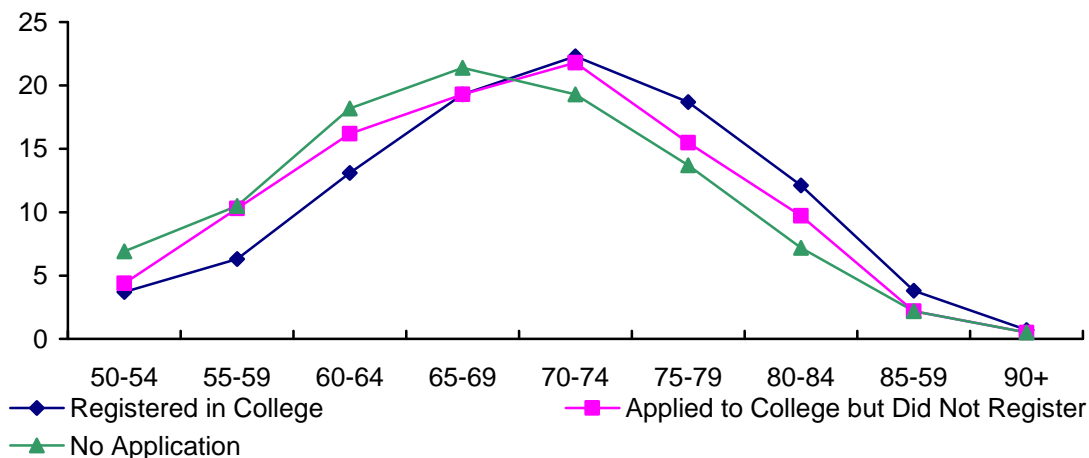
Figure 3.4: Destination of Students with College-Preparation OSSD Directly from Secondary School (26% of 2002-03 Base Grade 9 Population)



Source: MOE/OCAS/OUAC data file.

An examination of the average Grade 12 marks distributions of the college registrants, applicants (non-registrants) and non-applicants displayed remarkable similarities (see Figure 3.5). In general, the marks of those who applied but did not register and those who did not apply were a few percentage points lower than those who registered. The relatively small mark differences help explain why so many of the non-registrant group will register in college at a later date in their lives as these individuals do qualify for admission to college programs.

Figure 3.5: Grade 12 Average Marks Distribution of Students with College-Preparation OSSD, by College Application Status (26% of 2002-03 Base Grade 9 Population)



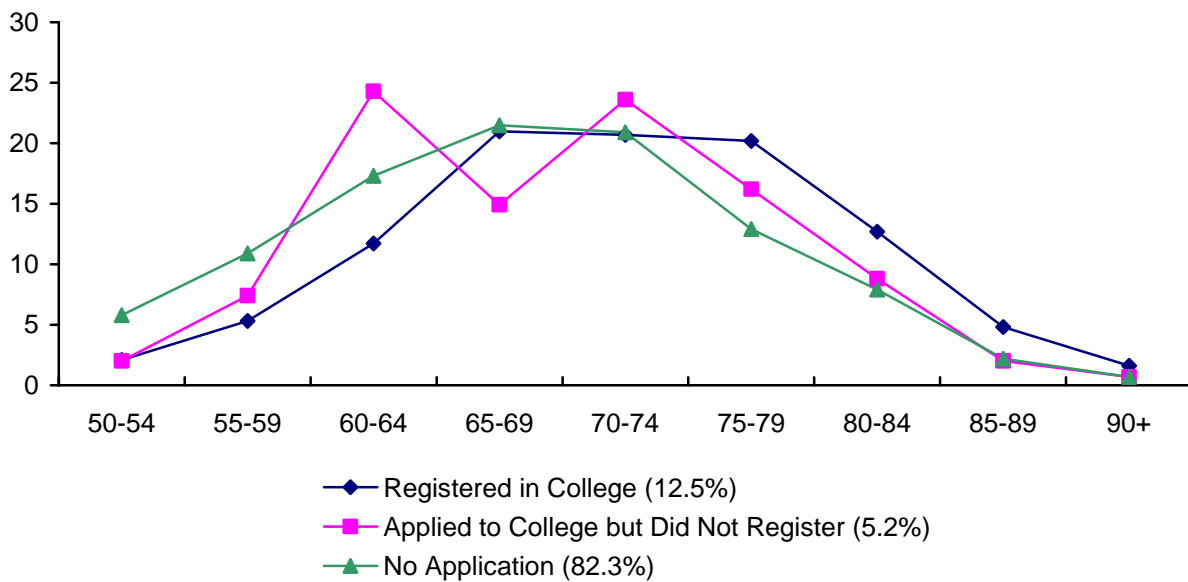
Source: MOE/OCAS/OUAC data file.

Since all of the College-Preparation OSSD students were academically qualified for some program in some college, why do so many of this group not apply to college directly from secondary school in contrast with the high proportion of University-Preparation OSSDs who apply directly? We randomly selected a sample of 200 transcripts of College-Preparation OSSD students (100 of students who registered in college, and 100 of students who did not apply) in order to determine whether there were any common patterns of achievement that might act as disincentives. There were more similarities than differences in achievement between the two groups. For example, in the majority of cases, students started secondary school taking Academic courses (Grade 9 or Grades 9 and 10) and were enrolled in a mix of College- and University-Preparation courses in Grades 11 and 12 prompted by low to moderately low achievement in key Grade 9 or Grades 9 and 10 courses. The non-applicants were more likely to have experienced academic difficulties with English or Mathematics courses which may have contributed to their hesitancy to apply to college. Nearly one-half of the 200 transcripts had at least one failed course listed. This PSE decision-making process and the role of secondary school achievement is developed in more detail in Chapter 9.

4. Destinations of Students with a Workplace-Preparation OSSD

Only 3.2 percent of the base 2002-03 Grade 9 population obtained an OSSD comprised of Grade 12 Workplace-Preparation English or a combination of other senior Workplace-Preparation courses after four or five years in secondary school (see Figure 3.6).

Figure 3.6: Grade 12 Average Marks Distribution & Destination of Students with Workplace-Preparation OSSD by College Application Status (3.2% of 2002-03 Base Grade 9 Population; n=3,431)



Source: MOE/OCAS/OUAC data file.

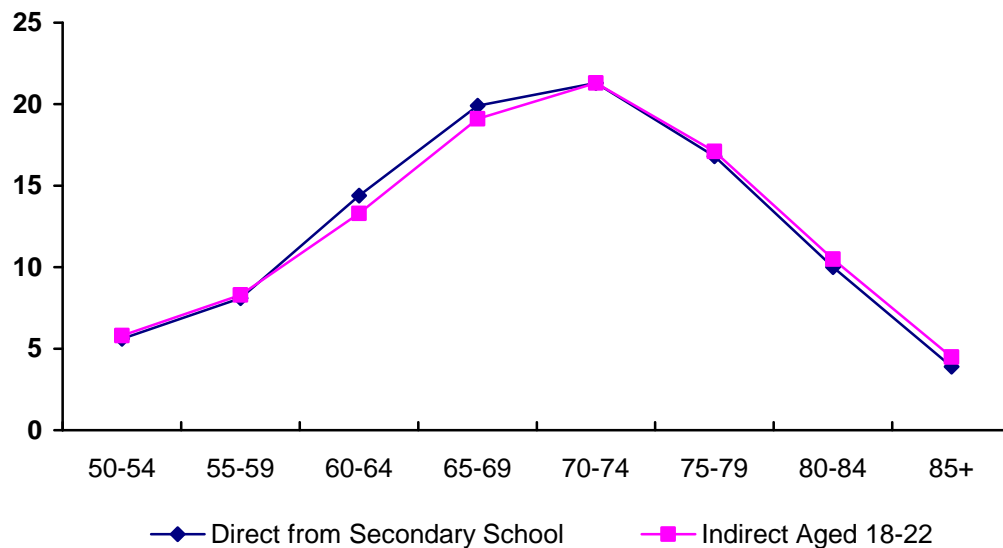
The majority of students with a Workplace-oriented OSSD did not apply to college, even though 4E English is recognized as meeting admission requirements, albeit in a very limited number of college programs. The few who did register in college did so mostly in one-year certificate programs, and their marks did not look much different from those who applied but did not register and from those who did not apply.

5. Secondary School Achievement of Out-of-School-to-College Registrants

Throughout this report, we comment on the relatively large group of young people who enroll in college after being out of secondary school one year or longer. Figure 3.5 indicates that those who applied to college with College-Preparation OSSDs looked very similar to those who did not in terms of their academic achievement. Using transcript marks submitted to OCAS for the

2006-07 school year, we compared the average marks of those who registered in college directly from secondary school with those who registered in college having been out of secondary school one to four years (Figure 3.7; the older out-of-school registrants typically had incomplete or non-existent transcripts). It must be noted that although only their secondary school marks are included, the out-of-school group is a very diverse group including some with PSE experience (Colleges Ontario, 2008). The marks distribution for the two groups was almost exactly the same. This finding is not surprising considering the similarities between college applicants, registrants, and non-applicants noted in Figure 3.5.

Figure 3.7: Mark Distributions of Direct and Non-Direct College Registrants (%; 2006)

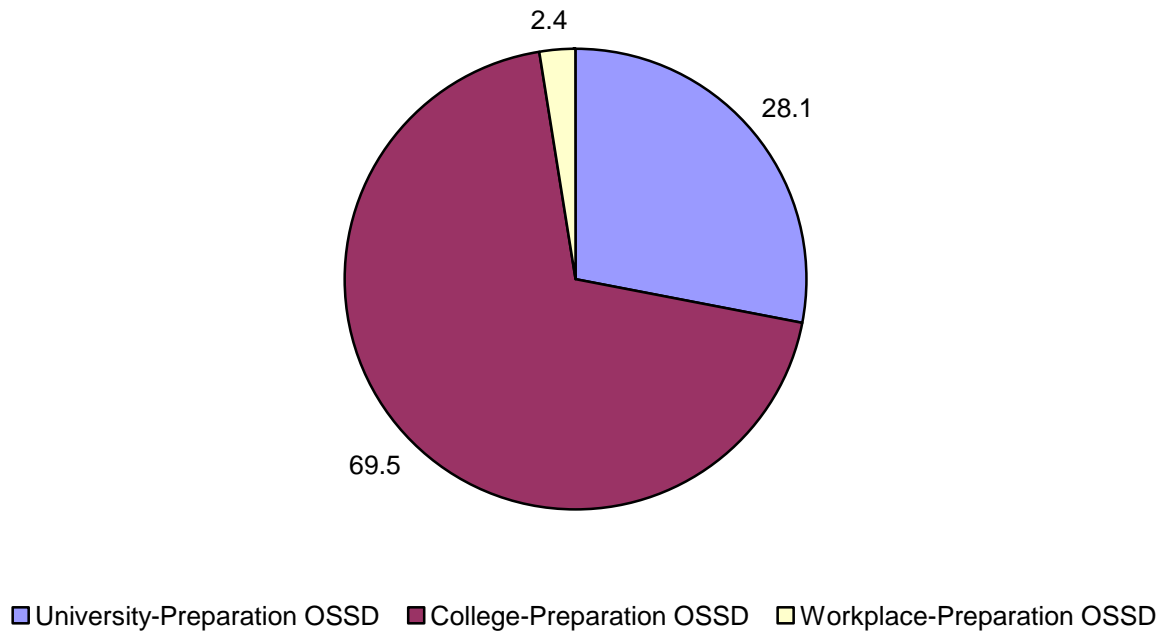


Source: Ontario College Application Services (OCAS).

6. Secondary School Background of Those Who Go to College Directly from Secondary School

Students with an OSSD with University-Preparation, College-Preparation, and to a much lesser extent Workplace-Preparation courses, are eligible for college programs. Figure 3.8 presents the percentage of students from each group who enrolled in a college program directly from secondary school. Many of those in the College-Preparation OSSD group had transcripts with a substantial number of University-Preparation courses, as well as College- and University/College-Preparation courses.

Figure 3.8: OSSD Type of Students Enrolling Directly in a College Program from Secondary School
(% of 2002-03 Base Grade 9 Population; n=17,904)



Source: MOE/OCAS/OUAC data file.

The majority of those entering college took University-Preparation English in Grade 11 and/or 12. Certainly the 28.1 percent of college enrollees with a University-Preparation OSSD had little or no exposure to College-Preparation courses, nor were they likely to have taken a Cooperative Education course. Their decision to apply to college may have been by default (for those who did not meet university-admission requirements), or because their career choice required College-Preparation (for most of those whose marks did meet university-admission requirements). The analysis of College-Preparation OSSD student transcripts, discussed in Section 3, found few instances of course combinations that might be classified as preparation for specific college programs.

7. Role of Secondary School Marks in Admission to University

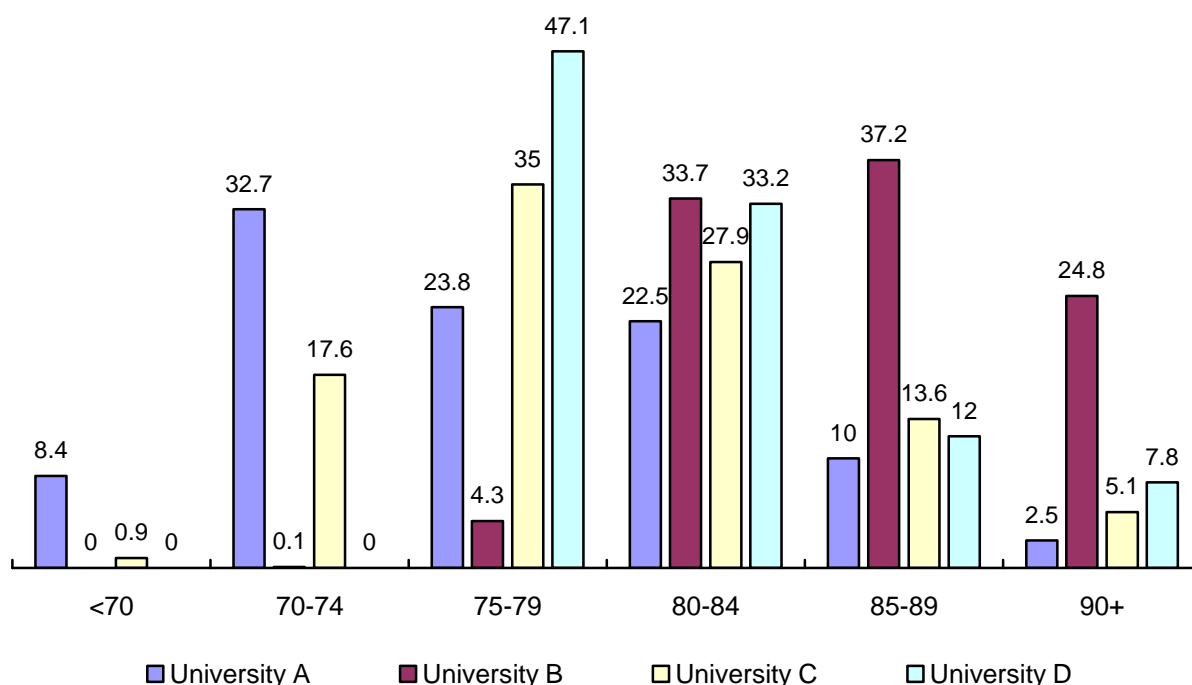
Admission requirements vary across Ontario universities and university programs. Specific information on university-admission requirements in terms of required courses and minimum average marks is made available to secondary school students. While it is true that some students who apply and do not register or do not apply to university attend university outside of the province, or are accepted but choose to travel or work for a year or longer, there are

students with good marks who may not meet the minimum requirements for their choice of program or university. It is easy to see how this might occur given the variability between minimum requirements across university programs. Also, some qualified students choose not to apply to university while in secondary school (see Figure 3.2).

Not only do marks play an important role in admissions overall, but marks play a differential role depending on the university and program. It is true that some students will apply more than once, but only about 12 percent (Table 1.2) register having been out of secondary school one year or longer. Some will apply twice while in secondary school (from Grade 12 and Year 5), since one-third of the 30 percent who return for a fifth year actually have an OSSD and could have applied while in Grade 12.

Figures 3.9 to 3.11 present the average marks of those students who were admitted into three undergraduate programs (Arts, Business and Commerce, and Engineering) at each of four different Ontario universities.

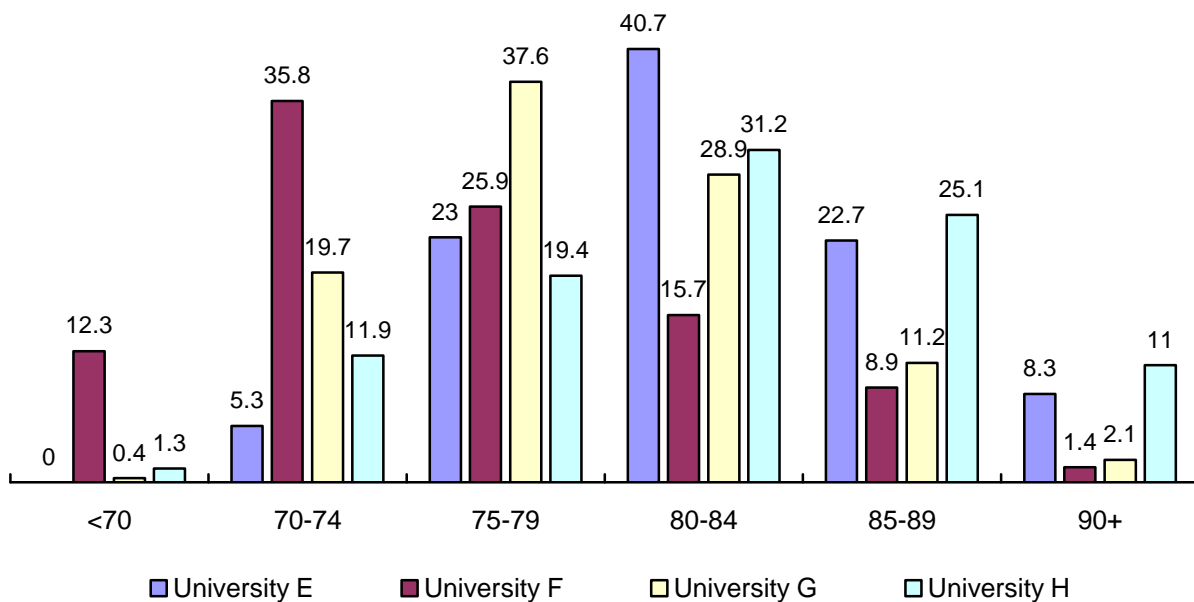
Figure 3.9: Secondary School Marks of Students Admitted into Arts Programs at Four Universities (%; 2007)



Source: Common University Data Ontario (CUDO).

It is obvious that the minimum requirements for admissions to what is essentially the same program differ greatly from university to university. For example, having a Grade 12 average of 73 percent almost certainly will not be high enough for acceptance into an undergraduate Arts program at Universities B or D, but would most likely ensure acceptance into Universities A or C (Figure 3.9).

Figure 3.10: Secondary School Marks of Students Admitted into Business & Commerce at Four Universities (%; 2007)

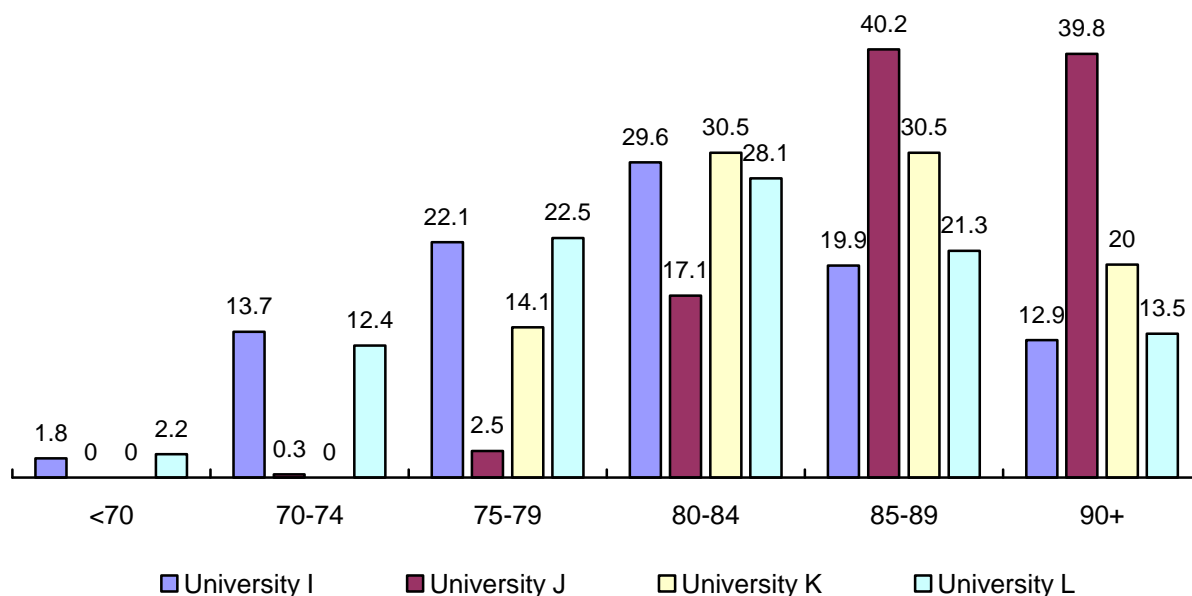


Source: CUDO.

Similarly, in Business and Commerce programs (Figure 3.10), the secondary school marks distribution of entering students can vary significantly from ‘relatively low’ (University F) to ‘very high’ (University E).

Interestingly, in a field such as Engineering, high marks are generally required for entry, but marks even higher than the norm are required for admission to University J (Figure 3.11).

Figure 3.11: Secondary School Marks of Students Admitted into Engineering at Four Universities (%; 2007)



Source: CUDO.

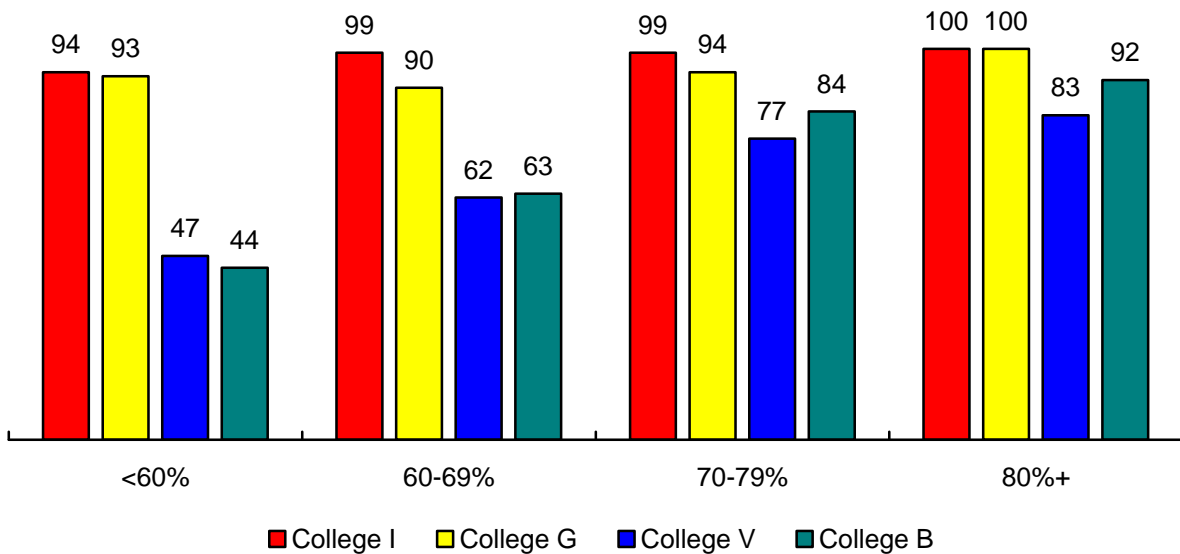
Choice of university, as well as program, is an important element of student decision making. The notion that we have a regionally representative university system is clearly not the case. Living near a university does not necessarily facilitate access to a university education. This issue is examined in greater detail in Chapter 5 – Region.

8. Role of Secondary School Marks in Admission to College

In college calendars, most programs state that the minimum requirements for admission include an OSSD with College-Preparation or University-Preparation English. However, for some programs (especially those programs which are highly competitive or require specific subject preparation), other requirements such as additional courses, interviews, aptitude test, etc. are considered in the admissions process. Figures 3.12 to 3.15 present data from the 2006 OCAS file which illustrate the marks of applicants who received offers to Police Foundations, Practical Nursing and Advertising programs at each of four colleges and Dental Hygiene at each of three colleges.

For Police Foundations at two colleges, almost all students with marks in all mark categories received offers (Figure 3.12). However, at the two other colleges, marks played a more important, but not necessarily decisive role, as students with marks over 70% were more likely to receive an offer; but substantial numbers of students with average marks of less than 60% also received offers.

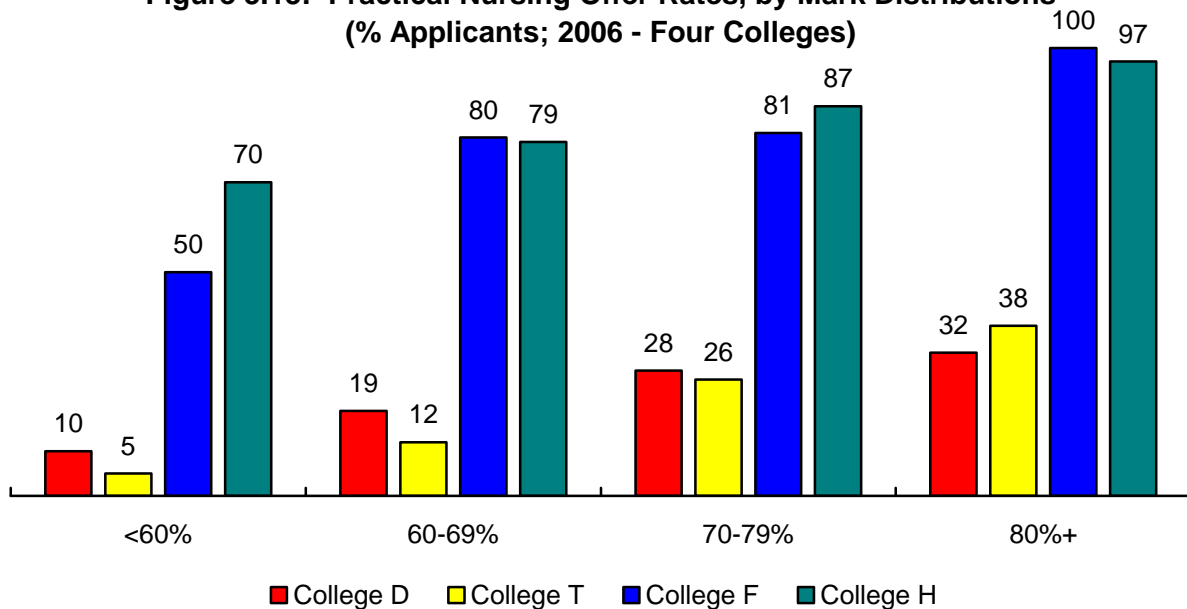
Figure 3.12: Police Foundations Offer Rates, by Mark Distributions (% Applicants; 2006 - Four Colleges)



Notes: Offer rates refer to offers as percentage of applications.
 Other requirements (e.g., interviews, portfolios, tests) may be necessary for admission to some programs in some colleges.
 Source: OCAS.

In the case of Practical Nursing (Figure 3.13), marks play a greater role in the admission process than was the case with Police Foundations, but this role varies sharply across colleges. For example, in College F all students with an average above 80% received an offer, 81 percent of those with an average between 70 and 79% did so, while 50 percent with an average below 60% also received an offer. In College T, relatively few applicants received offers overall, but 38 percent were accepted to the program from those with an average above 80%, and only 4 percent of students were accepted that had an average below 60%.

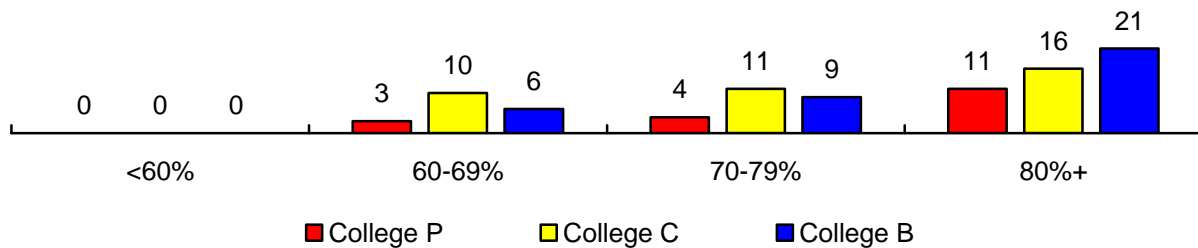
**Figure 3.13: Practical Nursing Offer Rates, by Mark Distributions
(% Applicants; 2006 - Four Colleges)**



Notes: Offer rates refer to offers as percentage of applications.
Other requirements (e.g., interviews, portfolios, tests) may be necessary for admission to some programs in some colleges.
Source: OCAS.

Dental Hygiene is a very competitive program with far more applicants than registrants (Figure 3.14). As seen in the three college examples, marks play a role in selection as more students with averages above 80% received an offer, while no students with averages below 60% received an offer. However, even marks above 80 percent did not guarantee that an offer would be made.

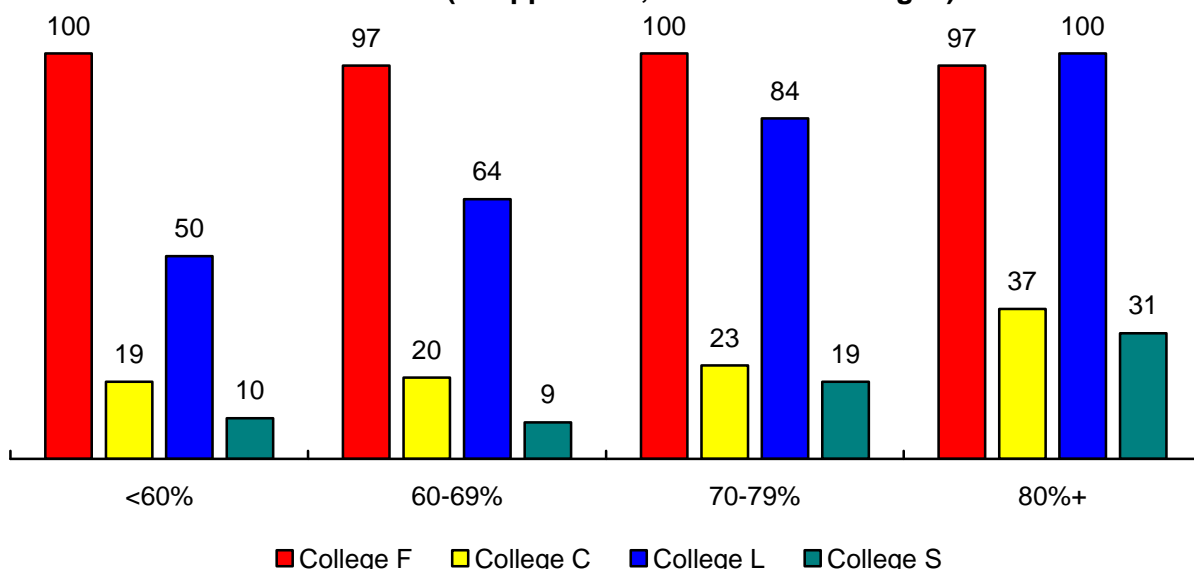
Figure 3.14: Dental Hygiene Offer Rates, by Mark Distributions (% Applicants; 2006 - Three Colleges)



Notes: Offer rates refer to offers as percentage of applications.
 Other requirements (e.g., interviews, portfolios, tests) may be necessary for admission to some programs in some colleges.
 Source: OCAS.

Business-Advertising is another program where there is considerable variance across the colleges with regard to offers made (Figure 3.15). For College F, almost all applicants to Business-Advertising received offers regardless of average marks. Colleges C and S had similarly low offer rates across the mark ranges, but more students in the higher mark ranges received offers. College L's offer rates progressed evenly from 50 percent of those with marks less than 60% receiving offers to 100 percent of those with marks 80% or over.

Figure 3.15: Business-Advertising Offer Rates, by Mark Distributions (% Applicants; 2006 - Four Colleges)



Notes: Offer rates refer to offers as percentage of applications.

Other requirements (e.g., interviews, portfolios, tests) may be necessary for admission to some programs in some colleges.

Source: OCAS.

B. Predicting OSSD Completion

1. Secondary School Achievement of Those Who Did Not Obtain an OSSD

The 2002-03 Grade 9 cohort, which forms the basis of this analysis, had a graduation rate of about 75 percent after five years of secondary school. But what of the 25 percent of the cohort who did not obtain an OSSD? Are they close enough to OSSD completion to be considered part of the target group for PSE? Table 3.1 outlines the credit accumulation of those who left secondary school without completing a diploma after two, three, four and five years. A small portion of this group would have left to go on to another secondary school, but were lost from our cohort trace.

**Table 3.1: Credit Status of School Leavers Without an OSSD
(24.6% of Cohort Traced from Grade 9 in 2002-03 to Year 5 in 2006-07)**

Time of School Leaving	Credits Obtained/% Students				
	11 or less	12-13	14-15	16 or more	
Left Before Year 3 3.2% ^a	80.0	4.9	5.1	9.9	
Left After Year 3 6.3%	57.0	12.2	12.0	18.8	
Left after Year 4 6.1%	40.9	13.0	14.0	13.1	28-29 ^b 16.9
Had No OSSD After Year 5 9.1%	30.7	13.8	18.7	15.5	17.9 ^c

^a Based on the 2002-03 Grade 9 enrollment as 100%.

^b 30+ - 2.1% have 30 credits, but no required credit in most cases for Grade 12 English (n=137)

^c 30+ - 3.4% have 30 credits, but no required credit in most cases for Grade 12 English (n=323).

The majority of those who left after Grade 10 and 11 were well behind in credit achievement at that point in time, and their likelihood of completing an OSSD was not promising. About one-quarter of the Grade 12 and Year 5 leavers could complete an OSSD in a short time because they were within one or two credits of the 30 required for graduating. However, a closer analysis of their records typically showed problems in English and/or Mathematics and likely a secondary school experience that did not predict successful PSE achievement. Obtaining a GED⁸ high school equivalency certificate would appear to be a viable route for most of this group to qualify for PSE.

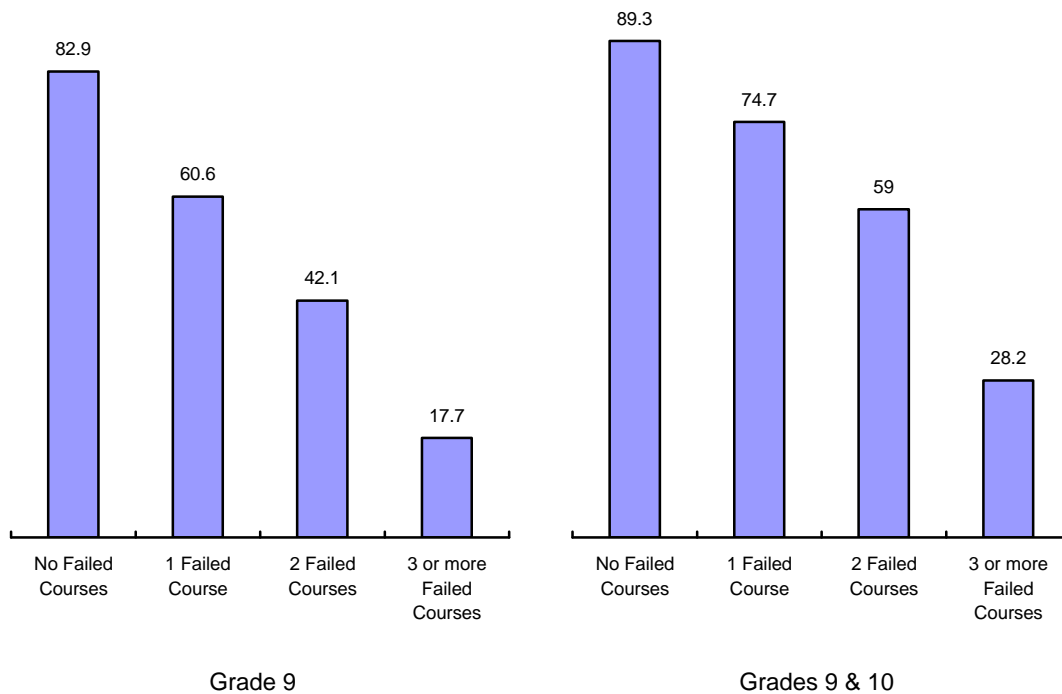
For this analysis we examined students' records in terms of Grade 9 course selections, number of Grade 9 and 10 courses failed, and overall credit accumulation to determine to what extent these factors predict students' OSSD completion. If effective intervention points can be identified and intervention strategies implemented, a greater proportion of students would be able to complete secondary school successfully. The 'Student Success' initiative introduced by the Ministry of Education is directly focused on this issue. The larger the number of graduates with OSSDs, the greater the likelihood that more will enroll in PSE.

⁸ The General Educational Development (GED) test is an international secondary school equivalency examination program for adults. The GED tests cover what secondary school graduates are expected to know in Mathematics, Writing, Science, Literature, and the Arts. Candidates who successfully complete the tests can earn the Ontario High School Equivalency Certificate. (Ministry of Education website) <http://www.edu.gov.on.ca/eng/students/faq-students.html#schools9>.

2. Role of Credit Loss and Marks in OSSD Completion

Thirty credits are required for an OSSD, and students can take up to eight courses a year (creating 32 credit opportunities in four years, 40 in five years). It is not unreasonable to expect that most students would obtain an OSSD, but as we have seen, this is not the case. Failing one or two courses in Grade 9 can quickly lead to demoralization for some students and later failed courses. Figure 3.16 illustrates how failures in the first year of secondary school affect secondary school graduation.

Figure 3.16: OSSD Completion in 5 Years or Less, by Number of Courses Failed in Grades 9 & 10 (% Students; 2002-03 Base Grade 9 Cohort)



* Note: 82.9% of students with no failed Grade 9 courses graduated with an OSSD in four or five years.

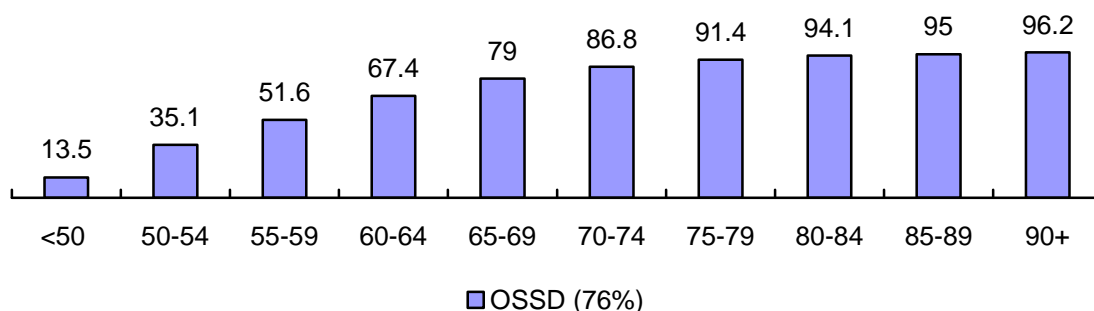
Source: MOE data file.

The relationship between failed courses in Grade 9 and OSSD completion is very strong. Even one failed Grade 9 course reduced the chances of graduation by over 20 percent to only 60 percent. Very few students who failed three or more courses in Grade 9 actually graduated.

Grade 9 appears to be a critical hurdle, as failing one or two courses over two years rather than one does not seem to have as pronounced an effect (Figure 3.16). For example, 74.7 percent of students who failed one course within the first two years of secondary school were still able to complete OSSD requirements, compared to 60.6 percent who failed one course in their first year of secondary school and completed them. Only 17.7 percent of those who failed three or more courses in Grade 9 completed OSSD requirements within five years, while slightly more (28.2%) of students who failed three or more courses over Grades 9 and 10 went on to complete OSSD requirements.

Figure 3.17 presents students' Grade 9 average marks in relation to OSSD completion. It was found that the lower the Grade 9 average, the less likely an OSSD completion. Students who had a Grade 9 average between 55 and 59% were only half as likely as those with marks over 85% to complete an OSSD. Only 35.1 percent of students whose average marks were between 50 and 54% were able to successfully complete OSSD requirements. While 50% is considered a passing grade in a course, it also indicates that a student may not have a strong enough background in the subject area to be successful in later grades. Most of the students with average marks below 65% in Grades 9 and 10 had at least one raised to 50%.⁹ The relatively low OSSD completion rates of students with average marks of less than 70% suggest that such students may need extra help, even if they are passing their courses.

Figure 3.17: OSSD Completion in 5 Years or Less, by Average Marks of Grade 9 Courses
 (% Students; 2002-03 Base Grade 9 Cohort)



Students with a minimum of four Grade 9 marks were used to calculate average.
 Source: MOE data file.

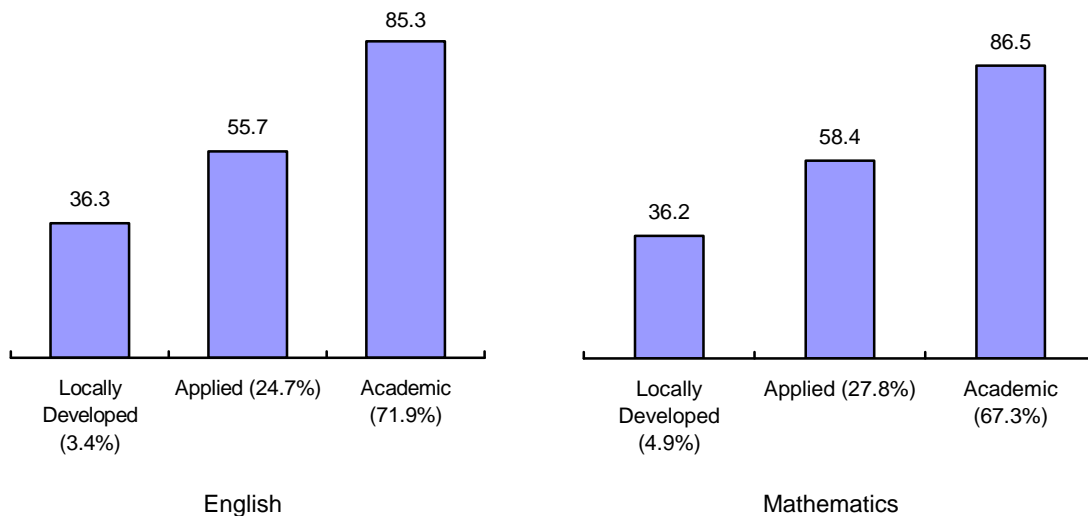
⁹ A mark of 50% in a course typically indicates that a student has failed the course but his/her real mark of 47 to 49% has been raised.

3. Role of Course Type

Grade 9 is the beginning of differentiation based on the type of courses selected by students – Academic, Applied, or Locally Developed. Although these course types are, in theory, designed to meet the students’ aptitudes and interests, and each student’s combination of courses should lead to OSSD completion, the actual outcome does not reflect this objective. Designing courses by type within subject areas was intended to provide students with appropriate information/skills matching their aptitudes and preparing them for their potential post-secondary plans.

Figure 3.18 indicates that OSSD completion was much more likely for those who took Academic English than those who took Applied English, and over one-third of those who took Locally Developed English graduated in four or five years. The same pattern holds true for Grade 9 Mathematics.

Figure 3.18: OSSD Completion in 5 Years or Less, by Type of Grade 9 English & Mathematics Courses (% Students; 2002-03 Base Grade 9 Cohort)



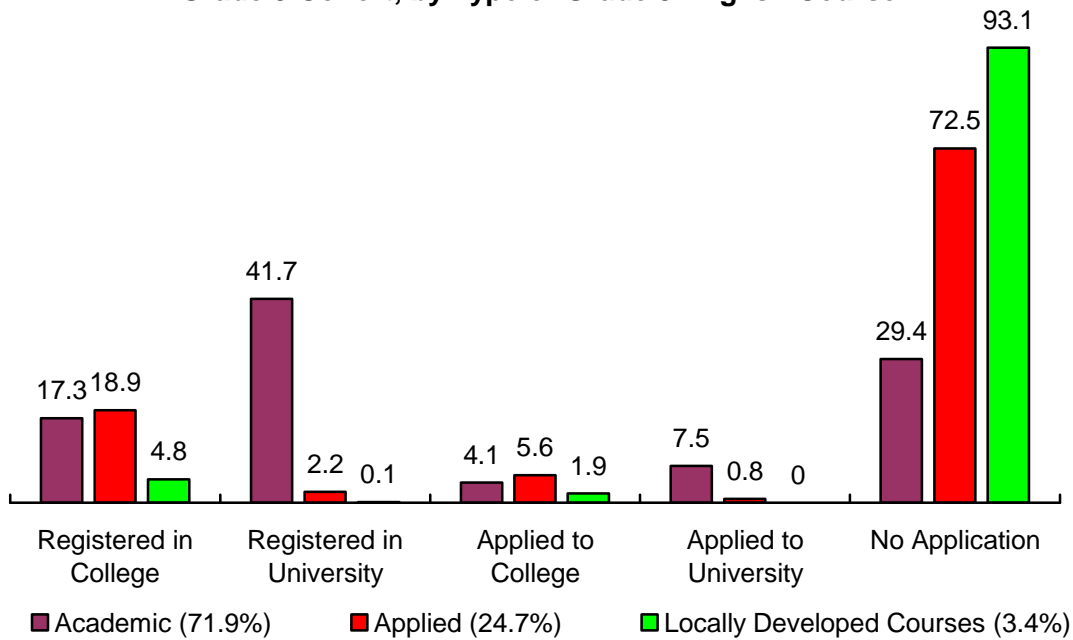
Source: MOE data file.

In addition to OSSD completion, we examined the PSE destinations¹⁰ of students based on the type of their Grade 9 English and Mathematics courses (Figures 3.19 and 3.20).

¹⁰ An analysis of destination which includes Apprenticeship is presented in Chapter 8.

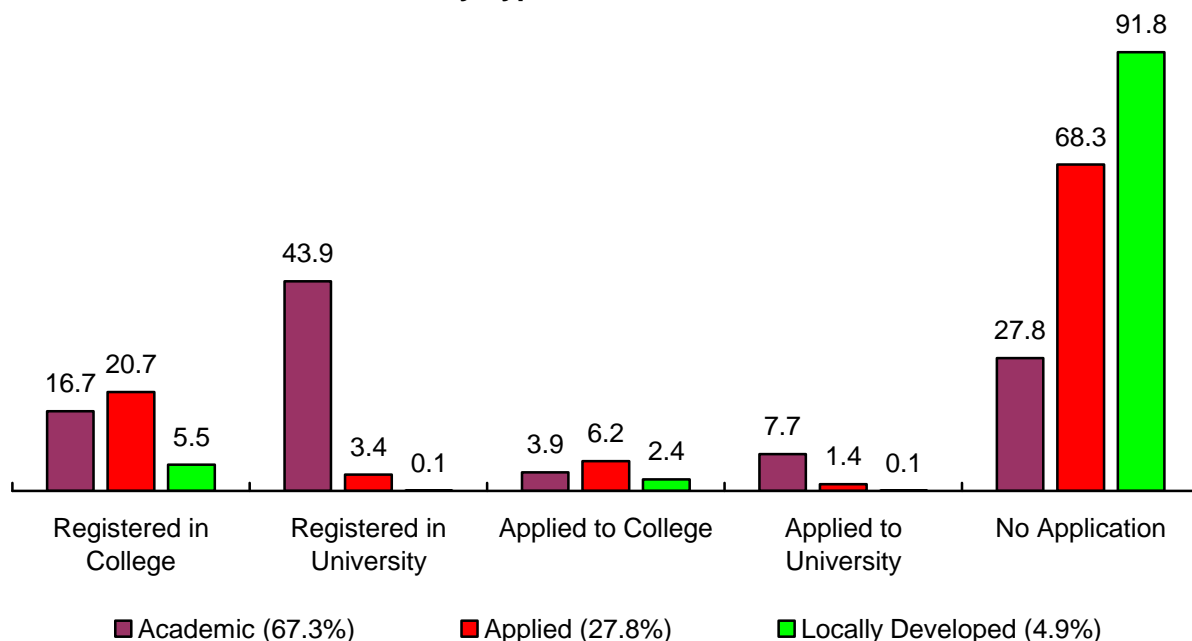
The patterns were similar for English and Mathematics. As expected, the majority of university registrants came from those who took Academic English and Mathematics in Grade 9 (41.7% and 43.9%, respectively). Not surprisingly, few students who took Applied English and Mathematics in Grade 9 registered in university.

**Figure 3.19: PSE Status of 2002-03
Grade 9 Cohort, by Type of Grade 9 English Course**



Source: MOE/OCAS/OUAC data file.

**Figure 3.20: PSE Status of 2002-03
Grade 9 Cohort, by Type of Grade 9 Mathematics Course**



Source: MOE/OCAS/OUAC data file.

Grade 9 Applied English and Mathematics were courses that did not necessarily lead to college, as only 18.9 and 20.7 percent, respectively of students who took these courses, registered in college directly after secondary school – similar to the proportions who took Grade 9 Academic English and Mathematics and did so. Of some importance is the relatively high proportion of students (slightly over one-quarter) who took Grade 9 Academic English and Mathematics but did not apply to PSE directly from secondary school.

Clearly, though, the choice of Grade 9 English and Mathematics course type is a relatively good predictor of who will apply to and register in university but certainly not college.

C. Summary

The majority of students who took University-Preparation courses and completed an OSSD went on to PSE directly from secondary school. This group includes 46 percent of the Grade 9 cohort (76 percent of these students enrolled directly in PSE). By contrast, 45 percent of the students who took courses that met college requirements and completed an OSSD went directly to college. However, since three times as many students take Academic English and Mathematics in Grade 9 as take Applied, the net effect is that a majority of college registrants

come from the former group. College-Preparation OSSD students, whether they went directly to college or not, had lower average marks than the University-Preparation OSSD group. A close analysis of the secondary school records of the College-Preparation OSSD group typically revealed marginal or failing marks in one or more of the key subjects – English, Mathematics, and Science. It is not surprising that many of them took time off before enrolling in a college after what must have seemed to them to be a relatively unsuccessful school experience. (Reasons that college-bound young people delayed registration (e.g., their school experience, financial issues) are discussed in some depth in Chapter 9.) On the other hand, the University-Preparation OSSD group had a generally positive secondary school experience in terms of academic achievement.

Although there were differences in the role played by secondary school average marks in college program offer rates, overall, marks were less important in gaining entry into college programs than was the case for university programs. The minimum average mark for entry to university programs was quite precise even though it varied substantially across universities for the same programs. Even for over-subscribed college programs, there were clearly factors beyond secondary school marks that resulted in offers of admission. Relatively few students with University-Preparation OSSD and appropriate average marks did not apply to university directly from secondary school, but a much larger proportion of College-Preparation OSSD students did not apply to college.

The types of courses selected and achievement in Grade 9 were strong predictors of secondary school success. A single failed course in Grade 9 reduced the likelihood of OSSD completion within five years to 60 percent, in comparison with 83 percent for those with no failures in Grade 9. Students who started secondary school taking Academic courses were far more likely to complete an OSSD than those taking Applied courses.

Chapter 4: Gender

Evidence has been accumulating for many years regarding the challenges experienced in schools by male students in comparison to females. The Ontario Ministry of Education has recognized the importance of this issue in its 'Reach Every Student' initiative that makes improving the educational opportunities for males a priority (Ministry of Education, 2008).

One way of viewing gender equality is to determine whether there are similar proportions of males and females enrolled in university, college and apprenticeships. In this section we determine whether significant gender differences are evident in college, university and apprenticeship enrollments, and, if differences exist, whether they can be explained in terms of gender differences on standardized tests of academic achievement.

What are the gender enrollments in Ontario colleges, universities and apprenticeships today? If there are important gender differences in achievement as well as program and institutional enrollments, what remediation might be introduced to balance participation by males and females in a way that might increase overall PSE participation?

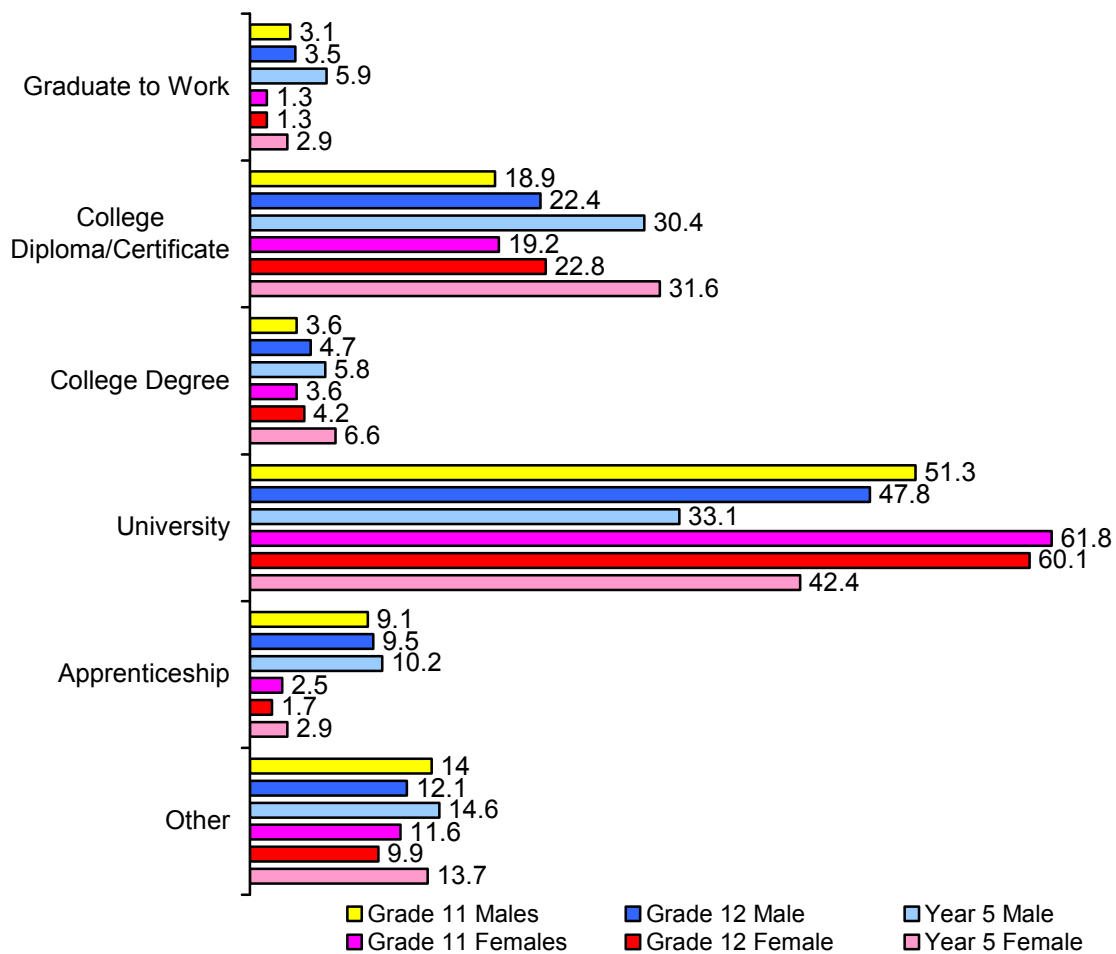
The first level of analysis in this chapter involves a presentation of gender differences in apprenticeship, college and university enrollments, with particular attention paid to changes over time. The differences that are noted are then related to secondary school achievement and course selection as well as educational plans. Achievement on large-scale assessments are then presented to further understand gender differences in academic achievement.

A. Post-Secondary School Destinations by Gender

In the *Transition to College* study, we examined the post-secondary plans of students in Grades 11 and 12 and Year 5 of secondary school (King & Warren, 2006; see Figure 4.1). A higher proportion of females, in both Grade 12 and Year 5, were considering university. Conversely, a higher proportion of males, in both Grade 12 and Year 5 were considering taking up an apprenticeship, and the proportion of males planning on going directly to the workplace exceeded that of the females. The proportions of males and females interested in college were similar.

It is important to observe that Grade 11 students' PSE plans were similar to those of Grade 12 students, and ultimately correspond with patterns of actual post-secondary enrollments by gender. It appears that educational plans of males and females correlate with educational attainment and PSE interest, and that the pattern tends to be established by Grade 11.

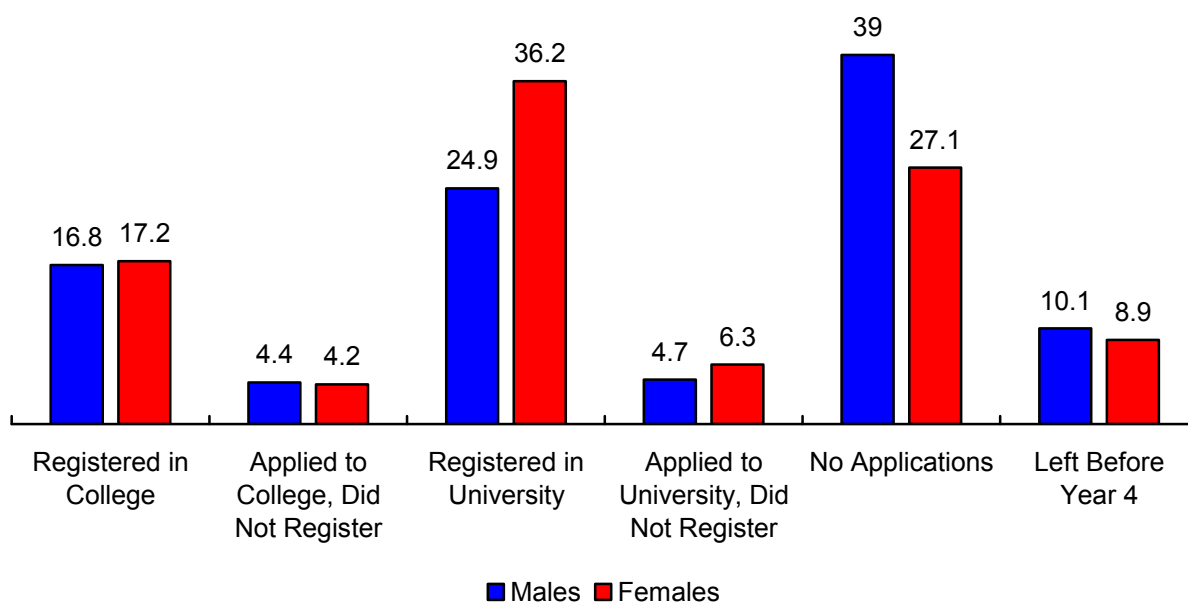
Figure 4.1: Post-Secondary Plans, by Gender



College Degree: refers to Colleges' Applied or Collaborative/Joint Degree programs.
 Other: e.g., military, traveling, sports teams.
 Source: King & Warren, 2006.

In order to present the PSE destinations of secondary school students by gender in more detail, we traced the 2002-03 Grade 9 cohort for five years to college, university or other destinations. The findings are summarized in Figure 4.2.

Figure 4.2: Post-Secondary Destinations of the 2002-03 Grade 9 Cohort after Five Years in Secondary School (%; 2006-07)



Note: Those who applied to both college and university and:
 a) did not register were included in Applied to College, Did Not Register
 b) registered in college were included in Registered in College
 c) registered in university were included in Registered in University.
 Source: MOE/OCAS/OUAC data file.

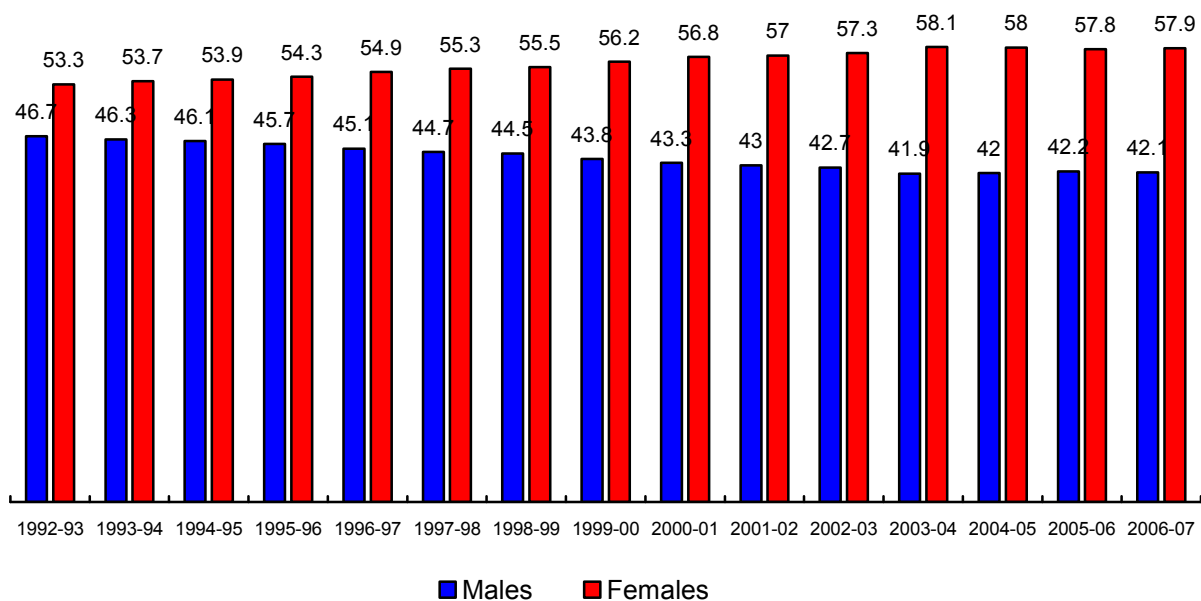
After five years, approximately 75 percent of the 2002-03 Grade 9 cohort had graduated with an OSSD (see Figure 2.7). While similar numbers of males and females registered in an Ontario college, far more females registered in university. The proportion of applicants not registering in college was similar for males and females, and slightly higher for female applicants not registering in university. Far more males than females did not apply to PSE institutions (the differences were mainly in university applications), and slightly more males had left secondary school before their fourth year.

1. University and University Program Enrollments

Through the 1980s and 1990s the proportion of young females in Ontario university undergraduate programs continued to grow to a leveling off point in the early 2000s (Figure 4.3). This trend was also true in graduate programs as females reached parity in Master’s Degree programs in 1997, and continue to account for around 50 percent of Master’s candidates

(Association of Universities and Colleges, 2007). Similarly, the proportion of females in PhD programs has increased, rising from 25 percent in 1976 to 45 percent in 2000 where it remained at least until 2006 (Association of Universities and Colleges, 2007).

Figure 4.3: University Undergraduate Enrollments in Ontario 1992-93 to 2006-07, by Gender (%)



Source: Statistics Canada (CANSIM), 2009, Table 477-0013.

The ratio of male to female students varies across Ontario universities (see Table D-12 in Appendix D). On the whole, females outnumber males in almost every university with the exception of the University of Waterloo and the UOIT (University of Ontario Institute of Technology), both of which have many Science and Technology programs that appear to be more attractive to males. Universities that have high enrollments in Arts and Social Science programs tend to have correspondingly high female enrollments.

Table 4.1: Ontario University Registrants, by Program Type & Gender (%; 2006-07)

Program	Female	Male
Business & Commerce	46	54
Computer Science	14	86
Education	76	24
Engineering	18	82
Fine & Applied Arts	71	29
Humanities	66	34
Law	54	46
Mathematics	43	57
Medicine	54	46
Nursing	91	9
Other Arts & Science	61	39
Social Science	67	33
Total Ontario Enrollment	59	41

Source: Common University Data Ontario (CUDO), 2007.

Gender differences within programs can be seen in Table 4.1. While there was a difference of 18 percent in the total university enrollment by gender, the difference in male and female enrollments in particular programs was often much larger. This pattern was especially pronounced in the male-dominated Engineering and Computer Science programs and the female-dominated Nursing Education and Humanities programs. Business and Commerce programs as well as Mathematics programs were closest to having an equal distribution in registrations by gender. The post-undergraduate degree programs of Law and Medicine both had slightly more females than males.

2. College and College Program Enrollments

For most colleges, the male and female ratio was similar, although three colleges did vary significantly from the norm with substantially higher female enrollments (Table D-13 to Table D-33 in Appendix D).

The same proportion of males and females entered college directly from secondary school in 2006, while a slightly greater proportion of females were non-direct registrants (Table 4.2). Non-direct registrants with no previous PSE were more likely to be male, and non-direct registrants with some PSE were more likely to be female (Colleges Ontario, 2008).

Table 4.2: Direct and Non-Direct College Registrants, by Gender (%; 2006)

College Registrant Types	Female	Male
Direct Registrants*	50	50
Non-Direct Registrants	52	48

*Direct = Direct from secondary school; Non-Direct = from out of school.
Non-direct registrants with no previous PSE were more likely to be male, and non-direct registrants with some PSE were more likely to be female.
Source: OCAS data file.

Although the proportion of males and females at most colleges was similar, there were pronounced program-level gender differences. Typically a higher percentage of females registered in Social Service Worker, Early Childhood Education and Travel/Tourism programs, while a higher percentage of males registered in programs such as Police Foundations, Computer Systems, Broadcasting, and the technologies programs (Table 4.3).

Table 4.3: Ontario College Registrants by Programs & Gender (%; 2006)

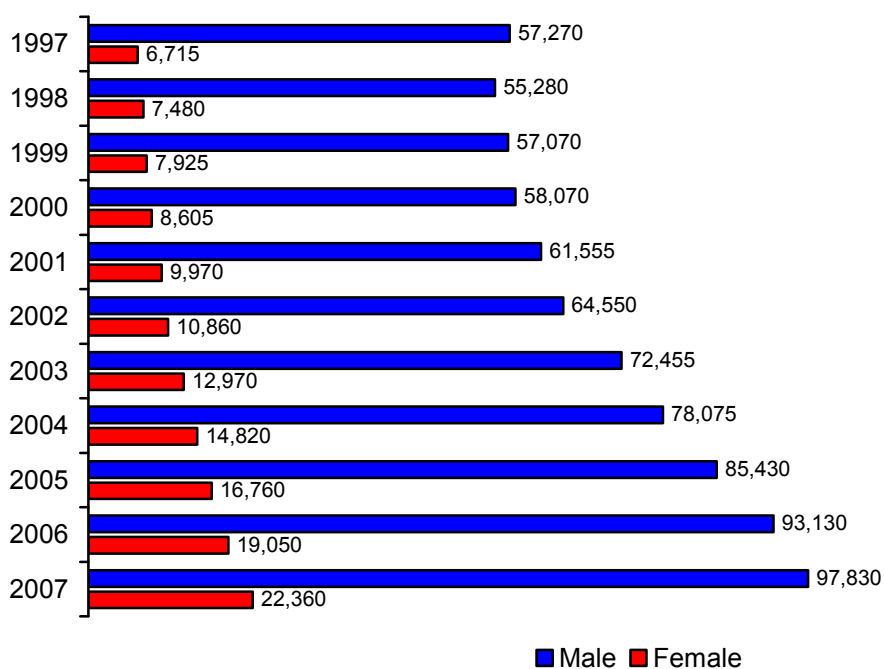
College Programs	Female	Male
Broadcasting-Radio	34	66
Business	38	62
Computer Systems	7	94
Culinary Skills	35	65
Early Childhood Education	96	4
Electronics Engineering	5	95
Graphic Design	53	47
Police Foundations	25	75
Social Service Worker	85	15
Travel Tourism	80	20

Source: OCAS data file.

3. Apprenticeship Enrollments

Registering as an apprentice has historically been a low priority for Ontario secondary school students. Approximately 8,300 apprentices under the age of 20 were registered in Ontario in 2007 (MTCU, 2008). Of these registrants, the majority were male. Further details on those who registered as apprentices (of all ages) was obtained from Statistics Canada and is presented in Figure 4.4.

Figure 4.4: Registered Apprenticeship Trainees in Ontario, by Gender (1997 - 2007; All Ages)

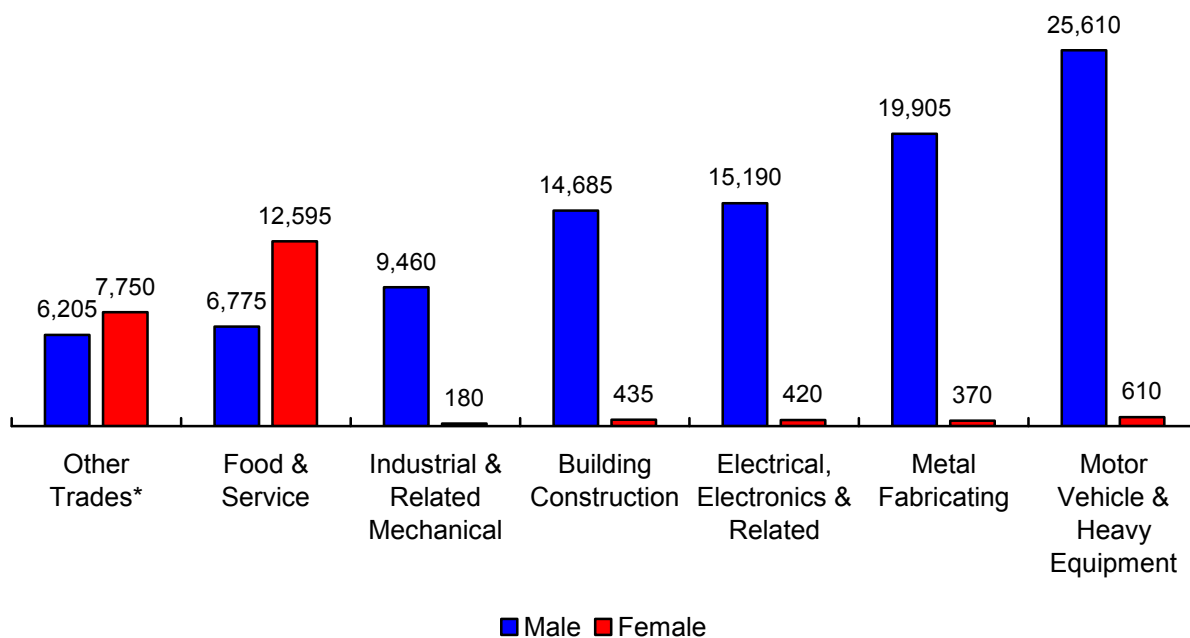


Source: Statistics Canada (CANSIM), 2009, Table 477-0051.

Figure 4.4 indicates the steady increase of apprenticeship registrants from 1991 to 2005, as well as the steady increase in the proportion of female apprentices. That increase in female apprentices can be attributed, in part, to the addition of new apprenticeship programs in traditionally female-dominated fields (e.g., Early Childhood Education). Nevertheless, even by 2007, females made up only 18.6 percent of apprenticeship registrants.

Figure 4.5 presents registered apprenticeship training for 2007 by specific trades.

Figure 4.5: Registered Apprenticeship Trainees in Ontario, by Type of Trades (2007)



* Other Trades: e.g., Early Childhood Educator, Child and Youth Worker, Assistant Cameraperson, Pork Production Technician.
 Source: Statistics Canada (CANSIM), 2009, Table 477-0051.

When one looks more closely at the apprenticeship programs by specific type (Figure 4.5), it becomes clear that very few females were involved in the traditionally male-dominated fields such as Building Construction, Metal Fabrication, and Motor Vehicle and Heavy Equipment. However, females were over-represented in the Food and Service field.

B. Gender Differences in Secondary School Course Enrollments, Achievement and Standardized Test Scores

Secondary school course selection is a reflection of not only interest and aptitude but also previous academic achievement. For example, one indication of gender differences in achievement is the relative proportion of females and males enrolled in secondary school University-Preparation courses. In this section, we examine gender differences in types of courses selected, secondary school achievement in English, Mathematics, and Science as well as standardized test scores (large-scale assessment measures) including the Ontario Secondary School Literacy Test.

The secondary school records of students in the Ministry of Education file were examined with regard to 2006-07 enrollment in Grade 9 to 12 courses in English, Mathematics and Science by program type and gender.

1. Course Enrollments and Achievement

Course enrollment information reflects not only achievement differences between males and females but also differences in their preparation for PSE destinations. Achievement in English courses plays an integral role in both high school graduation rates and pursuit of PSE – four English courses are required for the successful completion of an Ontario Secondary School Diploma, and English is a prerequisite for all College and University programs.

Table 4.4 indicates that a higher proportion of females than males were enrolled in the Grades 9 and 10 Academic and Grades 11 and 12 University-Preparation English (ENG) courses than males. On the other hand, the Grades 9 and 10 Locally Developed and Applied courses and Grades 11 and 12 Workplace-Preparation English courses had more males enrolled than females.

Table 4.4: Enrollment in Grades 9 to 12 English Courses, by Gender (%; 2006-07)

Course	Females	Males
Grade 9:		
ENG1D (Academic)	54	46
ENG1P (Applied)	38	62
ENG1L (Locally Developed)	32	68
Grade 10:		
ENG2D (Academic)	54	46
ENG2P (Applied)	39	61
ENG2L (Locally Developed)	32	68
Grade 11:		
ENG3U (University)	55	45
ENG3C (College)	41	59
ENG3E (Workplace)	30	70
Grade 12:		
ENG4U (University)	55	45
ENG4C (College)	42	58
ENG4E (Workplace)	31	69

Source: MOE data file.

Table 4.5 indicates that females consistently obtained higher average marks in all English courses. These gender differences in marks were so pronounced that they must inevitably influence post-secondary opportunities, especially those related to university admissions. Not only were females more likely than males to take University-Preparation English, but also they were more likely to achieve at a higher level than males in each type of English course.

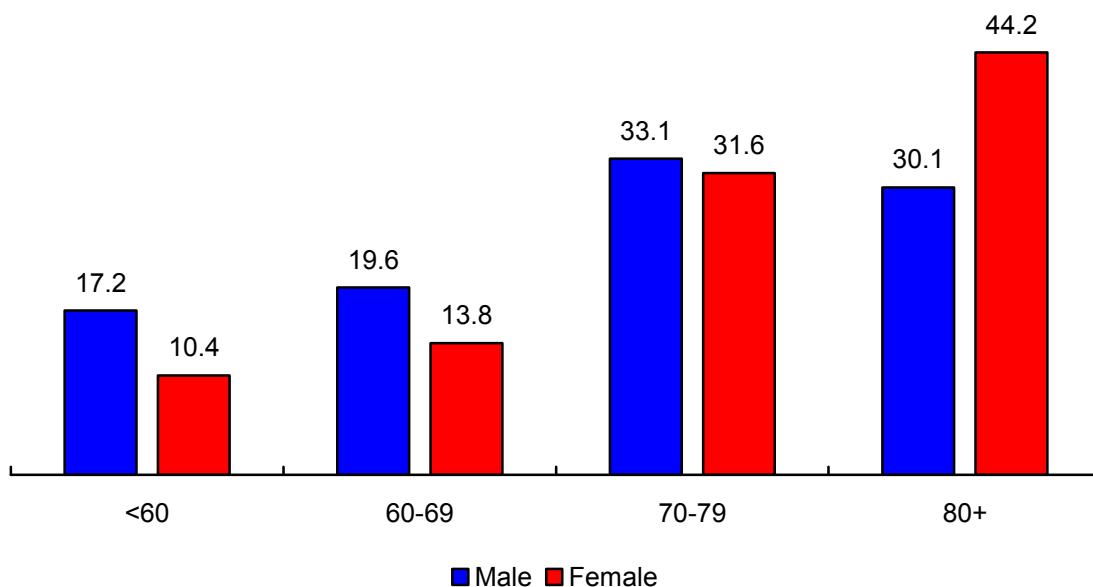
Table 4.5: Average Marks in Grades 9 to 12 English Courses, by Gender (%; 2006-07)

Course	Females	Males
Grade 9:		
ENG1D (Academic)	74.5	69.6
ENG1P (Applied)	65.4	61.5
ENG1L (Locally Developed)	66.2	61.9
Grade 10:		
ENG2D (Academic)	73.9	69.2
ENG2P (Applied)	64.7	60.4
ENG2L (Locally Developed)	65.6	61.2
Grade 11:		
ENG3U (University)	73.7	68.9
ENG3C (College)	66.3	60.3
ENG3E (Workplace)	65.9	60.7
Grade 12:		
ENG4U (University)	74.9	70.4
ENG4C (College)	68.8	62.4
ENG4E (Workplace)	68.8	63.6

Source: MOE data file.

Successful completion of Grade 12 University-Preparation English (ENG4U) is required for admission to all university programs. Figure 4.6 presents Grade 12 University-Preparation English marks distributions by gender.

Figure 4.6: Grade 12 University-Preparation English Marks, by Gender (%; 2006-07)



Source: MOE data file.

Similar proportions of males as females obtained marks in the 70s, but the proportion of females obtaining marks of 80% and over is much higher than that of males. Males were far more likely to obtain low and failing marks. Since more females than males took Grade 12 University-Preparation English (ENG4U), the gender difference in university eligibility was even more pronounced than this distribution suggests.

Table 4.6 presents the proportionate enrollment in secondary school Mathematics courses by gender. Three Mathematics courses are required for OSSD completion, but students are not required to take a Grade 12 level Mathematics courses. This is reflected in the proportion of Grade 12 students who took a Grade 12 Mathematics course. Only 63.5 percent of female graduates had a Grade 12 Mathematics on their transcripts compared to 74.8 percent of male graduates. Adding Grade 12 Mathematics course enrollments together does not present an accurate picture of the number taking Grade 12 Mathematics because a substantial number of university-planning students will take two University-Preparation Mathematics courses. Specific Grade 12 University- and College-Preparation courses are required for some post-secondary programs. A greater proportion of females than males were enrolled in Grade 9 Academic Mathematics (MFM1P), and more males than females in Locally Developed Mathematics

(MAT1L). Of the three Grade 12 University-Preparation Mathematics courses, similar proportions of females and males were enrolled in Data Management (MDM4U), while more males than females were enrolled in Geometry and Algebra¹ (MGA4U). The distribution of males and females taking these courses is directly related to the gender differences in university programs such as Engineering and Computer Science as these programs, like the enrollment in the prerequisite Mathematics programs, have a higher proportion of males.

Table 4.6: Enrollment in Grades 9 to 12 Mathematics Courses, by Gender (%; 2006-07)

Course	Females	Males
Grade 9:		
MPM1D (Academic)	51	49
MFM1P (Applied)	45	55
MAT1L (Locally Developed)	38	62
Grade 10:		
MPM2D (Academic)	51	49
MFM2P (Applied)	45	55
MAT2L (Locally Developed)	38	62
Grade 11:		
MCR3U (University)	50	50
MCF3M (University/College)	53	47
MBF3C (College)	45	55
MEL3E (Workplace)	41	59
Grade 12:		
MDM4U (University)	50	50
MGA4U (University)	34	66
MCB4U (University)	47	53
MCT4C (College)	27	73
MAP4C (College)	38	62
MEL4E (Workplace)	38	62

Source: MOE data file.

Significantly more males than females were enrolled in the College-Preparation Mathematics courses (MAP4C & MCT4C), which are required or recommended for college programs such as Technology, and the Workplace-Preparation Mathematics (MEL4E) course, which tends to be more closely linked to apprenticeship programs. It is particularly interesting to note the relatively small enrollment in MCT4C which is a course commonly recommended for Technology-based College programs (1.8% of total Grade 12 Mathematics enrollment) when compared to the more general MAP4C (23.1%). MCT4C is not offered in most secondary schools.

¹ Geometry and Calculus were most often listed as prerequisites for Engineering, Computers, and Science programs in university. In 2006 two new Mathematics courses were introduced to replace MGA4U and MCB4U.

As was the case with English courses, the average marks of females were consistently higher than those of males in every Mathematics course except Grade 9 Locally Developed Mathematics (although the differences in marks between females and males were smaller than for English courses, Table 4.7).

Table 4.7: Average Marks in Grades 9 to 12 Mathematics Courses, by Gender (%; 2006-07)

Course	Females	Males
Grade 9:		
MPM1D (Academic)	70.6	68.7
MFM1P (Applied)	60.2	58.4
MAT1L (Locally Developed)	60.0	60.2
Grade 10:		
MPM2D (Academic)	69.1	66.0
MFM2P (Applied)	60.6	57.7
MAT2L (Locally Developed)	62.3	61.1
Grade 11:		
MCR3U (University)	71.0	68.1
MCF3M (University/College)	64.8	61.2
MBF3C (College)	61.9	58.5
MEL3E (Workplace)	62.5	59.8
Grade 12:		
MDM4U (University)	72.9	70.6
MGA4U (University)	78.4	74
MCB4U (University)	72.2	69.6
MCT4C (College)	69.7	65.4
MAP4C (College)	66.3	62.4
MEL4E (Workplace)	64.9	62.7

Source: MOE data file.

Table 4.8 presents the proportionate enrollments in secondary school Science courses by gender. The enrollments in the Grade 12 Physics (SPH4U, SPH4C) courses were relatively low compared to Chemistry (SCH4U, SCH4C) and Biology (SBI4U). Except for Physics, more females than males were enrolled in Academic and University-Preparation Science courses.

Table 4.8: Enrollment in Grades 9 to 12 Science Courses, by Gender (%; 2006-07)

Course	Females	Males
Grade 9:		
SNC1D Academic	53	47
SNC1P Applied	42	58
SNC1L Locally Developed	35	65
Grade 10:		
SNC2D (Academic)	53	47
SNC2P (Applied)	44	56
SNC2L (Locally Developed)	34	66
Grade 11:		
SCH3U (University)	52	48
SPH3U (University)	39	61
SBI3U (University)	61	39
SBI3C (College)	57	43
Grade 12:		
SBI4U (University)	62	38
SCH4U (University)	51	49
SPH4U (University)	34	66
SCH4C (College)	54	46
SPH4C (College)	21	79

Source: MOE data file.

Table 4.9 presents the average marks in Grades 9 to 12 Science courses by gender.

Table 4.9: Average Marks in Grades 9 to 12 Science Courses, by Gender (%; 2006-07)

Course	Females	Males
Grade 9:		
SNC1D (Academic)	72.7	70.3
SNC1P (Applied)	62.3	60.7
SNC1L (Locally Developed)	63.2	61.2
Grade 10:		
SNC2D (Academic)	71.3	69.4
SNC2P (Applied)	62.0	59.8
SNC2L (Locally Developed)	63.4	61.1
Grade 11:		
SCH3U (University)	72.0	70.1
SPH3U (University)	74.2	70.2
SBI3U (University)	72.4	70.1
SBI3C (College)	65.3	60.8
Grade 12:		
SBI4U (University)	74.4	72.7
SCH4U (University)	73.1	71.6
SPH4U (University)	76.4	73.0
SCH4C (College)	65.8	61.9
SPH4C (College)	66.9	64.7

Source: MOE data file.

For all Science courses the average marks were higher for females than for males.

If school marks are closely correlated with scores on standardized tests (large-scale assessment tests), we would expect to find similar female/male differences in English, Mathematics and Science. In the following section, we examine the achievement of males and females on a large-scale assessment measure, the School Achievement Indicators Program (SAIP) for 13- and 16-year olds. SAIP was a pan-Canadian assessment program conducted by the Council of Ministers of Education, Canada (CMEC). It was a cyclical program that assessed achievement in Reading and Writing, Mathematics and Science between 1993 and 2004. In 2007, the Pan-Canadian Assessment Program (PCAP) was developed and replaced SAIP. The first PCAP assessment was conducted in that year (2007), but only assessed 13-year olds. Therefore, the 2004 SAIP data represents the most recent Canadian standardized test scores for 16-year olds.

The implementation of international, national and provincial large-scale assessments over the past few years has enabled an analysis of gender differences in specific school content areas such as Reading, Mathematics, English and Science. The test results of Science (in 2004), Mathematics (in 2001) and Writing (in 2002) for Ontario students are presented in Tables 4.10, 4.11 and 4.12.

The 2004 SAIP Science test classified students into five achievement levels ranging from Level 1 – the lowest to Level 5 – the highest. Concepts used to test knowledge included material from the physical sciences (Physics and Chemistry), earth and space sciences, life sciences (Biology) as well as concepts that addressed the nature of science and the relationship of science to technological and societal issues. Table 4.10 indicates that proportionally more males than females scored in the lowest category (below Level 1), but more females scored in Levels 1 and 2. Overall, a slightly higher proportion of males than females achieved at the highest three levels. The researchers noted: “These data suggest that the efforts to make science education more relevant to, and more inclusive of, young females continue to have a positive influence on science achievement” (CMEC, 2004, p.23). However, they did not note the higher achievement level of females than males in Science in regular secondary school classrooms, and the implications of the differences between the two sources of marks.

Table 4.10: SAIP Science Achievement of 16-year-old Canadians, by Gender (%;^a 2004)

Gender^b	Below Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
Females	6.5	6.2	25.2	40.3	15.3	6.5
Males	8.1	5.8	20.2	42.6	16.7	6.6
Total	7.3	6.0	22.7	41.4	16.0	6.5

^a The percentages calculated are based on samples of students. Therefore, these are estimates of the actual achievement that students would have demonstrated had all of the students in the population taken the test (CMEC, 2004).

^b For each gender group, the number shows the percentages of students by highest level achieved. The confidence intervals (1.96 times the standard errors) for the percentages can be seen in the CMEC document. Results are weighted so as to correctly represent each population. (CMEC, 2004).

The SAIP Mathematics assessment was designed to capture 16-year-old students’ abilities using a variety of concepts “to carry out a variety of Mathematics procedures and to use them to solve problems in both familiar and unfamiliar situations” (CMEC, 2001). The Mathematics Content of the tests assessed students’ ability to use numbers and operations, algebra and functions, measurement and geometry as well as data management and statistics. The Problem-Solving portion included: a range of problems and solutions; the use of numbers and symbols, and the ability to reason and construct proofs; provide information and make

inferences from databases; pursue evaluation strategies; and demonstrate communication skills. The SAIP Mathematics assessment was given to 41,000 students (24,000 13 year olds and 17,000 16 year olds) across the country: half of each age cohort was asked to complete the Mathematics Content test, while the other half was asked to complete the Problem-Solving component.

Tables 4.11 and 4.12 indicate the percentage of 16-year-old males and females in each achievement category in the Content and Problem-Solving components of the test.

Table 4.11: SAIP Mathematics Achievement (Content) of 16-year-old Canadians, by Gender (%; 2001)

Gender ^a	Below Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
Females	7.8	14.2	30.3	37.8	8.2	1.7
Males	7.6	13.9	25.8	40.3	8.5	3.8

^a For each gender group, the scores show the percentage of students who achieved at their highest level. The weighted totals were unavailable (CMEC, 2001).

Interestingly, and perhaps surprisingly, in light of secondary school mark differences in the Mathematics Content areas, proportionally more males scored higher in Levels 3, 4, and 5.

Table 4.12: SAIP Mathematics Achievement (Problem Solving) of 16-year-old Canadians, by Gender (%; 2001)

Gender ^a	Below Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
Females	8.0	11.1	32.5	33.6	12.1	2.8
Males	8.9	10.0	34.5	31.7	10.8	4.1

^a For each gender group, the scores show the percentage of students who achieved at their highest level. The weighted totals were unavailable (CMEC, 2001).

In Problem-Solving areas, proportionally more females than males were in Levels 3 and 4 and males were in greater numbers in Level 5. This pattern is not reflected in the course selection and achievement in Ontario secondary school Science courses.

The picture was quite different in the Writing test with substantially more females achieving in the highest three levels, and correspondingly more males in the lowest three (Table 4.13).

These gender differences in Writing are especially pronounced and may lie at the heart of female advantage in secondary school achievement since many of the courses depend upon written work.

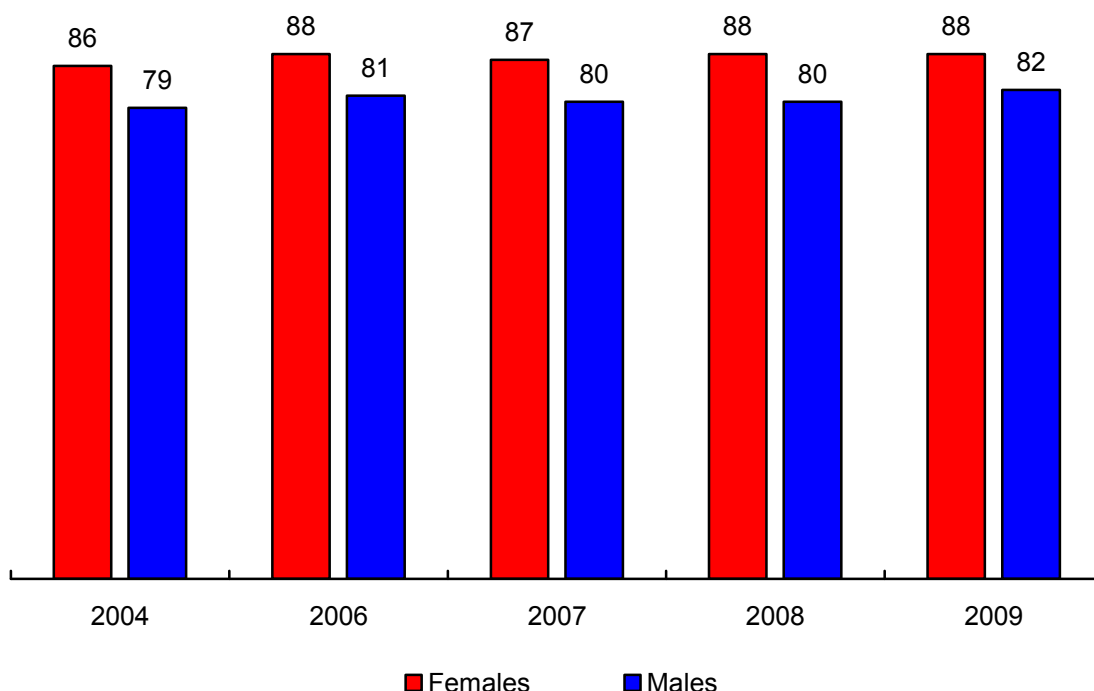
Table 4.13: SAIP Writing Achievement of 16-year-old Canadians, by Gender (%; 2002)

Gender ^a	Below Level 1	Level 1	Level 2	Level 3	Level 4	Level 5
Females	3.1	5.1	22.5	43.4	22.2	3.9
Males	7.0	10.3	29.7	35.6	14.5	2.8

^a For each gender group, the scores show the percentages of students at their highest level achieved (CMEC, 2002).

Successful completion of the Ontario Secondary School Literacy Test (OSSLT) or its equivalent is required for OSSD completion. Gender differences on this test administered in Grade 10 from 2004 to 2009 are presented in Figure 4.7.

Figure 4.7: Students Successful on Grade 10 Literacy Test, by Gender (%; 2004-2008)



Source: Education Quality and Accountability Office (EQAO) 2008-09 (OSSLT).

The trend of females outperforming males in Writing on SAIP was confirmed in the Ontario Secondary School Literacy Test (OSSLT) scores. The Grade 10 OSSLT was first implemented in 2003, and consists of both Reading and Writing tasks. Since its inception, more females than males have been successful in meeting the minimum standard for success, with males lagging consistently behind by approximately 7 percent each year. It is important to note that it is also possible to meet the literacy requirement by successfully completing a literacy course (OLC40). However, this test can represent a major hurdle for some ESL students (Brown, 2008).

One factor explaining gender differences in English skills is that females tend to spend more of their leisure time engaged in Reading and Writing activities, as found in the OSSLT assessment of students' interest in those activities outside of school (Education Quality and Accountability, 2008). Females consistently engaged in more Reading and Writing activities outside of school with 45 percent of females engaging in reading English outside of school for more than three hours a week, compared with only 33 percent of males. Similarly, 35 percent of females engaged in writing in English for more than three hours a week compared to 26 percent of males.

C. Summary

Evidence has been accumulating for many years regarding the challenges experienced in schools by male students in comparison to females. The Ontario Ministry of Education has recognized the importance of this issue, and has made improving the educational opportunities for males a priority through its 'Reach Every Student' initiative (Ministry of Education, 2008).

Gender differences in types of secondary school courses selected were strong predictors of gender differences in PSE enrollments. A higher percentage of females enrolled in Grade 12 University-Preparation English courses, while proportionally more males enrolled in Grade 12 College- and Workplace-Preparation English courses. Only 63.5 percent of OSSD female graduates had a Grade 12 Mathematics course on their transcript compared to 74.8 percent of male graduates. A higher percentage of males enrolled in the core Grade 12 University-Preparation Mathematics courses (MGA4U and MCB4U), while close to an equal number of females and males took Grade 12 Data Management (MDM4U). Similarly more males than females enrolled in College- and Workplace-Preparation Mathematics courses. A greater percentage of males registered in Grade 12 University-Preparation Physics, while more females registered in the University-Preparation Chemistry (SCH4U) and Biology classes (SBI4U). Similarly, more females enrolled in College-Preparation Chemistry (SCH4C), while more males registered in College-Preparation Physics (SPH4C).

Females obtained higher average marks on all English, Mathematics, and Science courses (except in Grade 9 Locally Developed Mathematics). Given the fact that university admission requirements are based primarily on academic achievement, it is not surprising that far more females than males enroll in university.

Scores on large-scale assessments (i.e., SAIP) in Mathematics and Science indicate that males and females have similar aptitudes in these content areas, but despite their similar potential, females obtained higher average marks in secondary school Mathematics and Science courses. Over the past several years, many programs have been initiated to encourage the participation of females in Mathematics and Science courses – with noticeable effect. On the other hand, the wide gender differences in marks in secondary school English courses are consistent with SAIP test scores in language.

Enrollments in college are similar by gender, although there are wide gender differences in program enrollments, as might be expected. Male registrations in apprenticeships were four to five times those of females. While female enrollments in apprenticeships have been steadily increasing, part of this growth trend can be attributed to the introduction of traditionally female-dominated programs (e.g., Early Childhood Educator) as Apprenticeship programs.

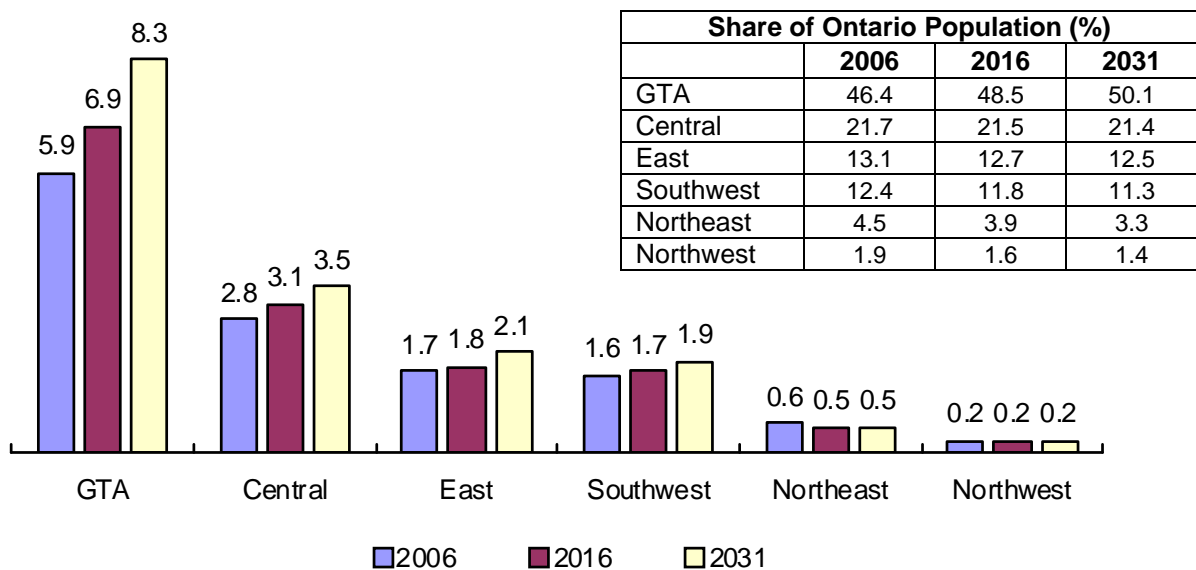
Chapter 5: Region

A. Introduction

For many young people the decision to pursue PSE is multi-faceted and complex. In addition to deciding which program they would like to pursue as well as how they will finance their education, they must also consider where they would like to live while they attend a PSE institution for that program. Whether or not particular applicants are willing or able to move to attend a college or university outside of their home community is an important factor in determining who goes to PSE.

Since the 1960s, the population of Ontario has grown substantially in some areas, while remaining stable or declining in others. Projections of Ontario population growth up to 2031, based on 2001 Census data, reinforce the concern regarding regional variations in projected growth (Figure 5.1). No growth or decline is projected for the north, minor growth in the eastern and western regions, and moderate growth in the central region but substantial growth in the Greater Toronto Area (GTA).

Figure 5.1: Current & Projected Population, Ontario Regions 2006, 2016 & 2031 (millions)



Source: Ontario Ministry of Finance, 2008.

Considerable attention has been given to the changing labour force needs and the importance of a well-educated workforce. How do these economic needs translate into accommodating the PSE aspirations and aptitudes of youth all across the province?

In Chapter 3, we found that many students who had the marks and prerequisite courses that prepared them for PSE did not apply (see Chapter 9 for further explanations). In order to determine whether there were regional differences in college and university application rates, we refer to the general concepts of interest and opportunity. Interest is defined as a student initiating the application process to college and/or university. Opportunity refers to PSE access in the form of an offer to or registration in a college or university program. Does youth interest in PSE vary across the province? Are there proportionally more qualified youth who do not apply to PSE in one part of the province than another? Are there regional differences in PSE application and registration rates that might reflect differences in opportunity? Do college program offer rates differ within and across colleges? These questions are the main focus of this chapter.

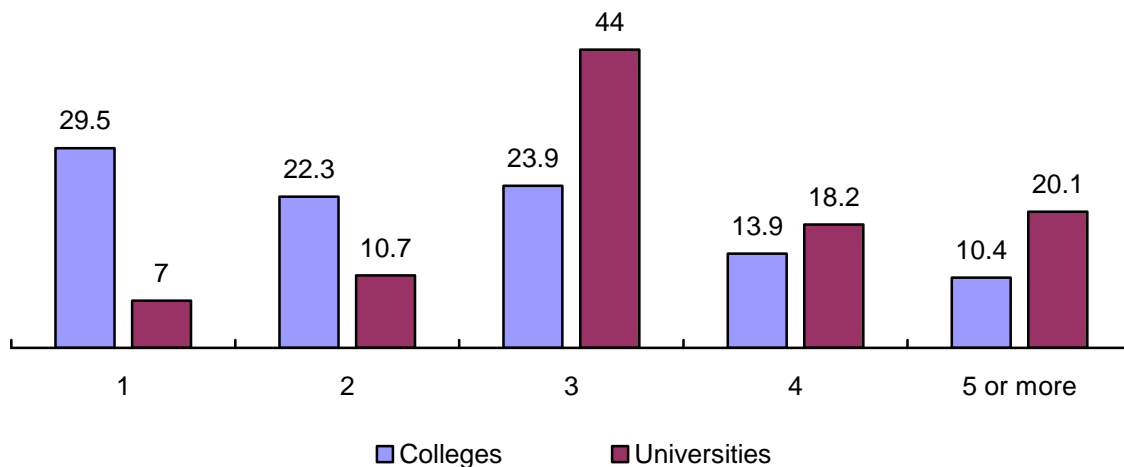
The first step in the analysis was to determine the extent to which students preferred to remain near their home to attend PSE. Then we explored regional differences in college and university application and registration rates. Of course, having the minimum academic marks for admission to a college or university does not assure accessibility for local youth as variations in admission requirements across institutions may influence accessibility. Finally, we examined the relationship between offers in response to college applications, by program and by college.

B. Student Mobility

Two analyses were conducted in order to determine the extent to which young people wish to enroll in post-secondary institutions in their own region. The first involved a simple consideration of the number of colleges and/or universities applied to by students. For the second, six regions were selected and the proportions of students applying only to a college in their region (i.e., their 'local' college) were noted. This phase of the analysis was augmented by examining the college applications of students from a French school board. In addition, information for each Ontario university regarding the proportion of university applicants who applied to their local university was obtained from the Council of Ontario Universities.

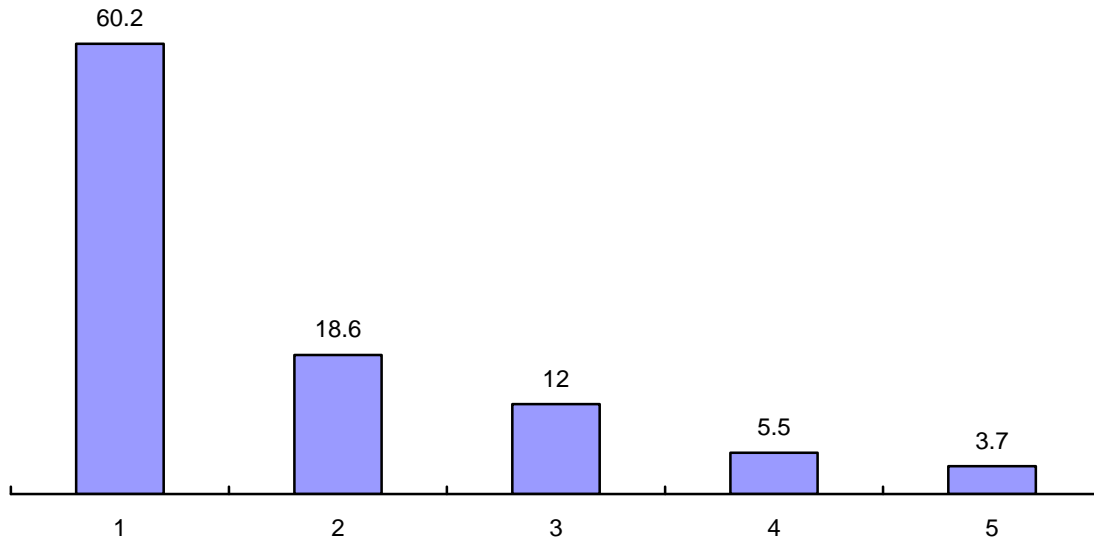
Figure 5.2 presents the numbers of Ontario colleges and universities that secondary school students applied to directly from secondary school when they submitted applications for programs in Fall 2006. Although that year, secondary school students could apply to up to five Ontario colleges for a fee of \$85, approximately 30 percent of the applicants applied to only one college, and another 22 percent applied to two, while students applying to universities tended to apply to 3 or more institutions. Figure 5.3 presents the number of colleges applied to by 'non-direct' applicants who applied from out of school in Ontario. The large majority of them (60.2%) applied to only one college. The pattern of selecting one college might be expected in that many colleges offer a similar range of programs and admission requirements appear to be similar, while universities may have varying entrance requirements (in terms of minimum marks required for admissions), thus requiring students to apply to more than one institution. Whether the 30 percent of students who applied directly from secondary school to a single college and the 60 percent of out of school non-direct applications who did so was, in fact, their local college and the percentage of students who attend their local university is examined in Section C which follows (p.78).

Figure 5.2: Number of Ontario Colleges or Universities Applied to by Students Directly from Secondary School (%; Fall 2006)



Source: OCAS data file; adapted from King & Warren (2006).

Figure 5.3: Number of Colleges Applied to by Out-of-School (Non-Direct)^a Applicants (%; Fall 2006)



Source: OCAS, 2006

Table 5.1 presents the number of college programs that students applied to across the province directly from secondary school for the Fall of 2006 – whether in one college or more than one college. Over one-half of the students who applied did so to three or more programs (43.4% applied to five or six programs). Considering the information from Figure 5.2 (29.5% of college applicants apply to one college) and Table 5.1 (over 80% of applicants apply to two or more programs), one can readily see that many students would rather apply to more than one program in one college than the same program in a number of colleges. The pattern is even more pronounced for non-direct college applicants (Figure 5.3 and Table 5.1) wherein a large majority of applicants preferred to enroll in their local college even if it meant enrolling in their second or third choice of program.

Table 5.1: Number of Ontario College Program Applications from Direct & Non-Direct Applicants (%; Fall 2006)

Number of Ontario College Program Applications	Direct %	Non-Direct %
1	13.5	35.9
2	11.3	18.9
3	17.1	18.5
4	14.6	9.8
5	40.8	16.1
6	2.6	0.8

Source: OCAS data file.

In order to determine whether there was a common regional pattern in the desire of youth to remain in their local community to attend college, we selected six representative regions for analysis – one in the north, one in the east, one in the west, and three in the central region.¹ The proportion of young people in the school boards which served these regions and who applied only to the local college, or in the case of Toronto to the four local colleges, was used as the criterion of ‘strong interest in remaining at home’.

It was not possible to take the same selected regional approach with the colleges serving francophone students and the French-Language Public and Catholic District School Boards because one of the colleges, established to serve the majority of Ontario francophones, has campuses elsewhere in the province. Also, most French school boards include such large regions as to render the concept of ‘local college’ inappropriate. Instead we chose to analyze the relationship between region and college of choice by examining the college applications of students from three French-Language School Boards (Conseil scolaire de district de l'Est de l'Ontario, Conseil scolaire de district catholique de l'Est ontarien, and the Conseil scolaire de district catholique de Centre-Est de l'Ontario).

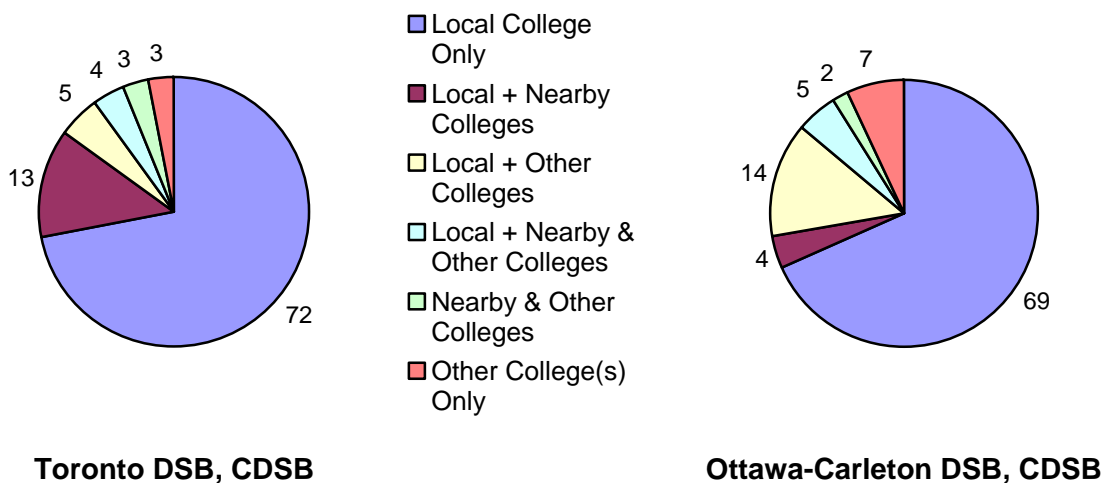
Figure 5.4 is based on the application rates of secondary school students who applied to college directly from school boards serving two large metropolitan regions. In the case of Toronto (Toronto District School Board & Toronto Catholic District School Board), ‘local’ refers to four colleges, while in Ottawa (Ottawa-Carleton District School Board & Ottawa-Carleton Catholic District School Board), ‘local’ refers to one college.

¹ See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps.

Note that 'local' refers to college(s) that lie within the school board(s) area selected for analysis. 'Nearby' includes the closest college(s) outside the school board(s) immediate area. The 'nearby' colleges represent colleges to which interested applicants could feasibly commute from their home community. 'Other college(s)' includes all remaining colleges: attending these colleges typically involves a prospective student taking up residence in another community away from home.

In both the Toronto and Ottawa areas, over two-thirds of students applied to only their local college(s). When the choices that include 'local' are combined, it can be seen that the majority of applicants from these two areas have a strong interest in remaining in their home community.

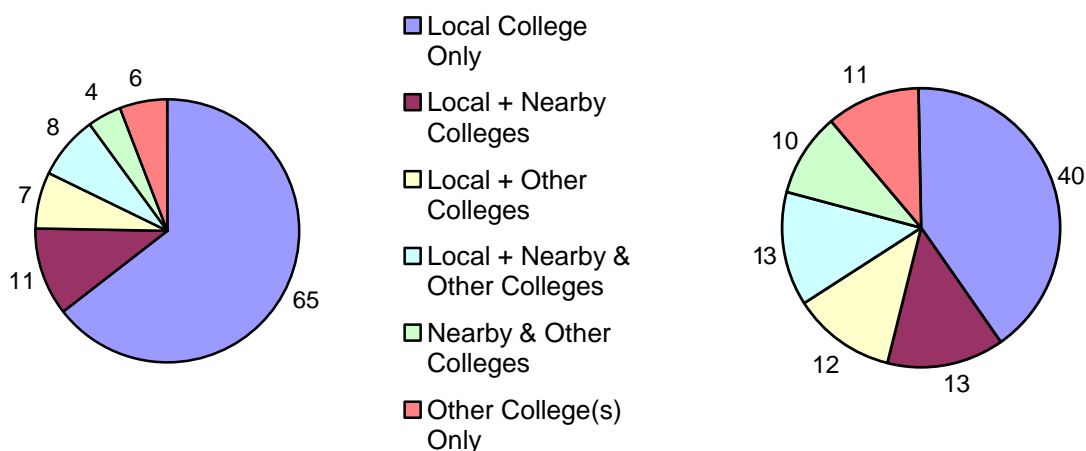
Figure 5.4: Applicants to Local & Other Colleges from Toronto & Ottawa-Carleton District School Boards (%; Fall 2006)



Note: Local = within School Board area; Nearby = generally within commuting distance; Other = typically means a student would have to live away from home.
Source: OCAS data file.

Figure 5.5 presents the applications to local and other colleges from students in the Public and Catholic District School Boards in a city in Southwestern Ontario and a city in south central Ontario. For both locations the local college is in each city, while there are two nearby colleges in neighbouring communities. In the case of the college closest to the two South Central school boards, 40 percent of applicants from the two school boards applied to only that college. However, it must be noted that the two nearby colleges were well within commuting distance. For the college in the Southwestern region of the province, the pattern was similar to that of the Toronto and Ottawa areas with 65 percent of local applicants applying only to that college.

Figure 5.5: Applicants to Local & Other Colleges from District School Boards in Southwestern and Central Ontario (%; Fall 2006)



DSB & CDSB in Southwestern Ontario

DSB & CDSB in South Central Ontario

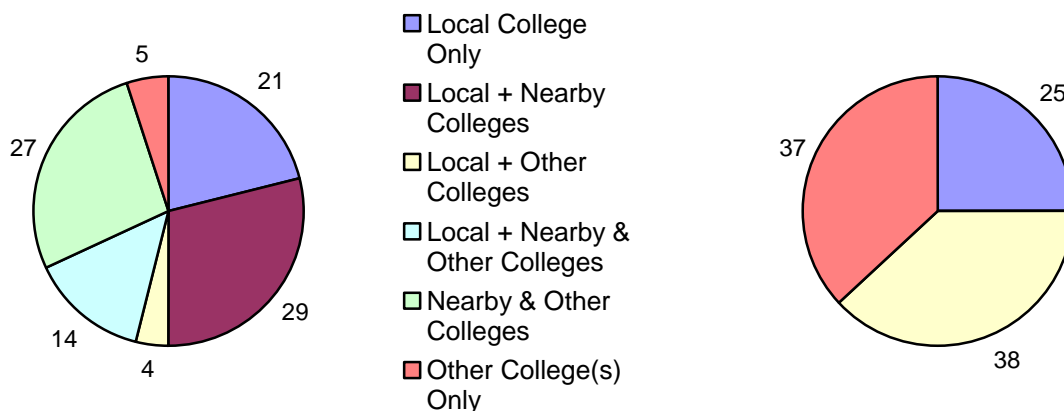
Note: Local = within School Board area; Nearby = generally within commuting distance; Other = typically means a student would have to live away from home.
 Source: OCAS data file.

Figure 5.6 presents the percentage of applicants to local and other colleges from school boards in communities in the Central and Northern parts of the province. In the case of the Central Ontario community, there was one college in the city and five nearby colleges, including four colleges located in Toronto. In the Northern community, no college fit our ‘nearby’ criterion, nor was there an equivalent Catholic District School Board.

In the case of the Central region school boards, only 21 percent of applicants applied only to their local college. However, not only were a number of other colleges nearby but the applicants may have had other college campuses nearer to their home. Therefore, students could remain in their home community and attend a nearby college.

The college application pattern was quite different for the Northern community. Thirty-seven percent of applicants applied to ‘other colleges only’ (i.e., other than the local college), and another 38 percent applied to other colleges as well as their local college. This pattern occurred in spite of the substantial distance from other colleges for students in this region. A much greater proportion of applicants from a school board in northern Ontario than from previously discussed school boards appeared to be willing to travel to other cities to pursue their college education, rather than remain at home.

Figure 5.6: Applicants to Local & Other Colleges from District School Boards in Central and Northern Ontario (%; Fall 2006)



DSB & CDSB in Central Ontario

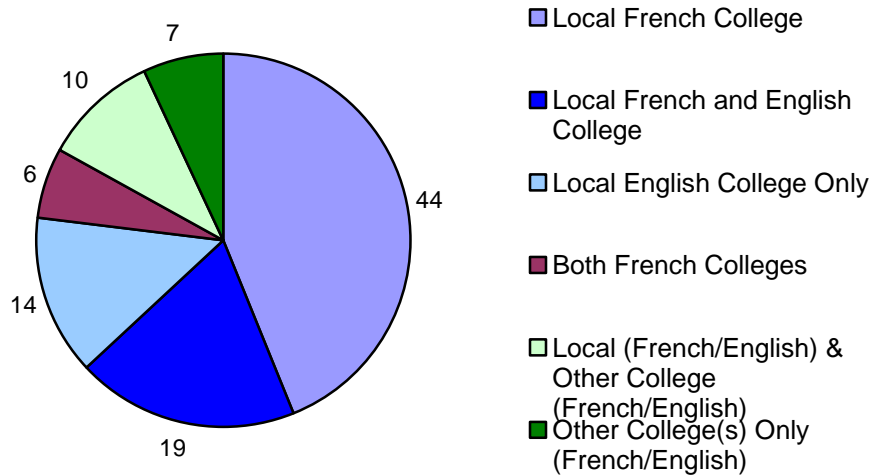
Northern DSB

Note: Local = within School Board area; Nearby = generally within commuting distance; Other = typically means a student would have to live away from home.
Source: OCAS data file.

Although regional exceptions existed, as noted above, generally college applicants preferred to stay close to home. When we consider this finding in light of the previous findings (i.e., that 48.3% of applicants applied to one college, Figure 5.2), we see that many young people are only willing to consider a college close to their home. The preference to enroll in a local college is further elaborated in Chapter 9 where interviewee perspectives on factors such as cost implications, existing part-time jobs, family obligations, and staying close to family and friends are considered. The strong feeling of many young people to remain close to home to attend college has important implications for college program availability that are discussed further in the final chapter.

The trend to stay close to home is evident in our analysis of the applicants to colleges from three French-language school boards in Ontario (Figure 5.7). Forty-four percent of applicants applied only to the local French college, while 77 percent of applicants applied to only local colleges that are English- and/or French-language colleges. The fact that many francophone students may also be fluent in English (e.g., almost all of the francophone interviewees were fluent in English) could enable them to select a desired program at an English college even though they may have preferred to continue their education in their mother tongue.

Figure 5.7: Applicants from Three French School Boards* in Eastern Ontario (%; Fall 2006)



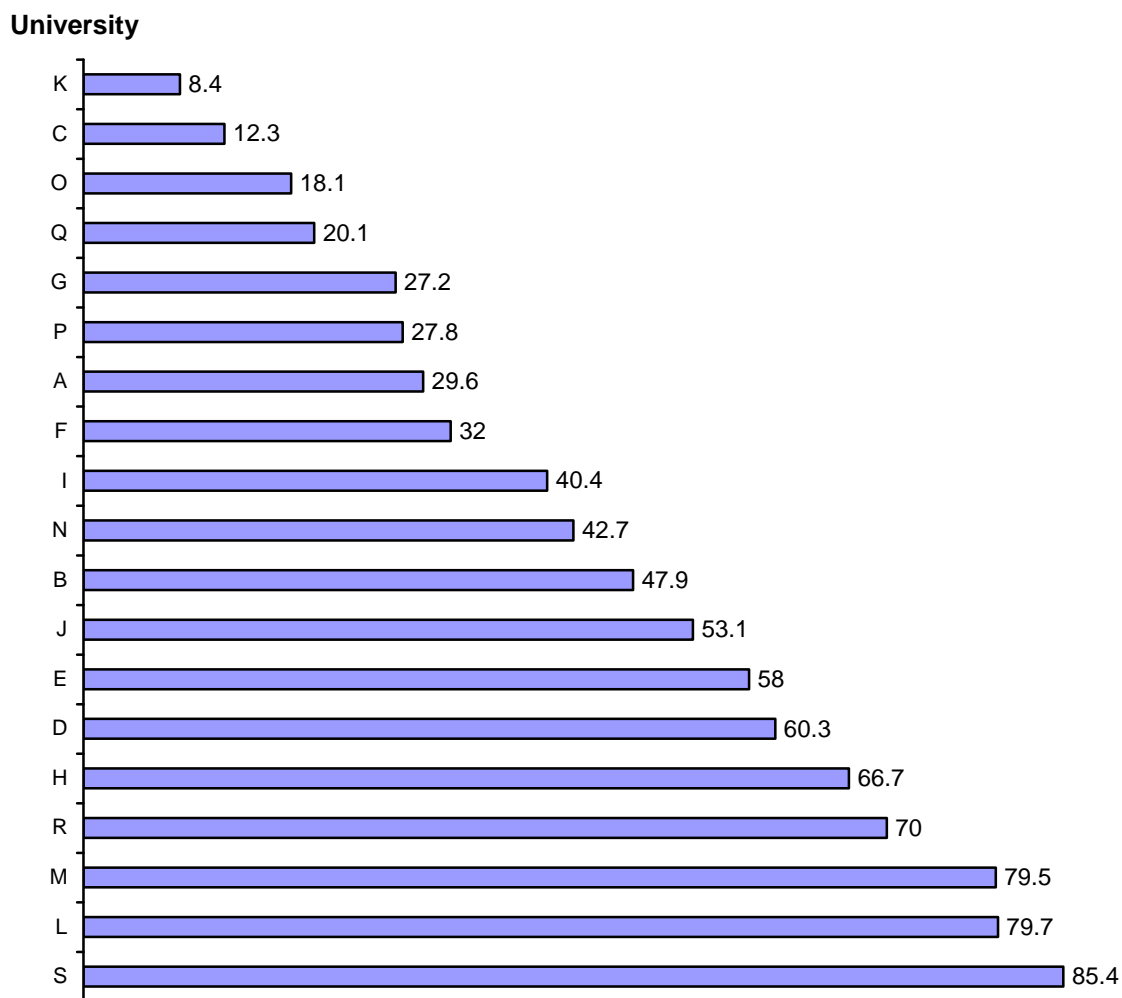
* Applicants are from Conseil scolaire de district de l'Est de l'Ontario, Conseil scolaire de district catholique de l'Est ontarien et le Conseil scolaire de district catholique de Centre-Est de l'Ontario.

Note: Local = within School Board area; Nearby = generally within commuting distance; Other = typically means a student would have to live away from home.

Source: OCAS data file.

Figure 5.8 presents the percentage of secondary school applicants to each Ontario university who registered in their local university in 2007. The area that is considered 'local zone' for each university can be found in Appendix C. There were dramatic differences in the proportions of local applicants across the universities ranging from 8.4 percent for University K to 85.4 percent for University S. The more recently established Ontario universities were more likely to serve the PSE interests of their local communities.

Figure 5.8: Ontario University Direct-from-Secondary School Applicants Who Register in their Local University* (%; 2007)



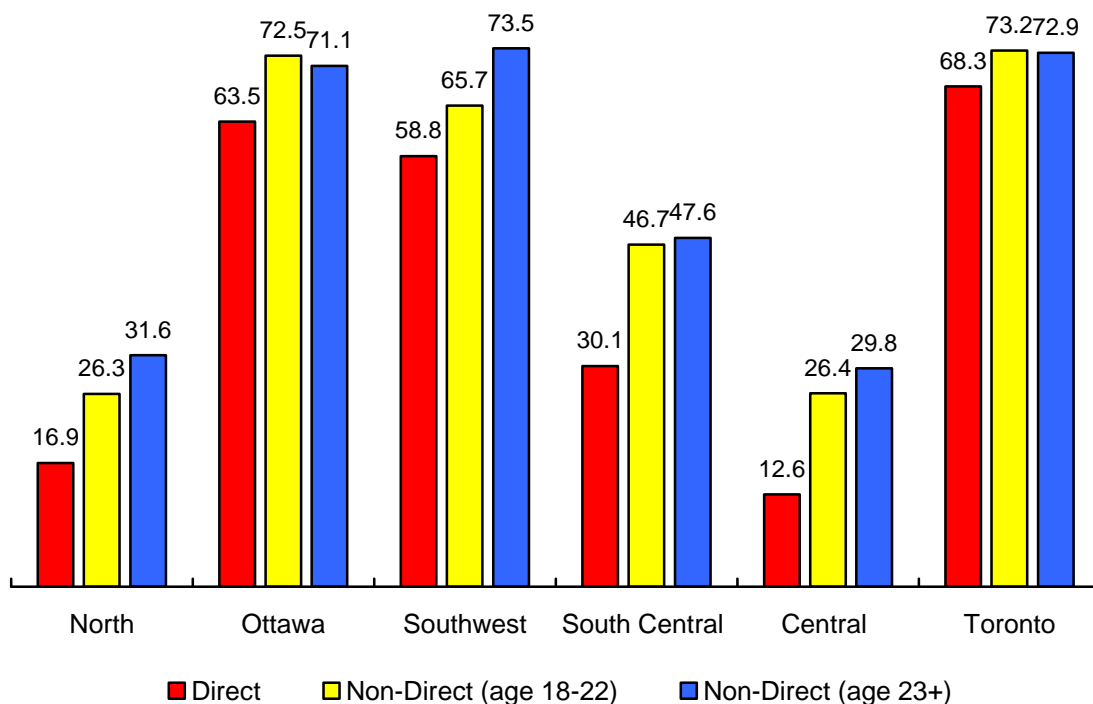
* See Appendix C for 'Local Zone' area for each university.
Source: Council of Ontario Universities.

C. Mobility of Direct-from-Secondary-School & Non-Direct Applicants to College

One would assume that young people who apply to college after being in the workforce for a period of time would have established roots in the community, and therefore would be more likely to apply to their local college in order to remain in their local community. To examine if this was the case for the six communities studied in the previous section, the applicants to 'local colleges' from each of the six communities were divided into three categories: (1) those who came directly from secondary school ('direct'); (2) those who applied from outside of secondary school, aged 18-22 ('non-direct'); and (3) those who applied from outside of secondary school, 23 years of age or older ('non-direct').

In Figure 5.9, we first note that differences across the six communities in applying only to their local college become quite clear. For example, in the case of Northern and Central communities (Figure 5.6), a relatively small group of applicants applied only to their local college(s), while in the Ottawa, Toronto and Southwest communities, a relatively large group applied to only their local college(s).

Figure 5.9: Applications to Local College Only by Direct- & Non-Direct-from-Secondary-School Applicants (%; Fall 2006)



Source: OCAS data file.

The main purpose of this figure (Figure 5.9) is to illustrate differences in local-college interest between direct-from-secondary school and out-of-school ('non-direct') applicants. Generally, with the exception of Toronto where differences were small, out-of-school applicants were more inclined to apply only to their local college, with little difference between the two age groups (except for those in the North and Southwest).

D. Applications to Post-Secondary Education by School Board

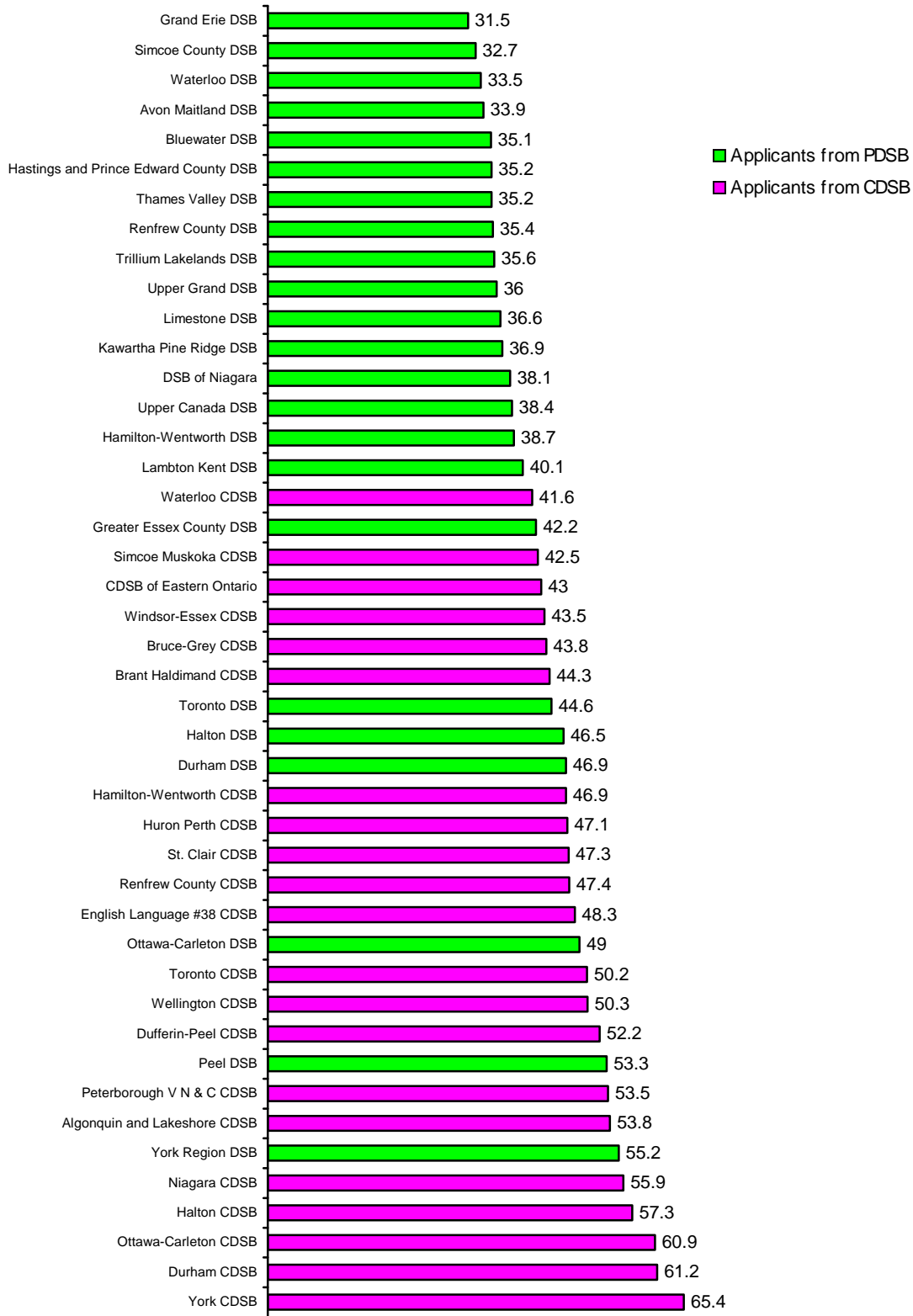
The proportion of eligible students applying to PSE from a school board is a useful indicator of the 'interest' in PSE of young people in a particular community. The base for this analysis includes all 'eligible' students enrolled in Grade 12 and Year 5 in secondary school in 2005-06 – that is, students enrolled in their fourth and fifth years of secondary school. The majority of these students would have been taking mainly Grade 12 courses, and thus would have been able to graduate and apply for PSE. However, some of the students included in this base would be lacking in credit accumulation and, therefore, would be unlikely to graduate in that year.

Figure 5.10 presents the application rates of secondary school students to colleges and/or universities from Ontario Public and Catholic District School Boards for Fall 2006, based on the number of eligible students in Grade 12 and Year 5 (selected on the basis of birth year). These figures represent a 3 to 5 percent underestimate of application rates because of OCAS, OUAC and Ministry of Education files integration procedures (see Chapter 1 for details).

For Southern Ontario, there was considerable variation in application rates to college and university ranging from a low of 31.5 percent in Grand Erie District School Board to a high of 65.4 percent in York Catholic District School Board. Overall, the large number of Catholic District School Boards with application rates over 40 percent emphasizes the greater percentage of applicants coming from the Catholic District School Boards compared to Public District School Boards. PSE application rates tended to be highest in urban and suburban regions, and lowest in the rural regions.

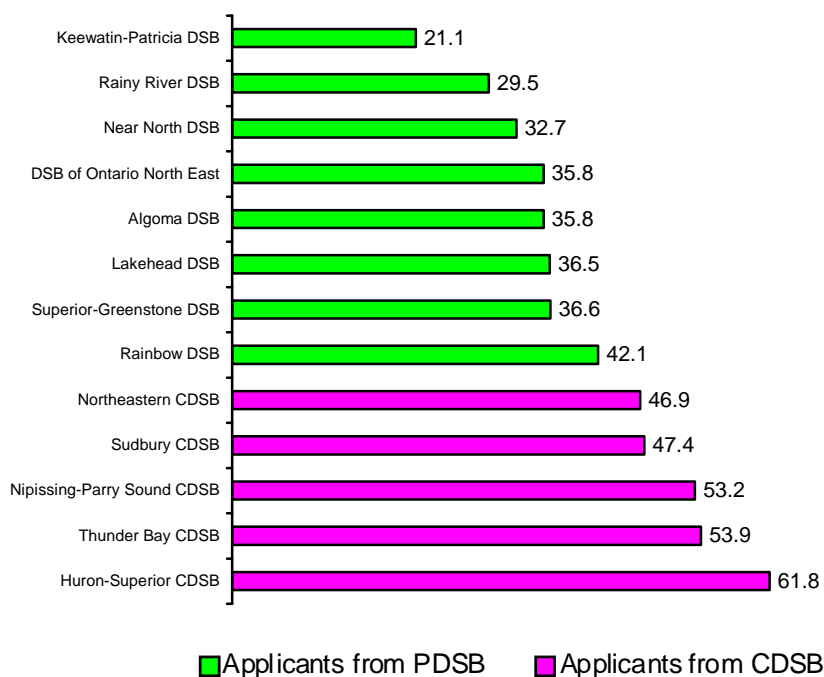
As with the Southern Ontario School Boards, there was substantial variation in application rates to PSE from Northern Ontario School Boards ranging from 21.1 percent in the Keewatin-Patricia District School Board to 61.8 percent in the Huron-Superior Catholic District School Board. Most school boards had an application rate above 30 percent of eligible students. Among the Public School Boards, the application rates were highest in the Sudbury area – perhaps because it is home to both a college and university.

Figure 5.10: Applicants to Colleges and/or Universities, by Southern Ontario Catholic & Public District School Boards (%; Fall 2006)



Source: MOE/OCAS/OUAC data file.

Figure 5.11: Applicants to Colleges and/or Universities, by Northern Ontario Catholic & Public District School Boards (%; Fall 2006)



Source: MOE/OCAS/OUAC data file.

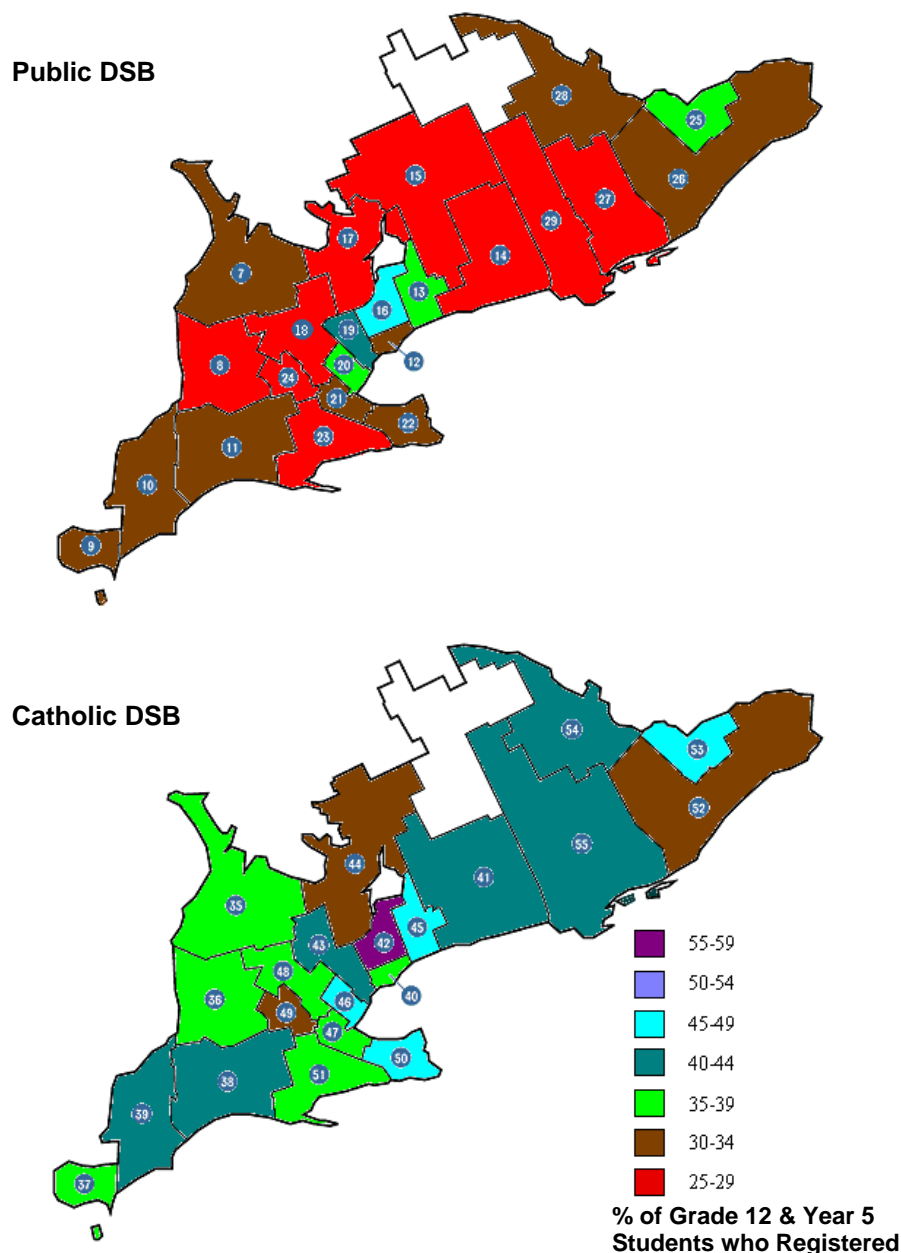
E. Registrations in Post-Secondary Education by School Board

Once a student shows interest in PSE by applying to either college or university, the institution acts as the ‘opportunity provider’ for the student, largely determining whether that student will ultimately be able to pursue PSE. While it is true that the students may turn down an offer to PSE, the institution itself must first provide the opportunity to attend.

Figure 5.12 presents the percentage of eligible students who registered in a college or university program from a Southern Ontario Public or Catholic District School Board in 2006.² Less than one-half of eligible students actually registered in a post-secondary program. In nine of the school boards, the registration rate was below 30 percent. None of the Public District School Boards in Southern Ontario had a post-secondary registration rate above 50 percent. The only Public District School Boards that had a PSE enrollment of over 40 percent were York Region and Peel District School Boards.

² The procedures used to prepare this and the following figures are described in Chapter 1.

Figure 5.12: University and College Registrants from Southern Ontario Public & Catholic District School Boards (% Eligible Students; Fall 2006)

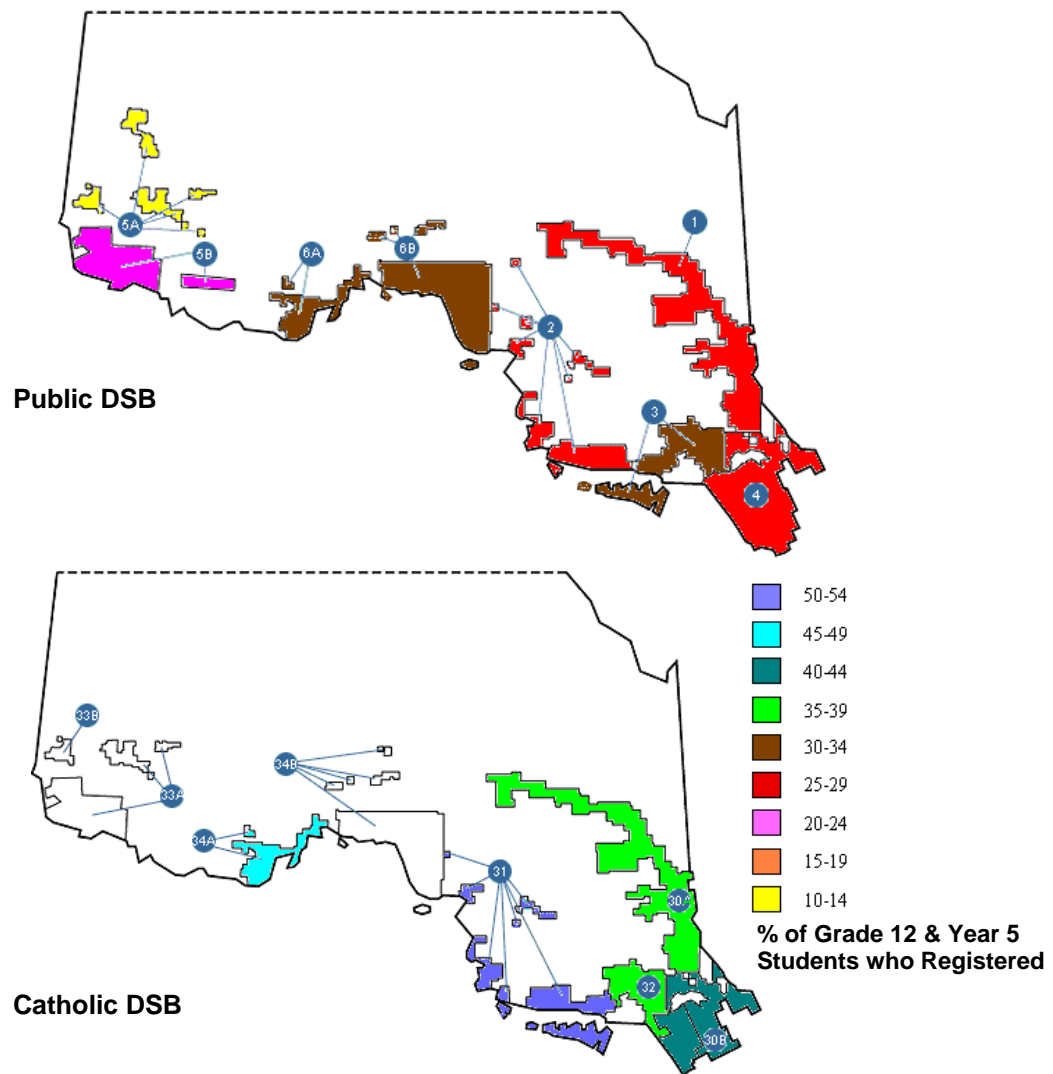


Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps.
 Source: MOE/OCAS/OUAC and OCAS data files.

The post-secondary registration rates for the Southern Ontario Catholic School Boards were generally higher than for the Public School Boards. Eleven school boards had registration rates higher than 40 percent, and none of the 21 school boards had a registration rate below 30 percent. The Catholic School Boards with the lowest registration rates tended to serve the same

communities as the Public School Boards with the lowest registration rates. For example, the Eastern portions of the province (excluding Ottawa) as well as the area around Georgian Bay had relatively low registration rates for both the Catholic and Public School Boards. Overall, a greater proportion of Grade 12 and Year 5 students from the Catholic School Boards registered in a post-secondary education program directly from secondary school.

Figure 5.13: University and College Registrants from Northern Ontario Public & Catholic District School Boards (% Eligible Students; Fall 2006)



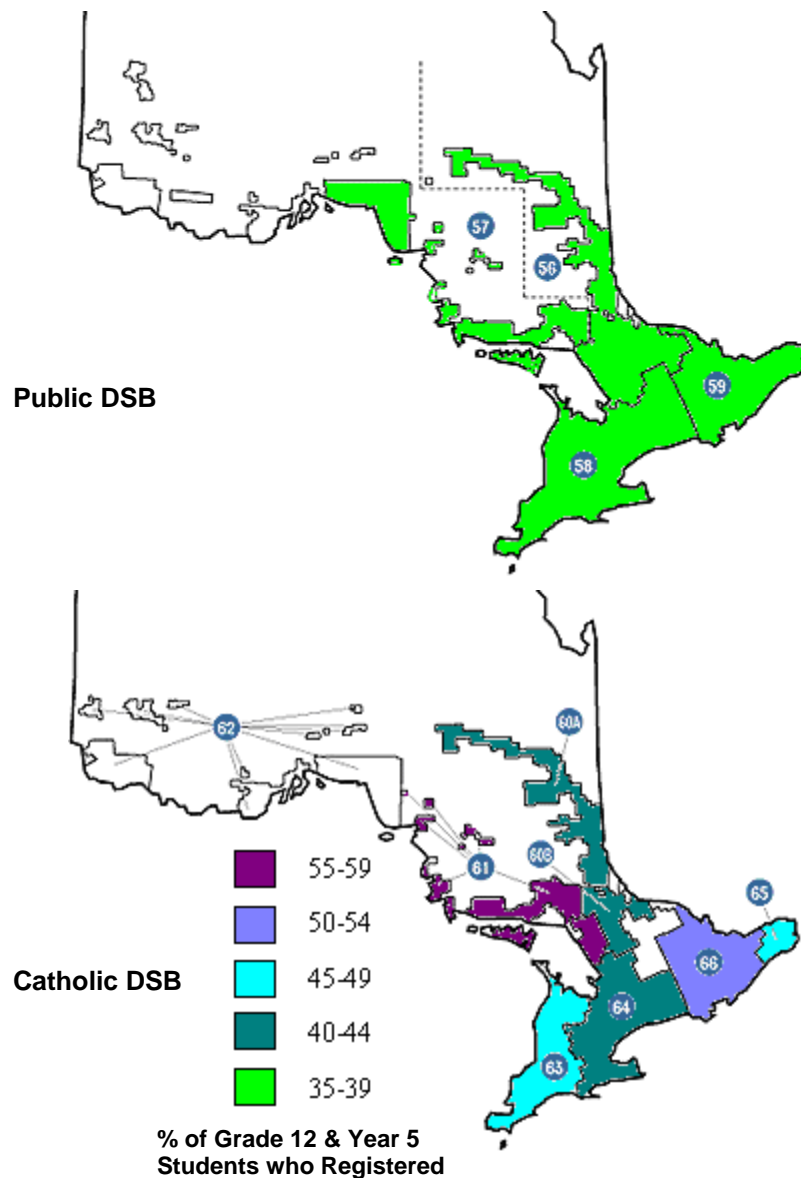
Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps. These maps define provincial school board boundaries (33a and 34b – no secondary school in these boards; 33b – no data available). Source: MOE/OCAS/OUAC and OCAS data files.

Figure 5.13 presents the percentage of eligible students from Northern Ontario District School Boards who registered in a college or university program directly from secondary school. Not surprisingly, the lowest registration rates were in the Northwest corner of the province where access to a post-secondary institution is most difficult. The Keewatin-Patricia District School Board had a registration rate of only 13.3 percent. Similarly, the highest rates of registration were in areas that have easier access to a university or college (e.g., Sudbury, Sault Ste. Marie).

As with the southern regions, the Catholic District School Boards tended to have higher registration rates than the Public District School Boards. The registration rates for each of the Catholic District School Boards were above 35 percent.

Figure 5.14 presents the registrants from French-Language Public and Catholic District School Boards to college or universities in Ontario. A relatively high percentage of students from these school boards proceed directly to PSE, with no school board having a registration rate below 35 percent.

Figure 5.14: University and College Registrants from French-Language Public & Catholic District School Boards (% Eligible Students; Fall 2006)



Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps.

(62 – no data available)

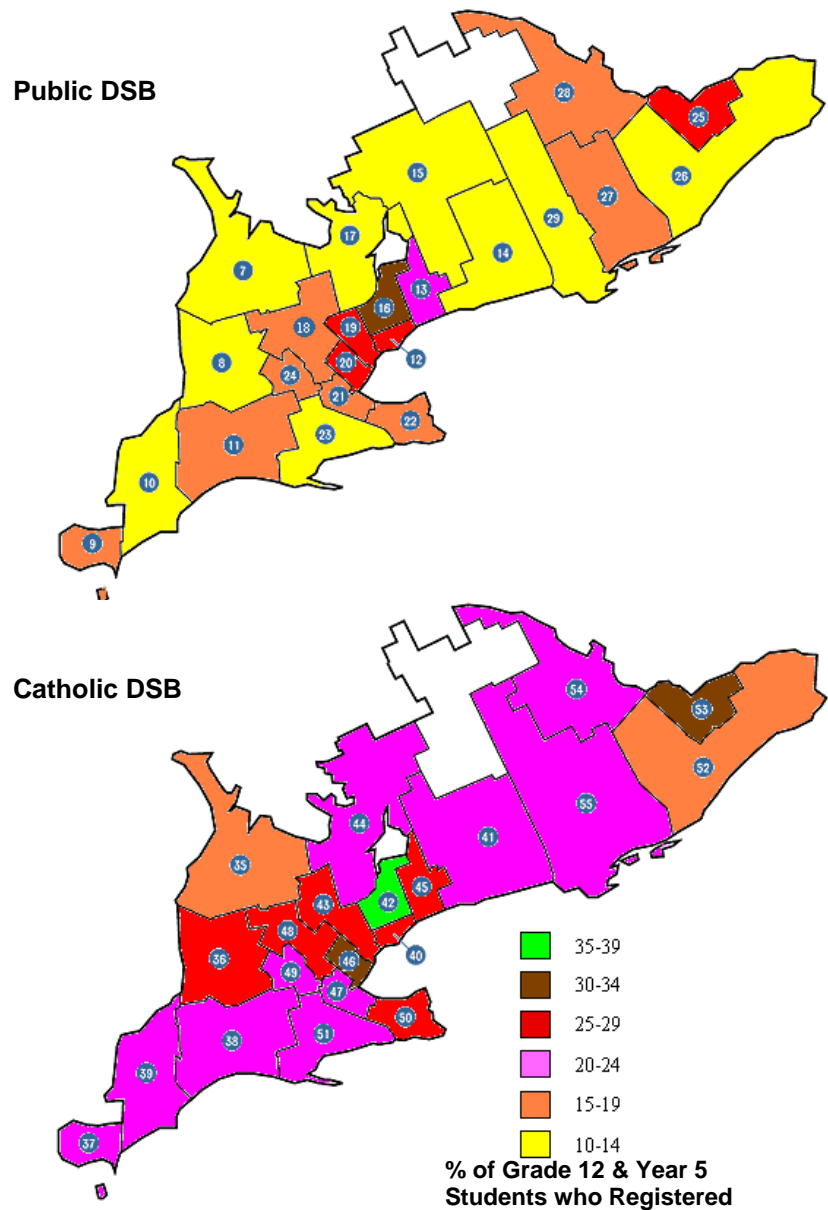
Source: MOE/OCAS/OUAC and OCAS data files.

1. University Registrations

Figure 5.15 presents Fall 2006 university registration rates for Southern Ontario District School Boards based on eligible students (those enrolled in Grade 12 and Year 5).

University registrations were notably higher than the norm in both Toronto and the Ottawa-Carleton region. Smaller proportions of students registered in university from the rural areas of the province. Southern Ontario students from the Catholic District School Boards were more likely to register in university than those from Public District School Boards.

Figure 5.15: University Registrants from Southern Ontario Public & Catholic District School Boards (% Eligible Students; Fall 2006)

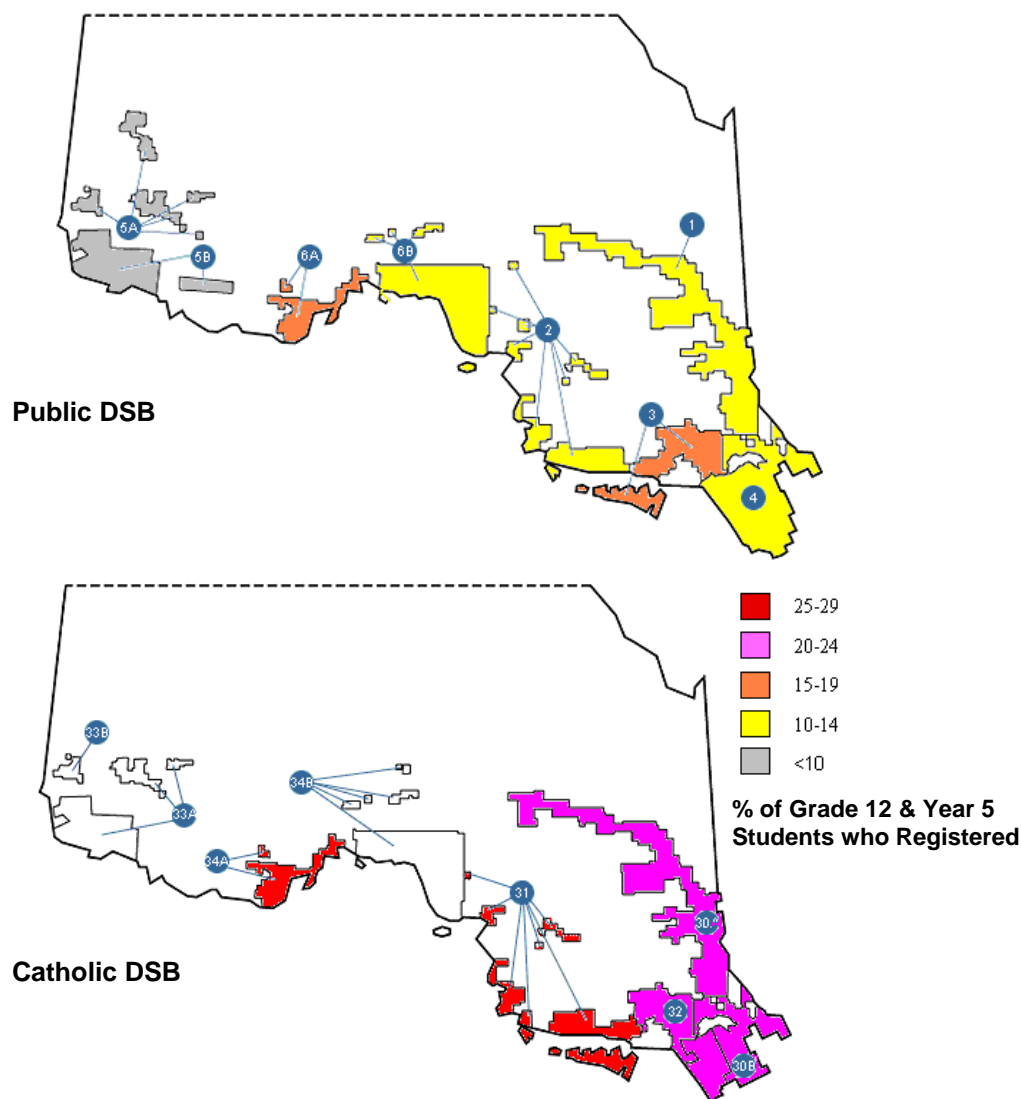


Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps.

Source: MOE/OCAS/OUAC data files.

The percentages of university registrants from Northern Ontario Public and Catholic District School Boards were notably lower than those for boards in Southern Ontario (Figure 5.16). Less than one-fifth of eligible Northern Ontario Public District School Board students registered in university. A slightly higher proportion of Catholic District School Board than Public District School Board students registered in a university.

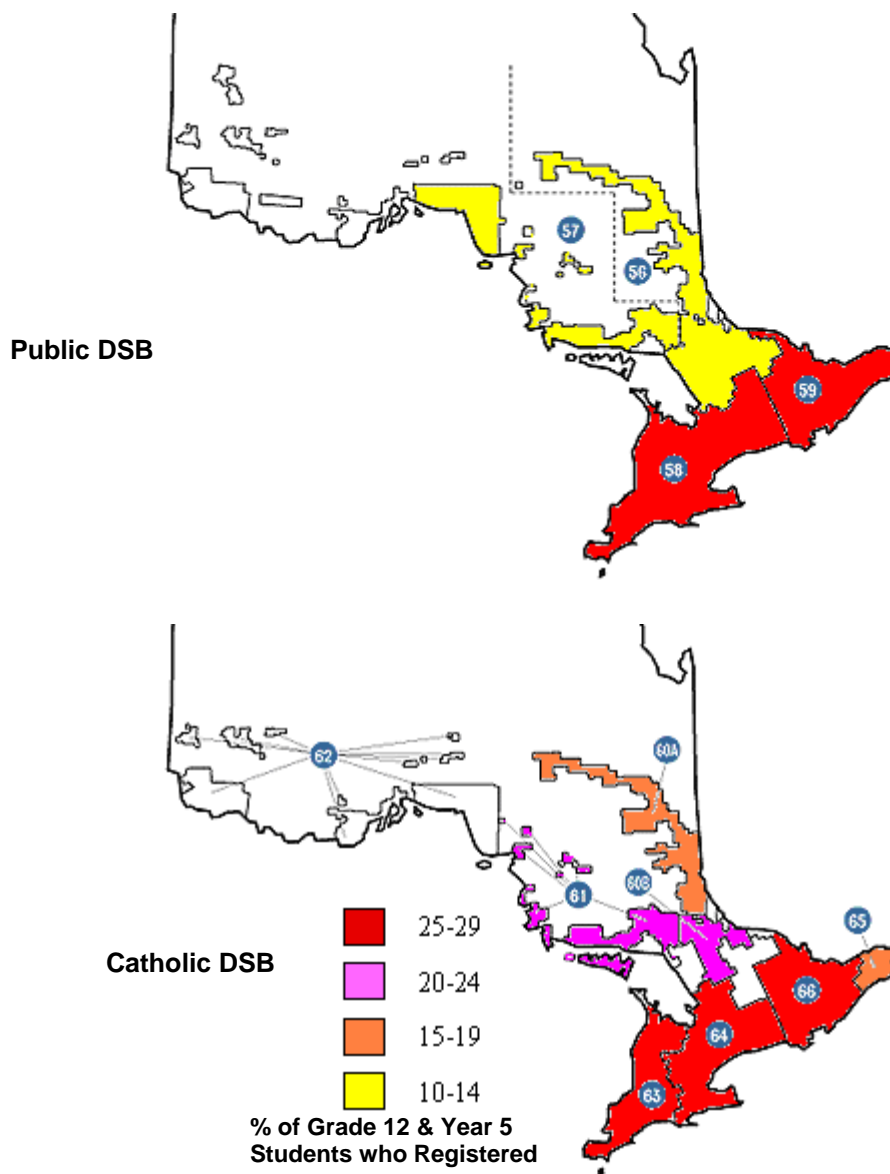
Figure 5.16: University Registrants from Northern Ontario Public & Catholic District School Boards (% Eligible Students; Fall 2006)



Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps. These maps define provincial school board boundaries (33a and 34b – no secondary school in these boards; 33b – no data available). Source: MOE/OCAS/OUAC data files.

The percentage of students in French-Language Catholic District School Boards registering in university was higher than in the French-Language Public District School Boards, with the lowest proportion of registrants coming from the Northern parts of the province.

Figure 5.17: University Registrants from French-Language Public & Catholic District School Boards (% Eligible Students; Fall 2006)

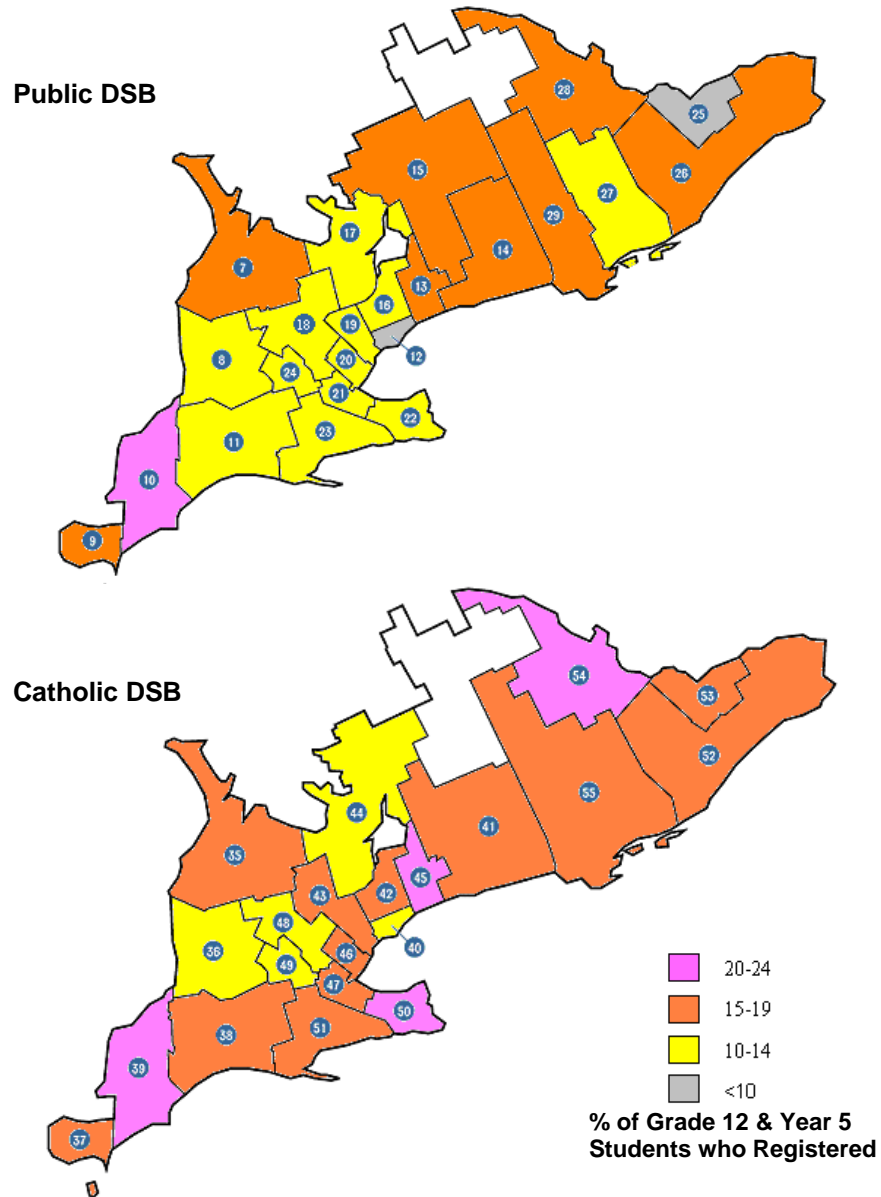


Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps.
 (62 – no data available)
 Source: MOE/OCAS/OUAC data files.

2. College Registrations

The percentages of college registrants were consistently lower than university registrants in the Southern Ontario Public and Catholic District School Boards (Figure 5.18). Only five school boards had registration rates above 20 percent. Generally the proportion of students registering in college programs from Public District School Boards was slightly lower than the proportion from Catholic District School Boards. The Toronto and Ottawa-Carleton Public District School Boards had notably low college registration percentages.

Figure 5.18: College Registrants from Southern Ontario Public & Catholic District School Boards (% Eligible Students; Fall 2006)

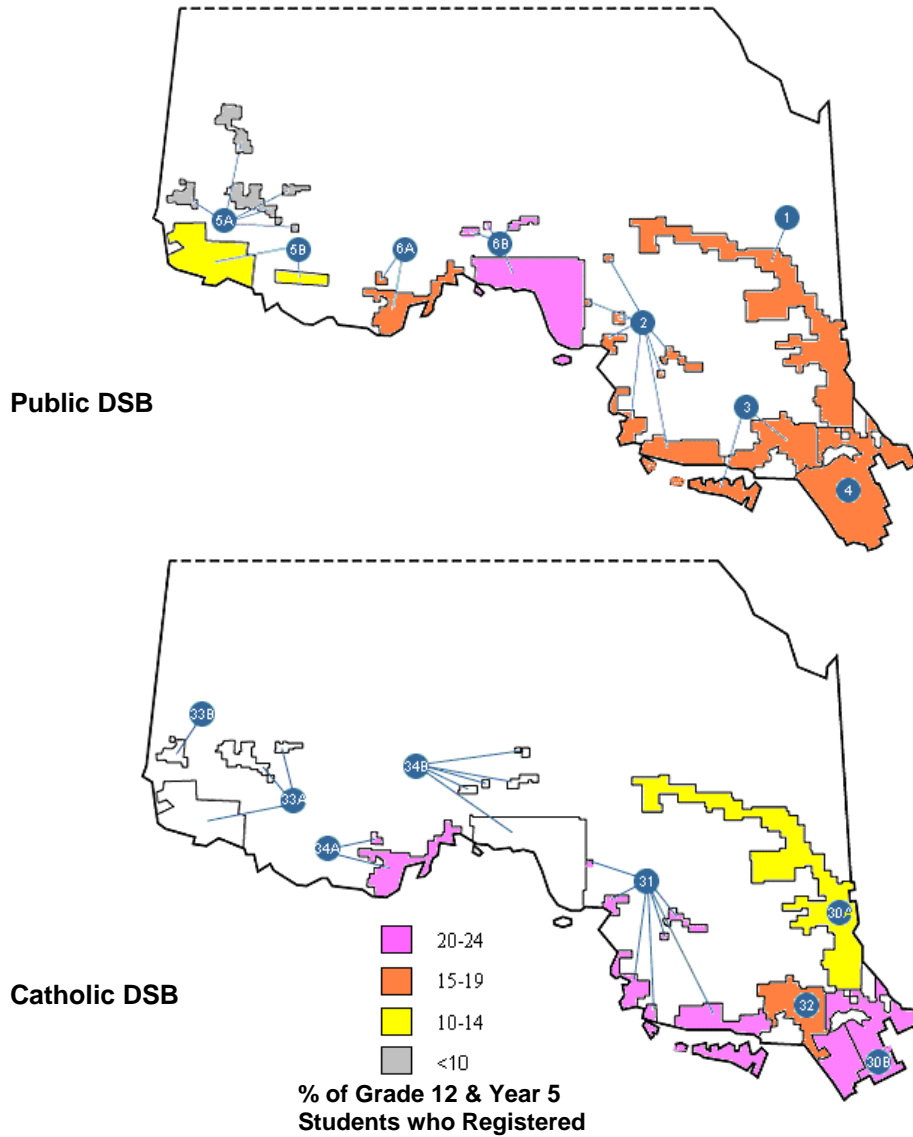


Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps.
 Source: MOE/OCAS/OUAC and OCAS data files.

Figure 5.19 presents the college registration rates for the Northern Ontario Public and Catholic District School Boards. The overall registration rate of students from the Public District School Boards was less than 20 percent. In fact, only two of the Public District School Boards had a registration rate above 15 percent (Rainbow and Lakehead District School Boards). The

registration rates for the Catholic District School Boards were consistently higher, with most over 15 percent.

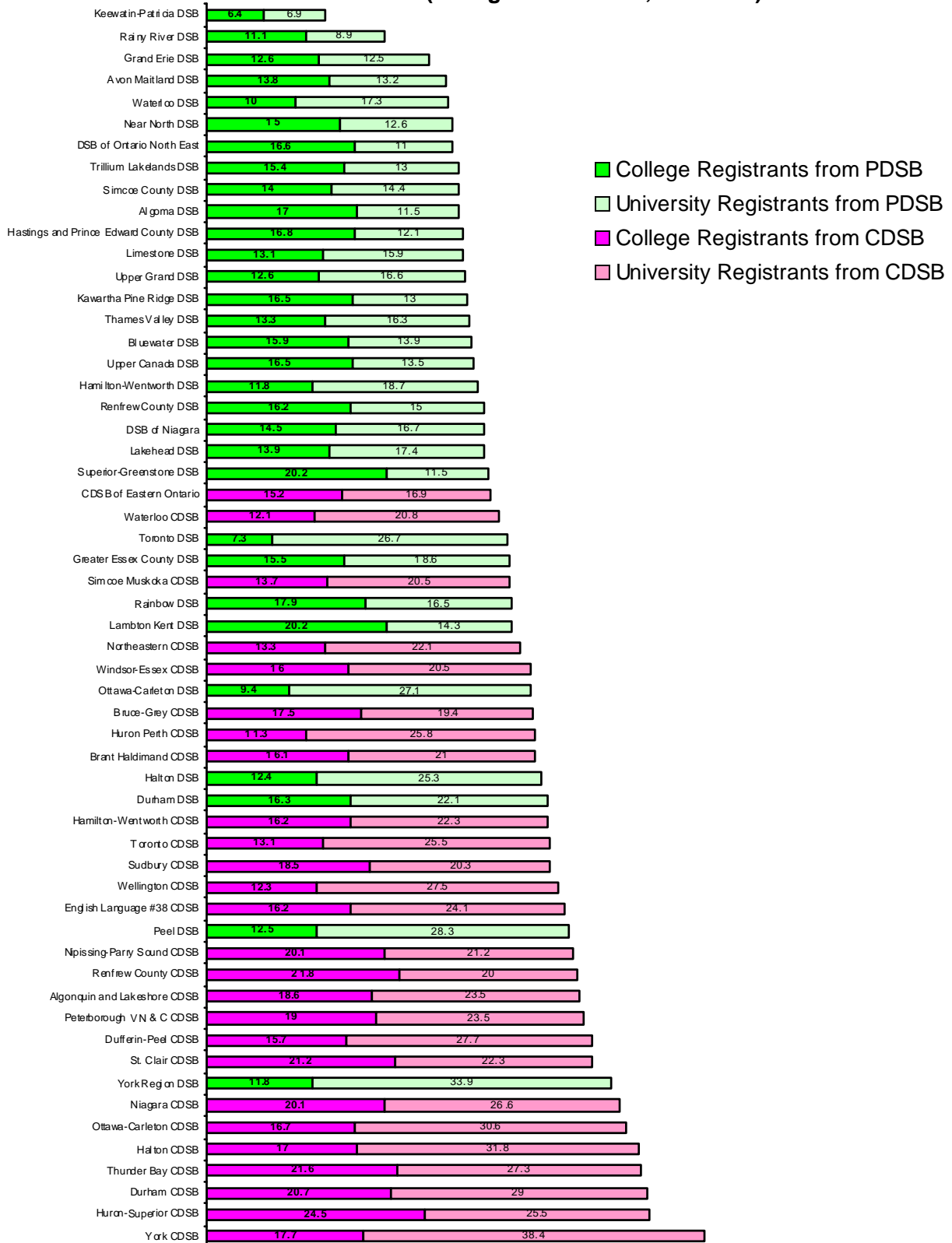
Figure 5.19: College Registrants from Northern Ontario Public & Catholic District School Boards (% Eligible Students; Fall 2006)



Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps. These maps define provincial school board boundaries (33a and 34b – no secondary school in these boards; 33b – no data available). Source: MOE/OCAS/OUAC and OCAS data files.

Figure 5.20 summarize the college and university registration rates by school board from the previous Figures 5.12 to 5.19. These figures bring into greater clarity the differences in the proportion of college and university registrants by school board. A school board can have relatively high numbers for both categories of registrants such as Dufferin-Peel, Ottawa-Carleton and Durham Catholic District School Boards, or relatively low numbers for both such as Keewatin-Patricia, Rainy River and Grand Erie Public District School Boards.

Figure 5.20: Registrants in Colleges and Universities from Ontario Catholic & Public District School Boards (% Eligible Students; Fall 2006)

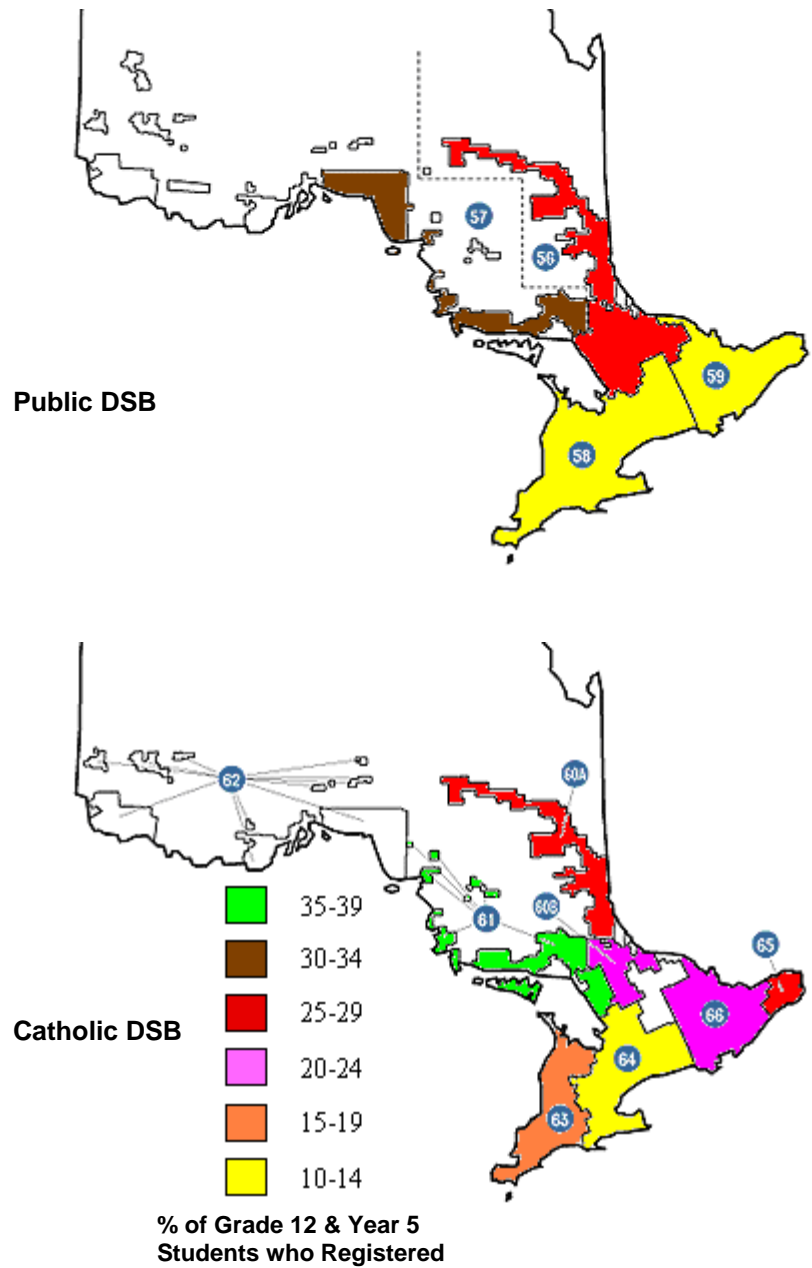


Source: MOE/OCAS/OUAC and OCAS data files.

In some boards there were large differences between the proportions of college and university registrants, such as the Toronto, York Region and Ottawa-Carleton Public District School Boards, and to a lesser extent the Waterloo, Wellington and Peel Public District School Boards. In those instances where large differences were evident in the proportions, the concern is that secondary schools may be restricted in their course offerings for college-planning students because of the large numbers of university-planning students.

Secondary school enrollments in French-Language District School Boards (Public and Catholic) are relatively low, and there can be considerable variation in college and university applications and enrollments by year. This variability must be kept in mind when viewing Figure 5.21. Again, as with the other school boards, a greater proportion of students from French-Language Catholic District School Boards than from French-Language Public District School Boards attended colleges. Interestingly, the proportion of students attending college was relatively low for the French-Language Public District Schools Boards in the southern part of the province and the French-Language Catholic District School Boards in Central Ontario. Proportionate college registrations were notably high for the Conseil scolaire de district catholique du Nouvel Ontario.

Figure 5.21: College Registrants from French-Language Public & Catholic District School Boards (% Eligible Students; Fall 2006)

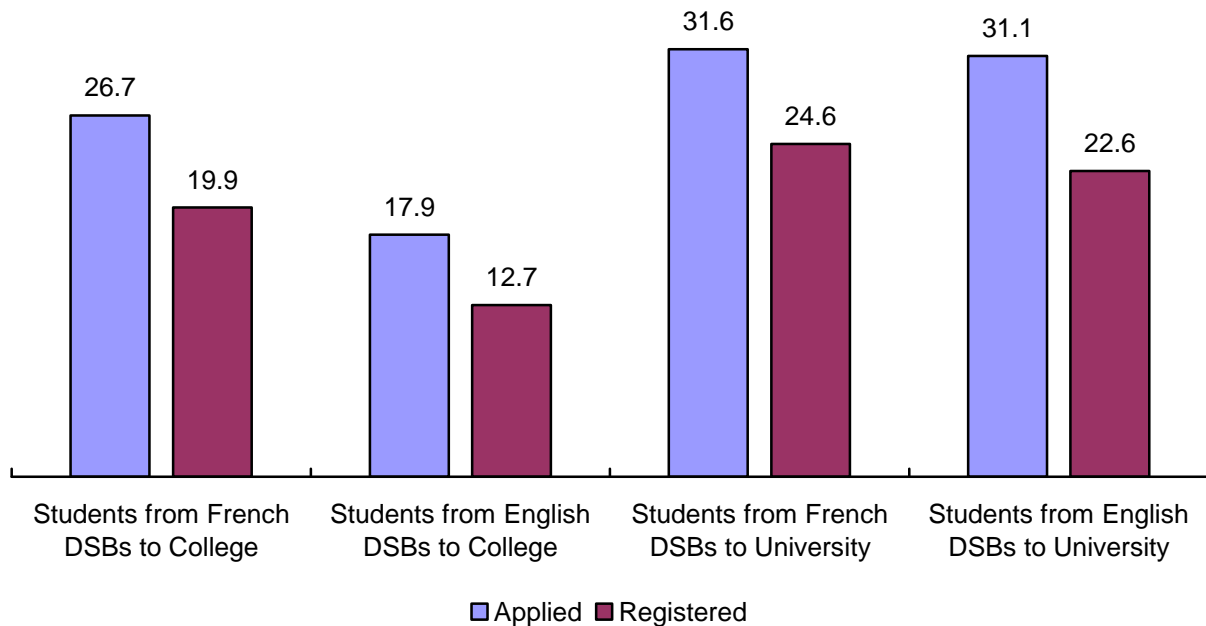


Note: See list of school boards in Appendix F; maps are based on Ministry of Education boundary maps. These maps define provincial school board boundaries (62 – no data available). Source: MOE data file.

Figure 5.22 presents a comparison of college and university applications and enrollment in aggregate for French-Language District School Boards in comparison with aggregated data from English-Language District School Boards (Public and Catholic). Similar proportions of

students from French- and English-Language District School Boards applied or registered in university. A greater proportion of students from French- Language District School Boards registered in an Ontario college program directly after secondary school.

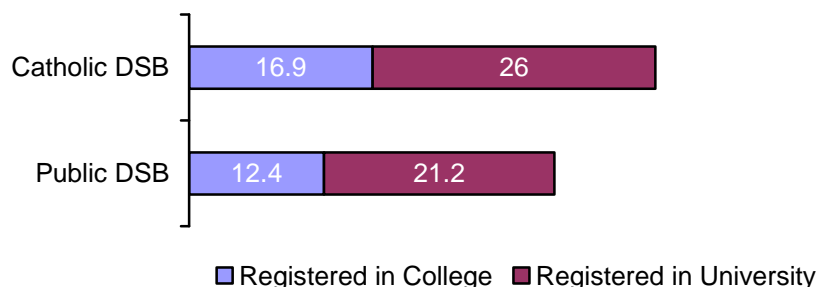
Figure 5.22: Applications to & Registrations in College & University, by Students from French- & English-Language District School Boards (%; 2006-07)



Source: MOE/OCAS/OUAC data file.

Figure 5.23 presents the proportion of students who register in a PSE program (College or University) directly after secondary school by the type of school board. A higher proportion of students from Catholic District School Boards register in both university and college programs.

**Figure 5.23: Students Who Registered in PSE
by Type of School Board (%; Fall 2006)**



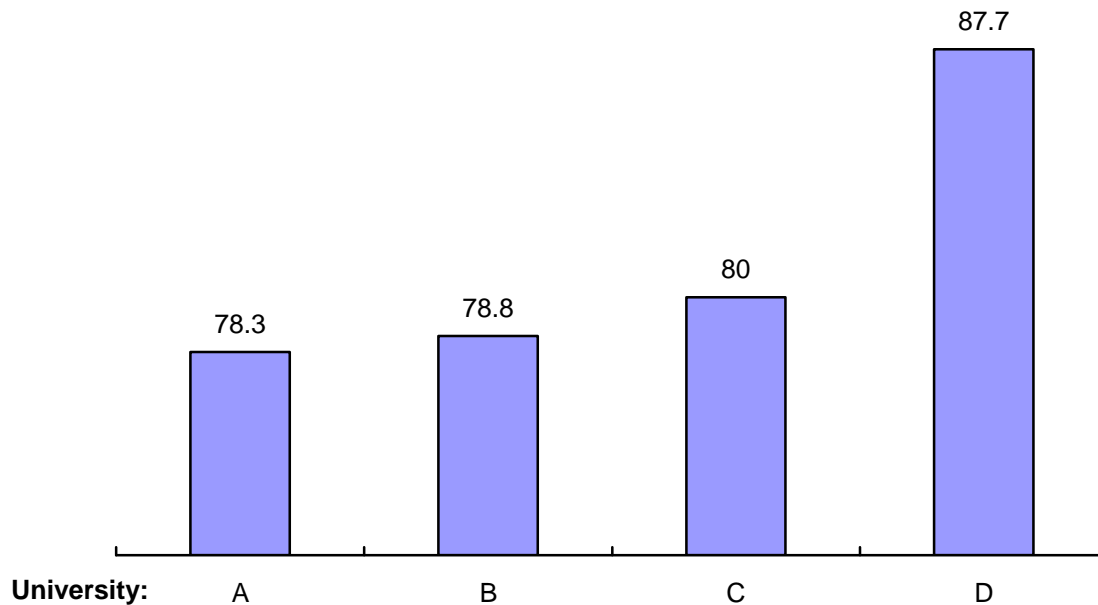
Source: MOE/OCAS/OUAC, OCAS 2006.

F. College and University Responses to Applications

The previous section indicates that regional differences in university and college application and registration rates were evident depending on the school board attended by students. Were there also differences in those rates as a result of the admission procedures of the institutions? That is, would students with similar marks have been more or less likely to be offered a place depending on the program and/or institution to which they applied?

In the case of universities, the answer to this question is obvious – admission requirements for the same program differ widely across universities. In Chapter 3, *Secondary School Course Selection & Achievement*, we presented the marks distributions of students admitted to selected university programs. There exist substantial differences across universities in the marks required to gain entry to similar programs. Figure 5.24 presents the average marks of incoming students to four universities in the Fall of 2006. The average marks were quite similar in three of the universities, but sharply higher for the fourth. The first three communities may be well served by their local universities, but the same argument could not be made for the fourth. Universities in Ontario may appear to be geographically located in such a way as to serve their nearby communities, but the large variations in admission requirements make the goal of equal access difficult, if not impossible, to achieve.

Figure 5.24: Average Secondary School Marks for First Year Students in Four Ontario Universities (%; 2008)



Source: CUDO, 2009.

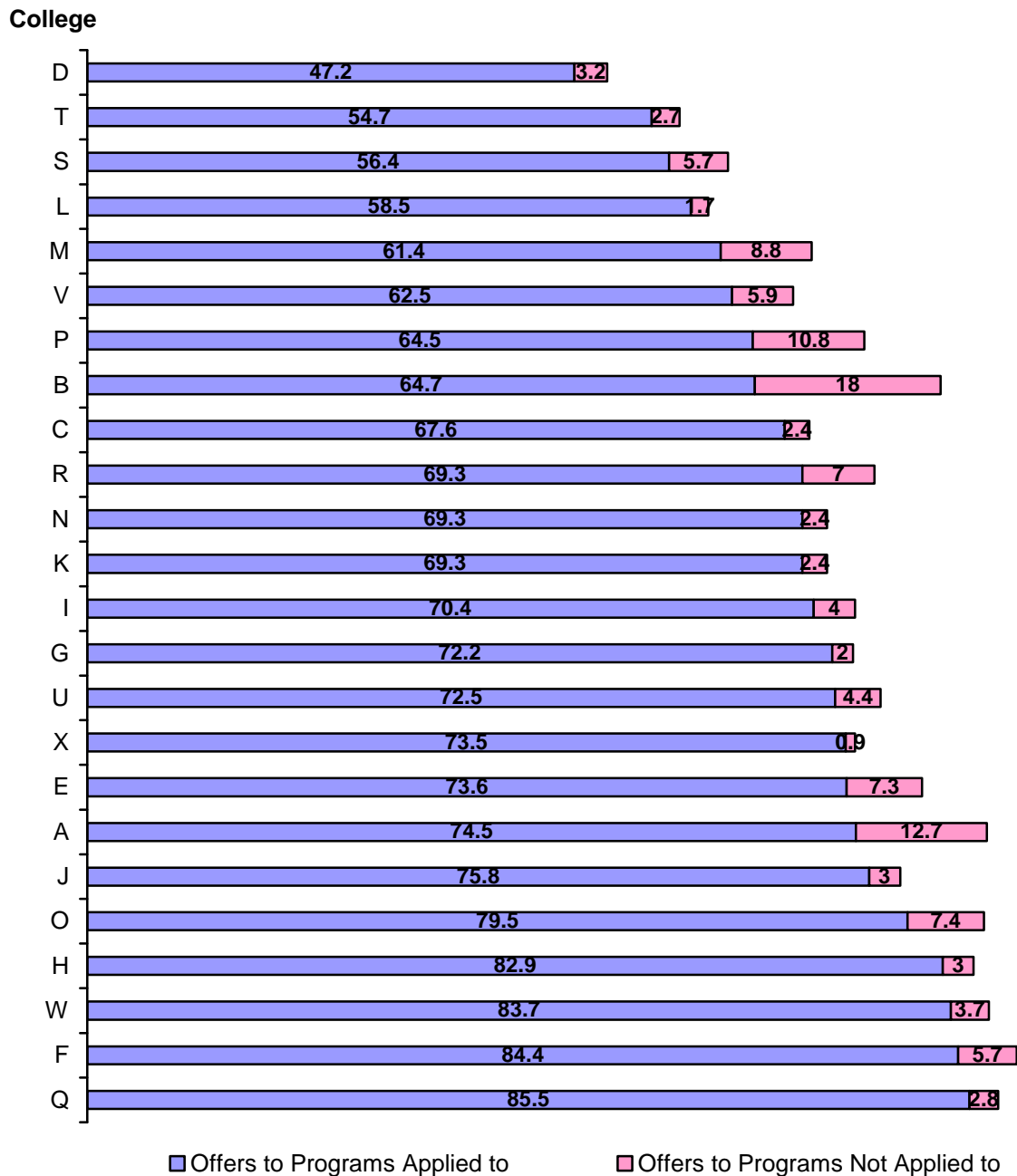
According to their original mandate, colleges are more specifically community-oriented than universities and are governed by essentially the same admission requirements per program across the province wherever they are located (Fleming, 1971; Ontario College of Applied Arts & Technology Act, 2002). However, in practice not all similar programs across colleges have the same admissions requirements. Nevertheless, we would expect to find similar offer-to-application rates across the colleges. A particularly useful indicator of ‘opportunity’ offered by a college is the actual percentage of offers of acceptance to a college program as a percentage of applications, i.e., the offer rate.

Figure 5.25 indicates that significant differences existed in 2006 across the colleges in the percentage of offers to applications ranging from a high of 85.5 percent to a low of 47.2 percent for ‘applied to’ programs. These figures represent applications, not applicants, and an individual may apply to one or more programs and/or colleges. Individuals may not receive an offer of acceptance to every program that they apply to in a particular college, but even if they receive one for that college, they would be recorded as having received an offer. It could be argued that some colleges offer many unique programs that tend to be oversubscribed, thereby having the effect of decreasing their overall offer rates. While this is true, a comparison of offer rates of

programs offered in most or all colleges showed a similar pattern of differential offer rates by college to that appearing in Figure 5.25. Colleges that had relatively low offer rates were located in the Ottawa and Toronto areas; thus, the ability of all regions of the province to serve all interested applicants was inequitable.

Note in Figure 5.25 the relatively high proportion of offers given to programs not applied to in some colleges (18%, 12.7%, 10.8%), and the relatively low numbers in others (0.9%, 1.7%, 2%). This recruitment strategy of making an offer to a student for a program not applied to allows colleges to attempt to fill programs that have available spaces by providing students with alternate opportunities in which they may or may not be interested. This strategy is also commonly used by Ontario universities.

Figure 5.25: Offers to College Programs, both Applied to and Not Applied to as a Percentage of Applications, by College (% Applicants; Fall 2006)



Source: OCAS data file.

Is the strategy of offering applicants opportunities to register in a program that they have not applied to successful in filling program spaces? Table 5.2 suggests that the strategy appears to be somewhat successful in that 6.9 percent of registrants were enrolled in a program to which they did not apply. The table also shows that 62.8 percent of college registrants were enrolled in

their first choice of program. However, this figure for registration for first-choice programs varied widely across colleges (50.9% to 82.8%, see Table D-34 in Appendix D).

Table 5.2: Applicants Who Register in Ontario College Programs, by Program Choice Ranked (%; Fall 2006)

Program Choice	%
First	62.8
Second	15.5
Third	8.0
Fourth	4.0
Fifth	2.8
Alternate Offer	6.9

Source: OCAS data file.

Did rates of offers to what is essentially the same program differ across colleges? If this was the case, because many prospective college students prefer to remain in their home communities to attend college, where they live would have been an important factor in having an opportunity to pursue college. A sample of programs illustrating different program types was selected to answer this question. Some programs were oversubscribed³ wherever they were offered (e.g., Dental Hygiene). Other programs were oversubscribed in some colleges but not in others (e.g., Early Childhood Education). In some colleges, many programs were oversubscribed. In other colleges, very few programs were oversubscribed, and many programs in these colleges were optimally or less than optimally subscribed to (e.g., General Arts & Sciences, Personal Support Worker). Based on these criteria, three categories of programs were selected for analyses: (1) three programs that were typically oversubscribed wherever they were offered; (2) two programs that varied across colleges in terms of oversubscription; and (3) two programs that tended to be optimally subscribed to or undersubscribed.

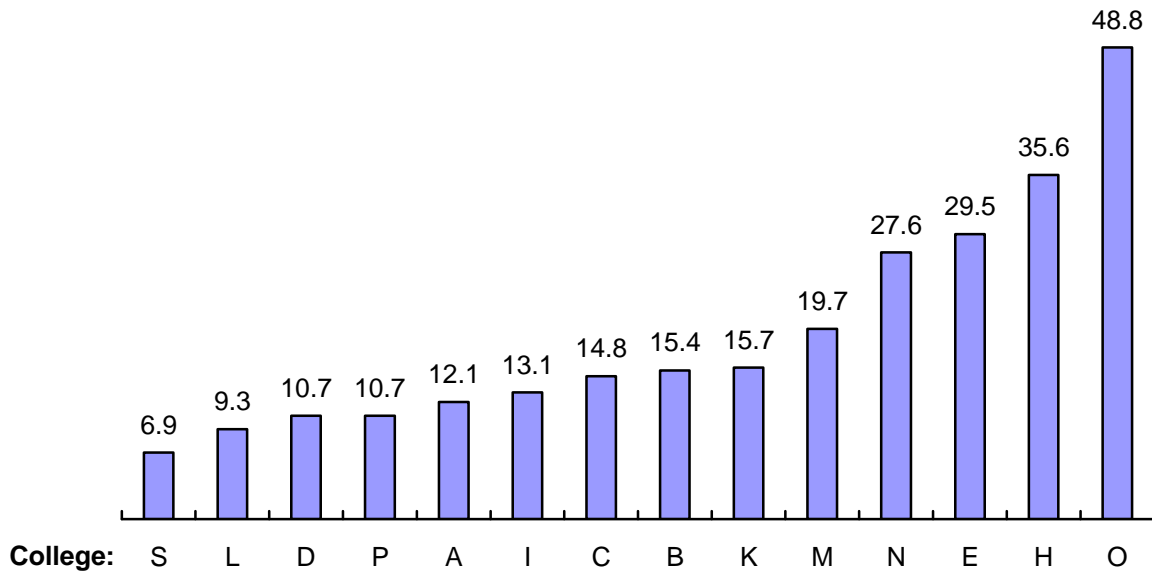
1. Offers to Oversubscribed Programs

Figures 5.26 to 5.28 present offer rates to programs that are typically oversubscribed and not offered in all Ontario colleges (e.g., Paramedic, Dental Hygiene and Firefighting). The fact that they are not offered in all colleges limits access for many prospective students because of the financial implications involved in moving to a distant community. For Paramedic and Dental Hygiene Diploma programs, the number of offers was quite low and relatively consistent across colleges, although the offer rate to the Paramedic program in one of the colleges approached 50

³ An oversubscribed program is one in which there are more qualified applicants than available spaces.

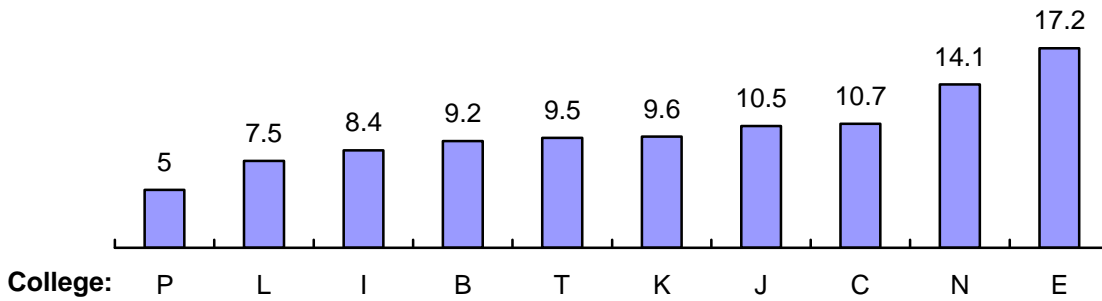
percent of applicants. In the case of Firefighting, the program offer rates from two of the colleges were similar to the provincial norm for all programs, while the remainder were quite low. The likelihood of an applicant being accepted into Paramedic or Firefighting programs, while still relatively low, varied across colleges.

Figure 5.26: Offers to Paramedic Diploma Programs in 14 Colleges (%; Fall 2006)



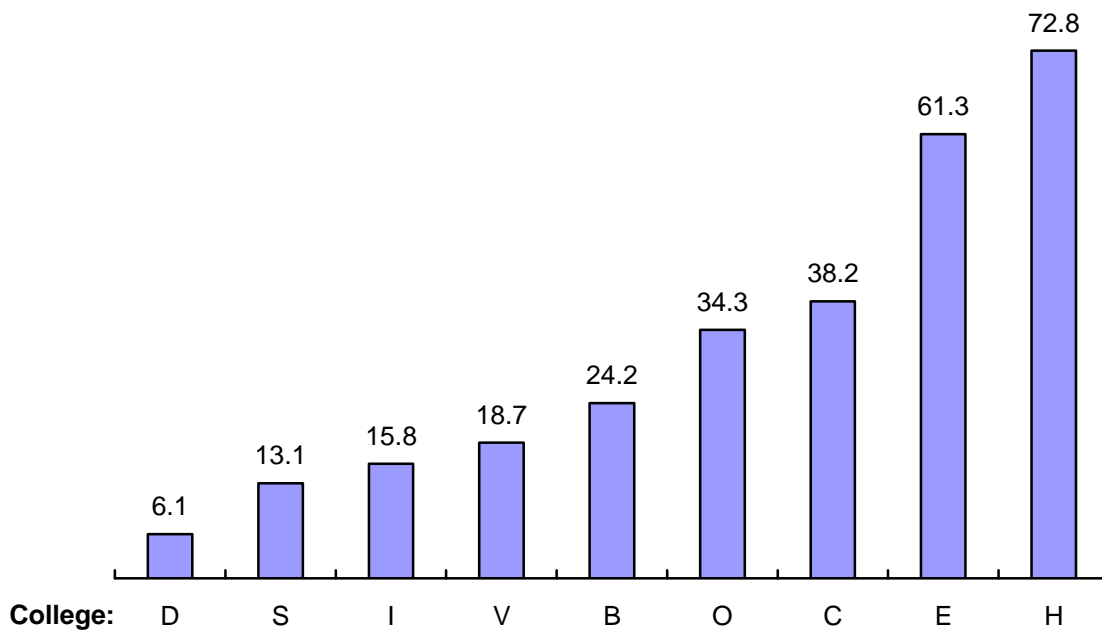
Source: OCAS data file.

Figure 5.27: Offers to Dental Hygiene Diploma Programs in 10 Colleges (%; Fall 2006)



Source: OCAS data file.

Figure 5.28: Offers to Firefighting Certificate Programs in 9 Colleges (%; Fall 2006)

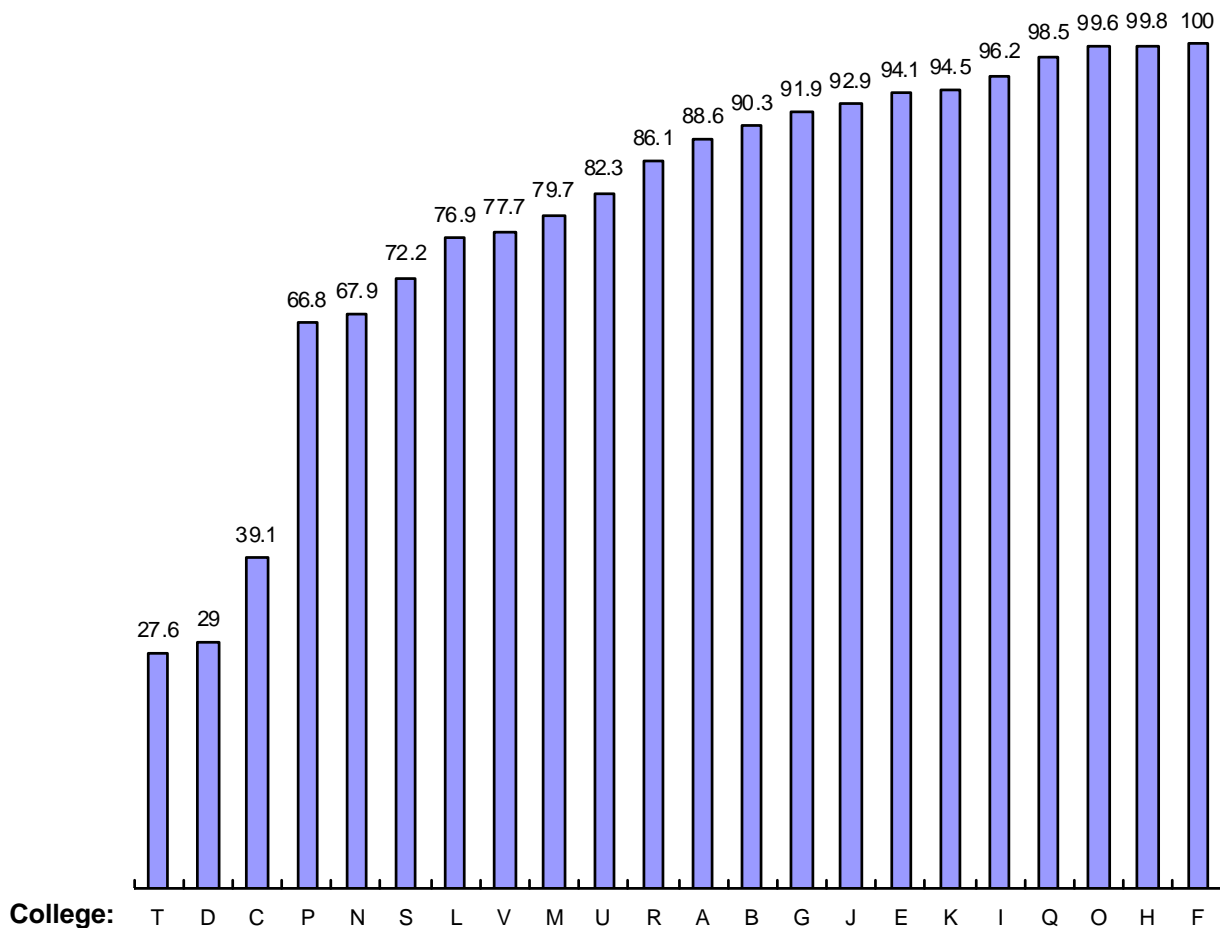


Source: OCAS data file.

2. Variability in Programs Across Colleges Re Oversubscription & Under Subscription

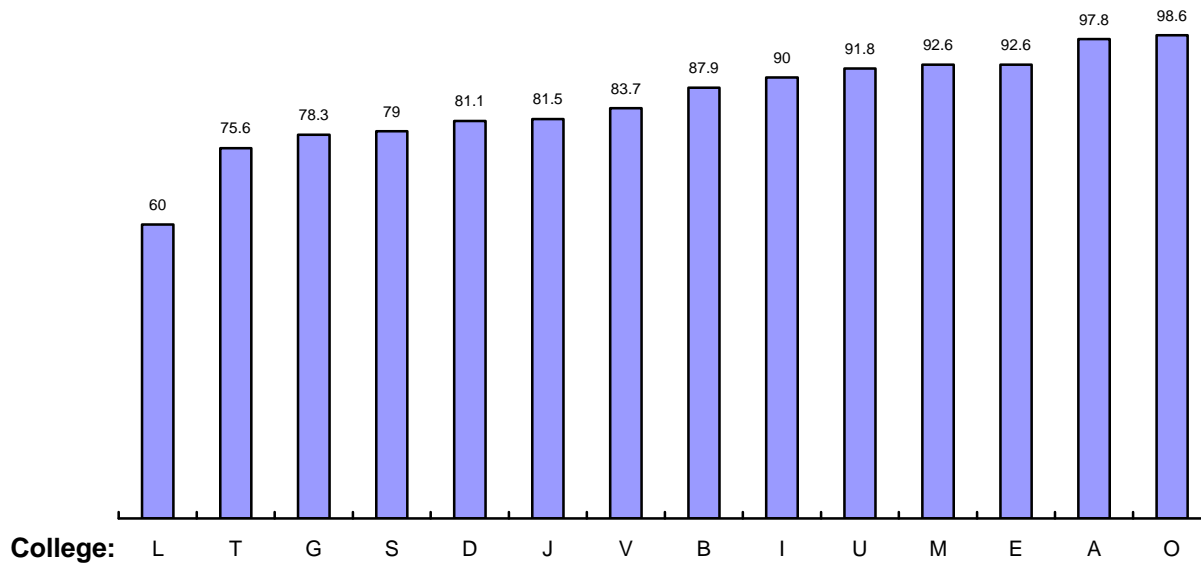
Figures 5.29 and 5.30 present offer rates for two programs where the offer rates varied across colleges. In the case of Early Childhood Education programs, offer rates were notably low in three colleges, and these colleges had relatively low offer rates for most of their programs. On the other hand, nearly all who applied to ECE in other colleges received offers. The low offer rates in some colleges mean that access to college programs for people in communities that surround these colleges may have been limited. In the case of Business Administration programs, one college had a lower-than-average offer rate, while the others ranged from average to well-above average.

Figure 5.29: Offers to Early Childhood Education Diploma Programs in 22 Colleges (%; Fall 2006)



Source: OCAS data file.

Figure 5.30: Offers to Business Administration Advanced Diploma Programs in 14 Colleges (%; Fall 2006)



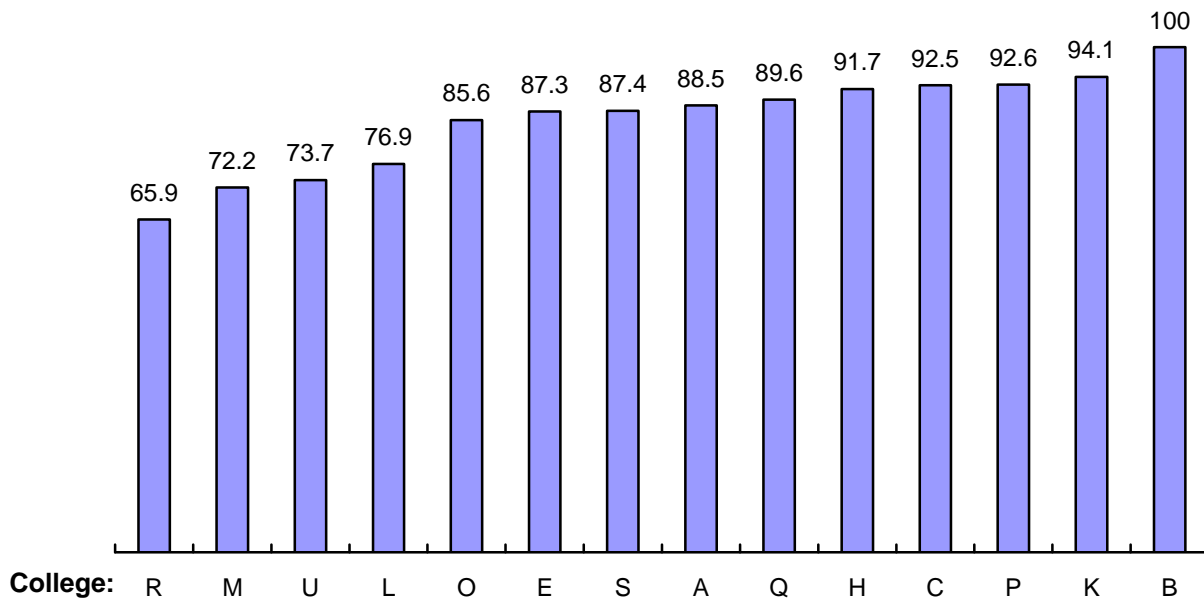
Source: OCAS data file.

3. Optimally Subscribed Programs

For the most part, colleges offering the Personal Support Worker Certificate program and the Electronics Engineering Technician Diploma program had relatively high offer rates, although there were some exceptions (Figures 5.31 and 5.32).

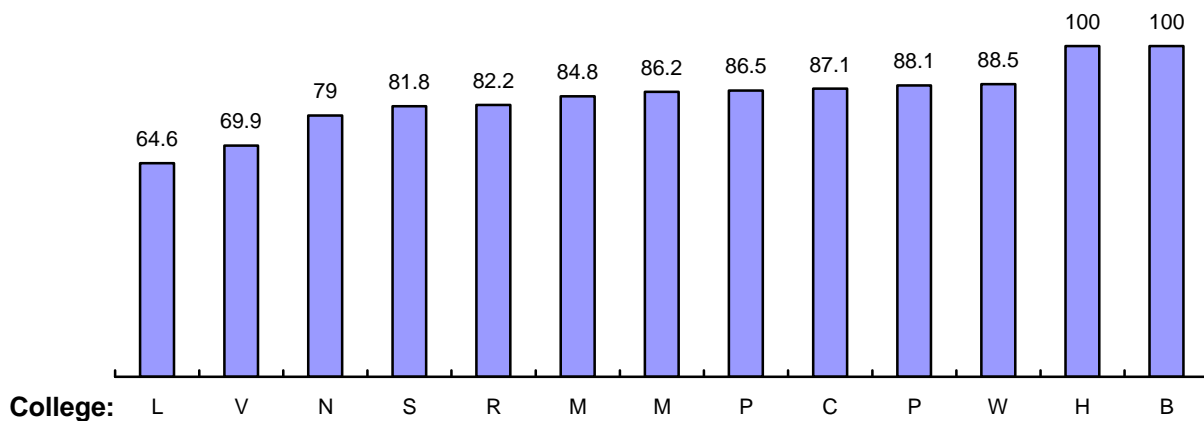
Programs such as Personal Support Worker, General Arts and Science, and the Pre-Health Science programs tended to have more spaces than applications, and were most likely to appear in the 'offers-to-programs-not-applied-to' category.

Figure 5.31: Offers to Personal Support Worker Certificate Programs in 14 Colleges (%; Fall 2006)



Source: OCAS data file.

Figure 5.32: Offers to Electronics Engineering Technician Diploma Programs in 13 Colleges (%; Fall 2006)



Source: OCAS data file.

4. College Variations in Applications, Offers and Registrations

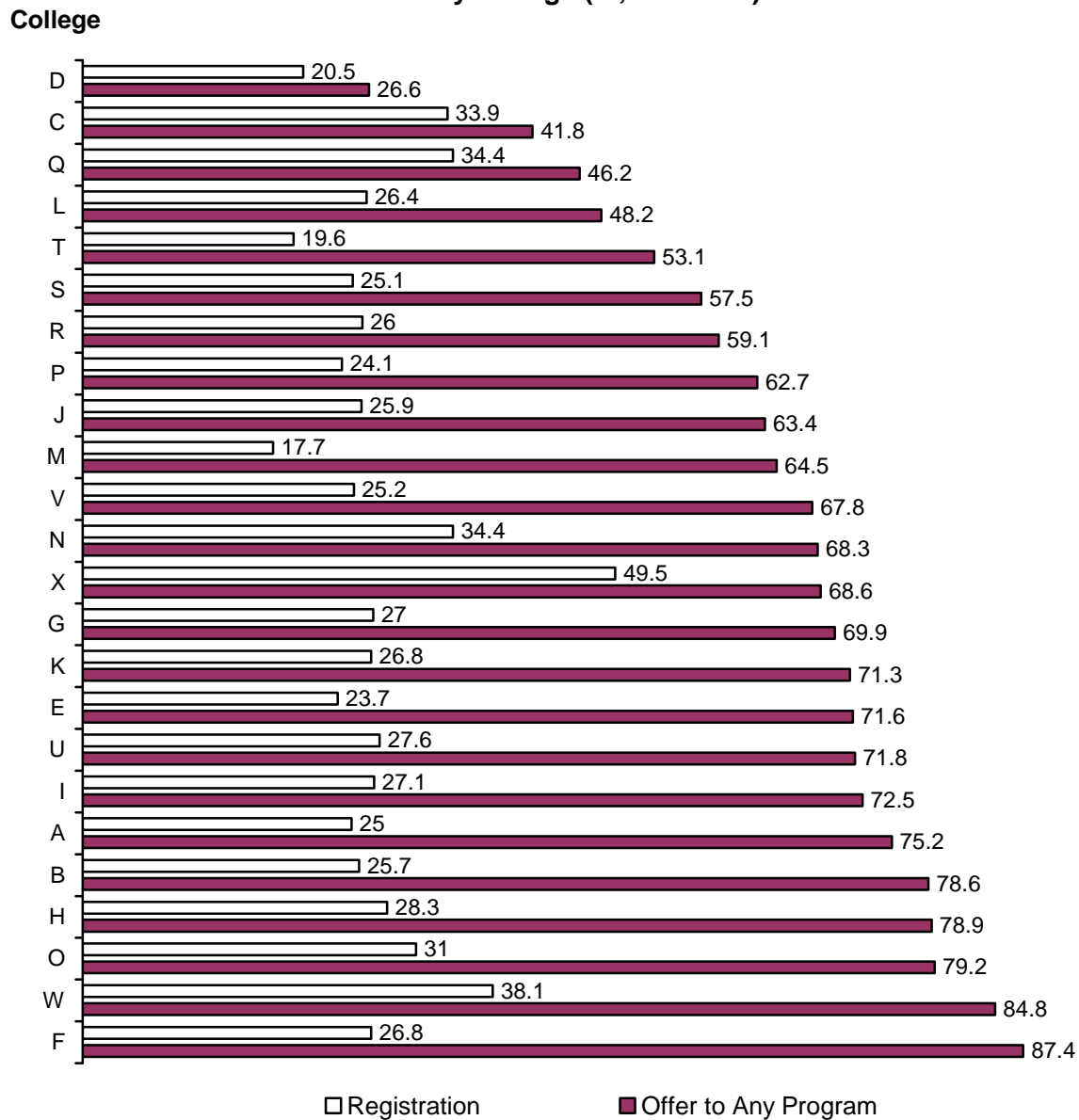
College registrars have a complex task to ensure that their college admits sufficient students to fill available spaces in each of their programs. For those colleges where the offer-to-registration rate is high, most of those who receive offers will register, as in Colleges D and C (Figure 5.33). The challenge for registrar offices is to make appropriate decisions regarding who will receive

offers from the many who apply. For those colleges where the registration-to-offer rate is comparatively low, as in Colleges F and M, the challenge to fill available spaces is quite different with a constant reconfiguration of offers to acceptances.

The university registrar offices undergo a similar process, although with less difficulty because average marks and appropriate secondary school courses are the consistent criteria for admission to most university programs.

It is not easy to determine whether the college system does not have the capacity to offer spaces to all qualified applicants. Certainly regional differences can be seen in Figure 5.33. However, an individual may apply to more than one college, not receive an offer from one college, and then be accepted to another college but can only register in one program. The 'no offer' from a particular college does not necessarily mean a non-registration. Nevertheless, the college system only registers about 60 percent of applicants, even though over 80 percent of the applicants typically receive offers, regardless of how many colleges and programs they apply to. If at least two-thirds of the other applicants meet minimum admission requirements (Chapter 3 indicates that this is the case), are there regional differences that might indicate that insufficient spaces are available in the proximal colleges?

Figure 5.33: Applicants Who Received Offers & Who Registered, by College (%; Fall 2006)



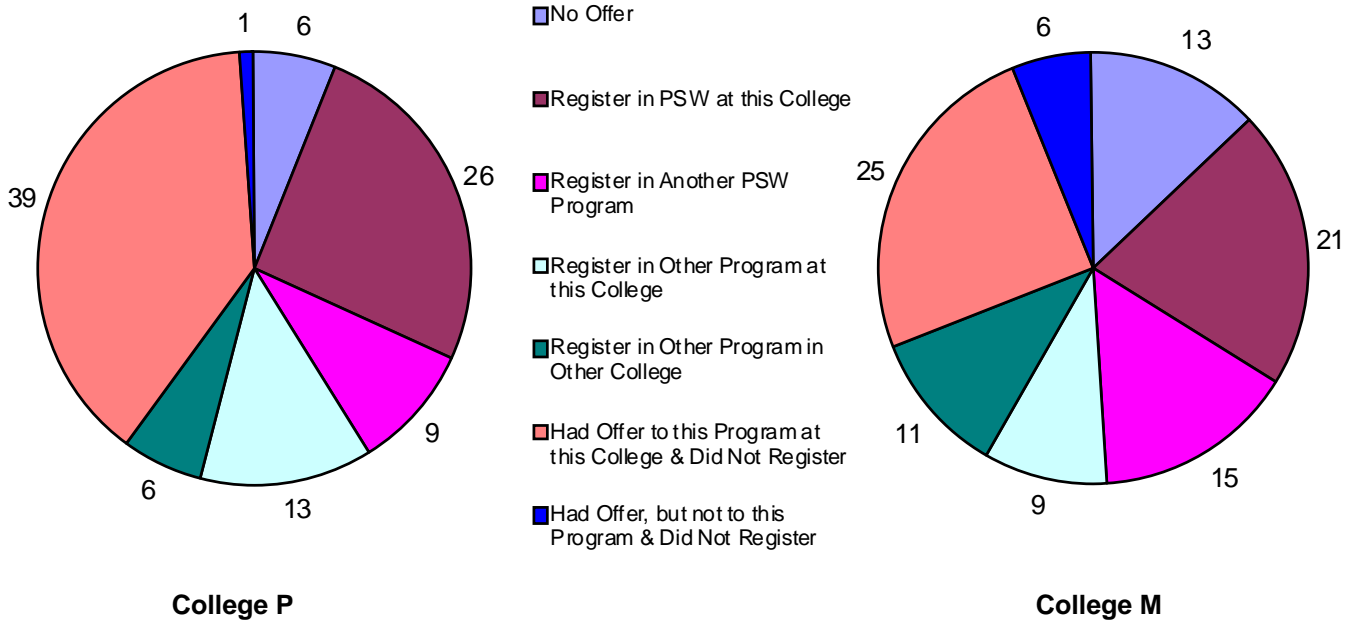
Source: OCAS data file.

The relationship between offer and registration rates by college (Figure 5.33) does not provide the full picture. A college may enroll nearly all of those applicants who receive an offer or, alternatively, relatively few. The actual range of the rate of registrations to applications was not that large with most colleges in 2006 falling between 20 and 34 percent (with two outliers of 17.7% and 49.5%). However, since application rates indicate interest and offer rates indicate

opportunity, colleges in Toronto and the Ottawa-Carleton region do not appear to provide the same opportunities as those in other parts of the province.

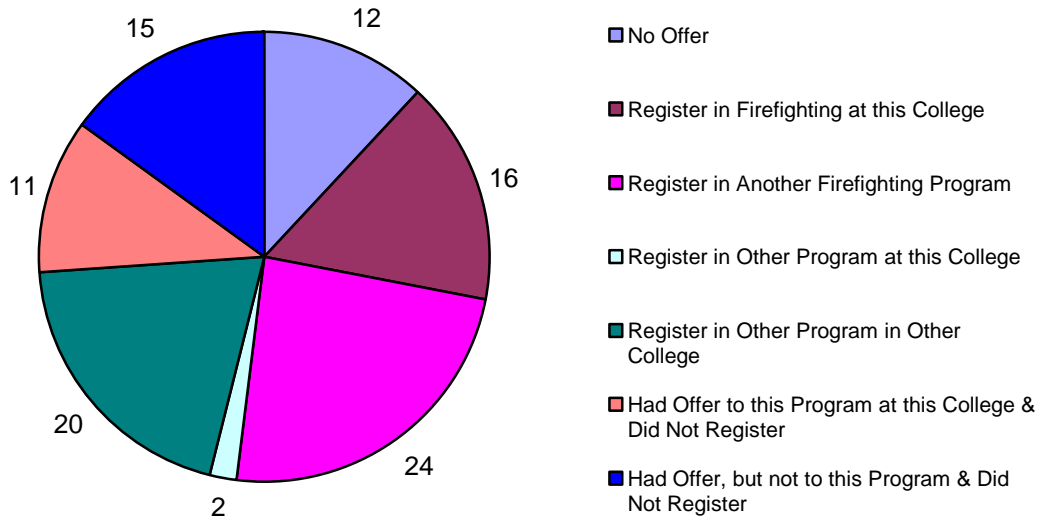
What happens to those who do not receive an offer to a program in one college to which they have applied? Do they register in that program in another college, or register in another program in the same college, or just not register in any program? And what do the answers to these questions tell us about college opportunities by region? As we note throughout this report, many factors influence a decision to apply to a college, and whether to register or not if one receives an offer. Answers to these questions tell us more about the relationship between program registration decisions and the region in which a potential college registrant lives. To shed some light on the issues, we analyzed Personal Support Worker (PSW) Certificate programs in two colleges, and one Firefighting Certificate program in another college (see Figures 5.34 and 5.35). The applicants to these programs were divided into seven categories: (1) those who did not receive an offer; (2) those who registered to that particular program in the particular college in question; (3) those who registered in the particular program but at a different college; (4) those who registered in another program at that college; (5) those who registered in another program in another college; (6) those who had an offer in that program and college, but did not register; and, (7) those who had an offer, but not to that program and did not register.

Figure 5.34: Destinations of Applicants Applying to Personal Support Worker Certificate Programs at Colleges P and M (%; Fall 2006)



Source: OCAS data file.

Figure 5.35: Destinations of Applicants Applying to Firefighting Certificate Program at College G (%; Fall 2006)



Source: OCAS data file.

Interestingly, many of the applicants to the PSW programs who received offers to the program did not register in any college program (39% and 25%). In comparing the proportions of students who registered in PSW or another college with those who took another program in the same college, one could not make a case that they preferred to remain in the college to take another program or take PSW in another college. The choice of college took precedence over the choice of program for some, but not all.

The story was quite different for the Firefighting Certificate program. In that case, the program choice was obviously more important than the specific college. If an offer was not received to Firefighting, very few took another program in the same college, while nearly one-quarter took the Firefighter program in another college. This was the common pattern in the system-wide oversubscribed programs.

These analyses demonstrate that both college and program or college and/or program can play an integral role in whether applicants accept an offer.

G. Summary

There were regional differences in the proportion of Grade 12 and Year 5 students who applied to and registered in college and university. Generally, rural and Northern Ontario students were less inclined to apply to and register in PSE. Students from Catholic District School Boards were more likely than students from Public District School Boards to apply to and register in both university and college. Differences were evident in the ratio of college-to-university registrations by school board; for example, youth were far more likely to register in university than college in Toronto and the Ottawa-Carleton region.

Whether or not students preferred to remain in their home communities to attend PSE was found to be particularly relevant for college applicants, particularly those who applied to college from out-of-school. Ironically, the desire to remain at home to attend college was most common among students in Toronto and the Ottawa-Carleton region where the local colleges had relatively low program offer rates in comparison with most other colleges. This issue was not as pertinent for university-planning students as a common expectation is to leave home to attend university. The proportion of local students enrolled in their nearby university was remarkably low in some universities, less than 10 percent in the case of one, although quite high in the case of others.

It could be argued that all Ontario colleges do not serve their local communities equally. In fact, some concerns could be raised about the relatively low proportions of offers to applications made by colleges in Ottawa and Toronto, and thus the ability of all regions of the province to serve all interested applicants.

Some programs are oversubscribed in some colleges, but not in others; however, programs such as Paramedic, Dental Hygienist and Firefighting tend to be oversubscribed wherever they are offered. Surprisingly high percentages of college applicants who received an offer to their first choice of program chose not to register (e.g., 39% of those receiving an offer to the Personal Support Worker program at one of the colleges did not register in any program).

In summary, important regional differences were evident in both 'interest' (the proportion of eligible students who applied to PSE) and in 'opportunity' (the proportion of applicants who received offers) for post-secondary education.

Chapter 6: English as a Second Language Students

The cultural and language backgrounds of young people in Ontario are many and varied and inevitably influence their secondary school attainment and post-secondary plans. In this chapter we examine the secondary school achievement and post-secondary destinations of students who spoke a language other than English¹ in their home, and those who took at least one ESL/ELD course. Although, not a comprehensive analysis, the information presented in the following pages is a valid representation of the educational status of these youth at a particular point in time, and should provide the baseline data for the more comprehensive analyses required.

The MOE data file used for this study does not include information on either the ethnic background of students or their parents, nor their number of years living in Ontario, but it does classify students on the basis of the main language spoken in their home and whether or not they had taken a course in English as a Second Language (ESL) or English Literacy Development (ELD). This information does provide some insight on the impact of language on students' post-secondary destinations.

A. English as a Second Language (ESL) Students

1. ESL Course Enrollments

ESL and ELD courses are offered to all students from a variety of backgrounds who require additional instruction in English.² For some of these students, English may be a third or even a fourth language, but for purposes of this study they are placed into the category of having taken at least one ESL or ELD course. Table 6.1 indicates the broad language group categories used in this analysis and most of the languages that make up each language group.

¹ Language Spoken in the Home was used as a proxy for ethnic background.

² Throughout this discussion, and in the corresponding figures, students who took ESL and ELD courses are together called ESL students.

Table 6.1: Language Groups by Region³

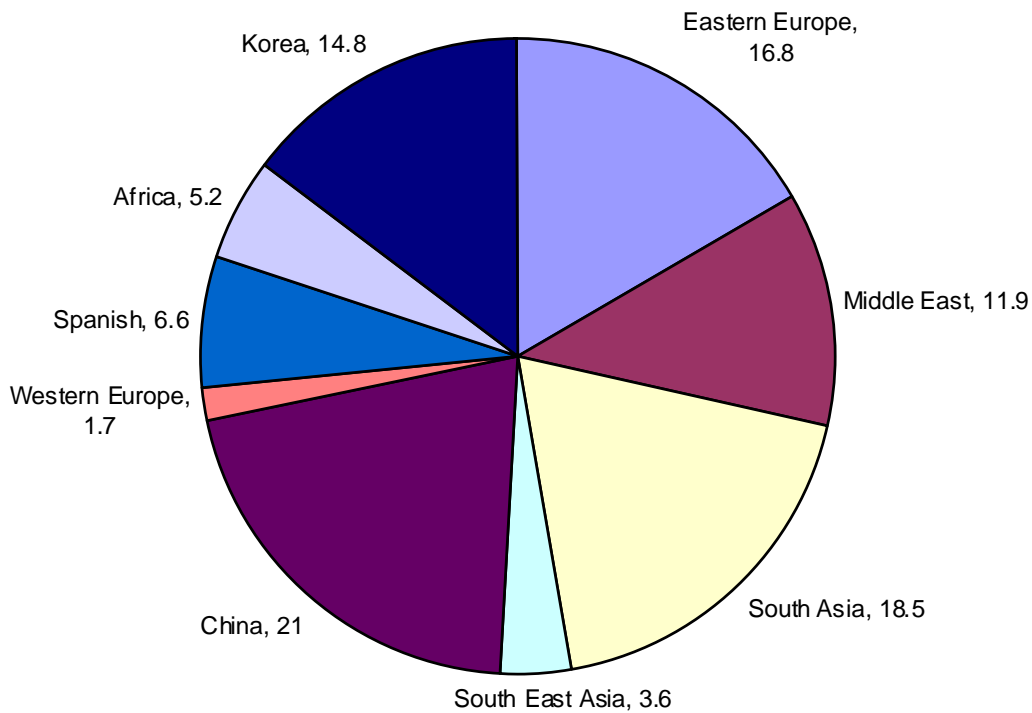
Eastern European	Albanian Estonian Macedonian Serbo-Croatian Ukrainian	Armenian Hungarian Polish Romanian	Croatian Latvian Russian ⁴ Slovak	Czech Lithuanian Serbian Slovenian
Western European	Danish German Swedish	Dutch Greek	Finnish Italian	Gaelic Maltese
Africa	Igbo	Oromo	Somali	Tigrinya
Middle East	Arabic Kurdish	Persian Lisane-Dawat	Dari Pashto	Farsi Turkish
South East Asia	Cambodian Vietnamese Marathi	Malay Hmong Pilipino ⁴	Tagalog ⁴ Khmer	Lao
South Asia	Bengali Singhalese	Gujerati Tamil	Hindi Telugu	Punjabi Urdu
China	Cantonese	Mandarin		
Korea	Korean			
Spanish ⁴	Spanish			
Portuguese ⁴	Portuguese			

As seen in Figure 6.1 the main language spoken at home of students in these classes is highly variable, and the English skills of these students can also vary substantially. Homes where the main language spoken at home have roots in China, South Asia, Korea, East Europe and the Middle East were well represented in ESL enrollments. Students from some of the language groups would not have many other students sharing common language issues in their classes. This figure emphasizes some of the challenges facing ESL teachers.

³ Allocations of the Geographic Region are based on a modification from the Macro Regions as identified by the United Nations.

⁴ In this analysis, language groups with substantial numbers were treated as separate entities. Also, people who speak Spanish or Portuguese may be from Central or South America as well as from Western Europe and they were treated separately.

Figure 6.1: Secondary School Students Who Took an ESL Course, by Geographic Region of Language Spoken at Home^a (%; 2002-03 Grade 9 Cohort)



^a Students whose main language spoken at home was Spanish may be from Central or South America as well as from Western Europe and they were treated separately.
Source: MOE/OCAS/OUAC data file.

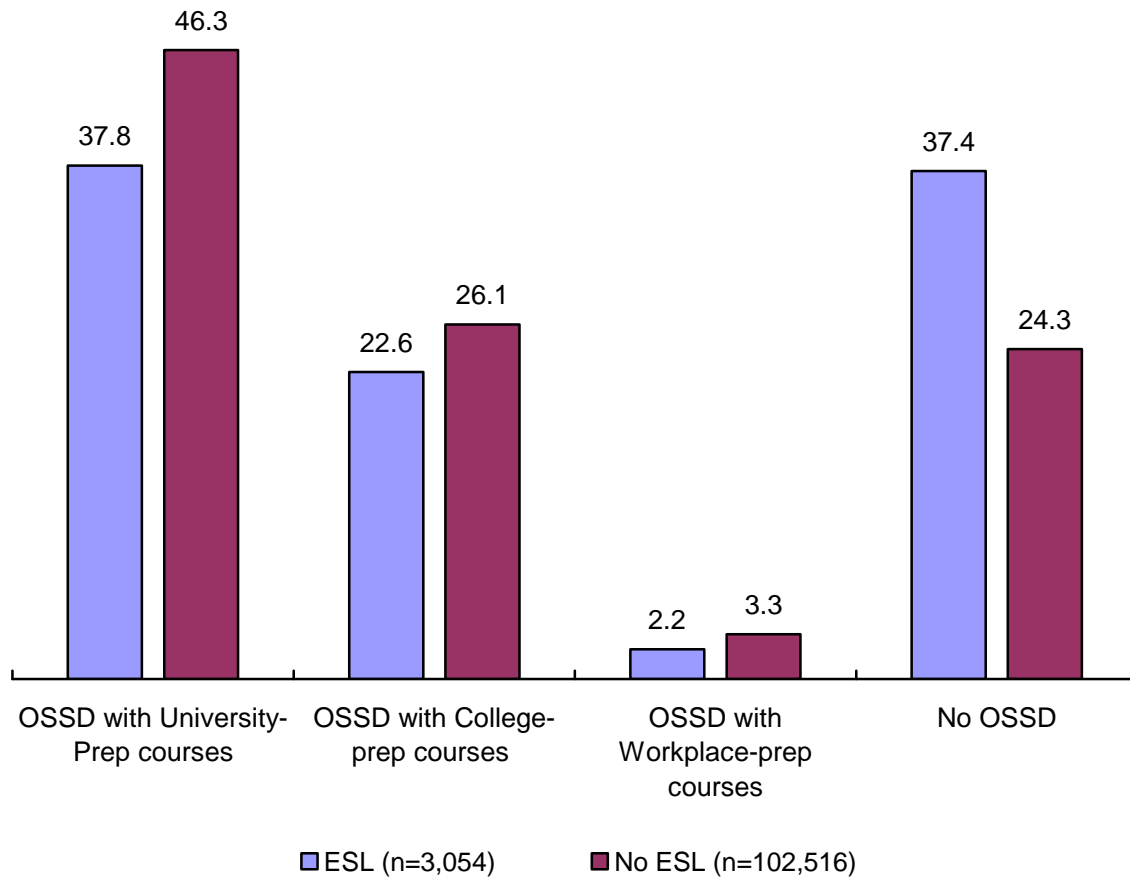
For the analysis, students who had completed at least one ESL course were traced from Grade 9 to OSSD completion to PSE destination, and then compared with the remainder of their cohort. In a similar analysis, students who had a language other than English spoken in their home were compared with their non-ESL peers in terms of OSSD completion and post-secondary enrollments.

2. OSSD Completion by Students Taking ESL Courses

Students who take ESL courses in Ontario secondary schools still require four English credits for graduation; however, three of these credits can be earned by successfully completing ESL courses. Further, many ESL students are enrolled as full-time students, taking courses where the instruction will be in English, which may confound acquisition of knowledge and skills within the subject area. Figure 6.2 compares the proportion of students who took an ESL course with those who did not, in terms of OSSD completion. Three broad categories of OSSD were used in

the analysis: an OSSD that included courses that could qualify the student for university; an OSSD that included courses that could qualify a student for college; and an OSSD that qualified a student for neither university or college (Workplace-Preparation OSSD).

Figure 6.2: OSSD Status of Students After Four or Five Years of Secondary School with At Least One ESL Course (%)
 (%; 2002-03 Grade 9 Cohort: n=105,570)

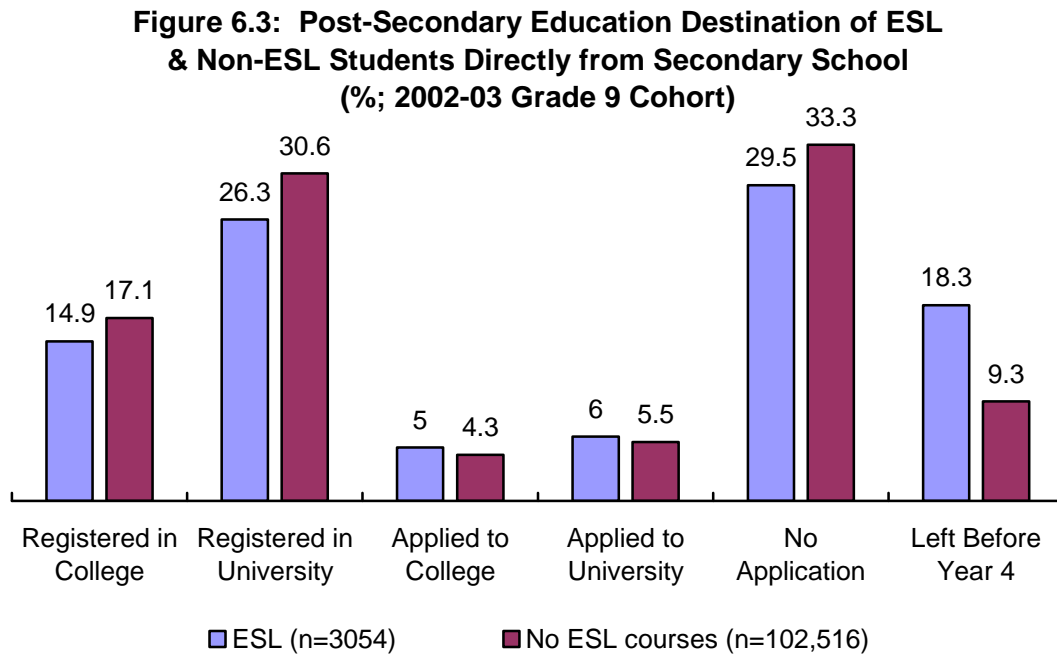


Note: ESL student numbers are particularly large in Toronto, and Toronto's Year 6 enrollment is higher than in the rest of the province. Therefore, including OSSD after six years would increase these ESL graduation rates.
 Source: MOE data file, 2006-07.

The proportion of students with an ESL course who did not achieve an OSSD at the end of five years was 13 percent higher than those with no ESL course. Similarly, a smaller proportion of students who took ESL courses than other students successfully completed a University-Preparation OSSD, but only slightly fewer ESL students than other students completed a College-Preparation OSSD.

3. Post-Secondary Destination of ESL Students

Figure 6.3 presents the post-secondary destination of students who took at least one ESL course while in secondary school.



Source: MOE/OCAS/OUAC data file, 2006-07.

Proportionately fewer ESL students than other students registered in college and university, and nearly twice as many ESL students left before their fourth year.

For some ESL students, their English skills do not appear to act as a significant barrier to their secondary school achievement and PSE enrollment, but as can be seen in the next section, there is great variability in secondary school achievement across language groups. A lack of English skills does not appear to create the same problems with some language groups as it does for others. Nevertheless, a lack of English skills for a large number of students may present a significant barrier to secondary school achievement. The relatively high dropout rate for ESL students is of particular concern.

B. Language Spoken at Home

Language and School Achievement – Toronto District School Board

There are at least 80 languages spoken by students in the Toronto District School Board. This study looks at the languages spoken by 100 or more students. In general, students speaking English (the largest group, accounting for about half the students) have achievement levels somewhat below the average (18% are highly at-risk compared to 14% for the full cohort). Students speaking Somali, Spanish, and Dari have much higher at-risk levels (21% of Dari-speaking Grade 9 students, 27% of Spanish-speaking Grade 9 students, are highly at-risk). They are also most likely to be lower-performing (average of below 60%) in all four mandatory Grade 9 credits. Other language groups (Portuguese, Persian-Farsi, and Greek) have lower achievement in some subjects, yet performance in others is not as problematic. Thus, Portuguese students have credit accumulation at-risk rates only slightly higher than English for Grade 9 credit accumulation (19%), but are more likely to be lower-performing on subject achievement (e.g. 46% have an average below 60% in Mathematics). High achievement by student language is somewhat more difficult to put into a consistent pattern. Students speaking Bengali, Chinese, Gujarati, Korean, Russian, Tamil, Hindi, Punjabi, and Vietnamese have higher Grade 9 credit accumulation and usually (but not always) have higher achievement in Science, Geography, and Mathematics. The pattern is not as consistent for English and Grade 10 OSSLT Literacy. In part this is because many of these students are recent immigrants and are still in the initial 5-7 year timeframe considered necessary to master the English language. We have found from other cohort tracking research that recent immigrants tend to be behind in OSSLT first-time eligible pass rates, but over time make up the differences (Brown, in press). It is probable that we will see the same with many of the recent immigrants in the TDSB over 2006-7.

(Brown & Sinay, 2008, p.36).

1. OSSD Completion by Main Language Spoken at Home

When a language other than English or French is the main language spoken in a secondary student's home, it is naturally assumed that this absence of English language interaction might interfere with the student's progress in school and the parents' capacity to provide the necessary support and encouragement for the student's success in school. In this section, students were classified on the basis of the main language spoken in their home and their OSSD status after 4 or 5 years in secondary school was determined.

Figure 6.4 presents students classified by 'main language spoken in the home' and type of OSSD completed. The large majority of these students live in the Greater Toronto Area; therefore, the findings from this study have particular relevance for GTA school boards. The highest proportion of students whose main language spoken in the home has roots in China, Korea, Russia and South Asia obtained an OSSD with University-Preparation courses. Spanish and Portuguese language groups were most likely not to obtain an OSSD. The Portuguese

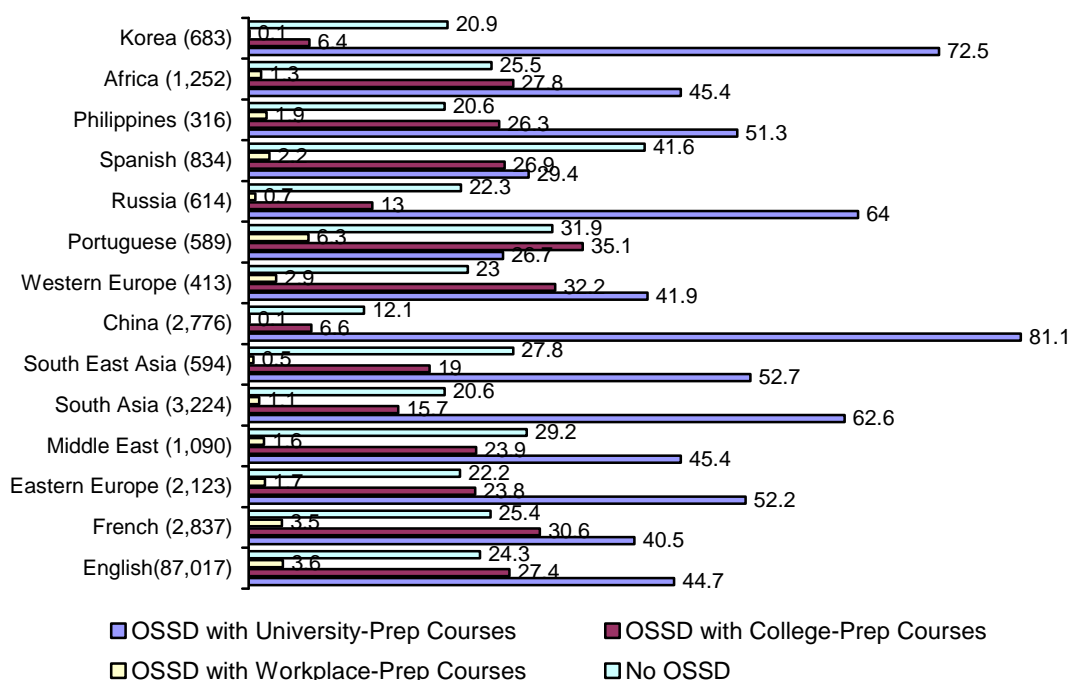
language group was most likely to complete a Workplace-Preparation OSSD. Western-European and French-language groups were most likely to complete a College-Preparation OSSD. This variability of types of OSSD completion and language background as well as their implications are worthy of further study.

The findings in this study on language group, secondary school completion and type of courses taken correlate with research findings on at-risk students from the Toronto District School Board.

Students born in the English-speaking Caribbean, Central and South America/Mexico, and Eastern Africa tend to be more highly at-risk than the average; students born in Eastern Europe, South Asia, and Eastern Asia tend to be less highly at-risk than the average; students born in Canada tend to be average at-risk (in part because most students are born in Canada).

(Brown & Sinay, 2008, p.2)

Figure 6.4: OSSD Status After Five Years of Secondary School, by Geographic Region^a of Language Spoken at Home^b (%; 2002-03 Grade 9 Cohort)



^a Allocations of the Geographic Region are based on modifications of the Macro Regions as identified by the United Nations.

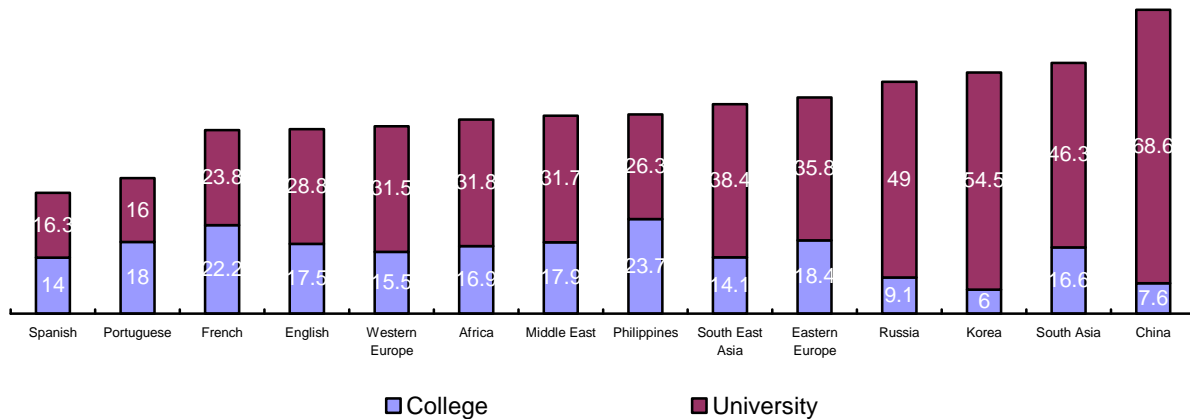
^b In this analysis, language groups with substantial numbers were treated as separate entities. Also, people who speak Spanish or Portuguese may be from Central or South America as well as from Western Europe and they were treated separately.

Source: MOE/OCAS/OUAC data file, 2006-07.

2. Post-Secondary Destination by Language Spoken at Home

Figure 6.5 presents the post-secondary education destination (college and university) after four or five years in secondary school of students classified in terms of the main language spoken in their home. Students from some language groups were more likely to attend university and others college, although the combined PSE enrollments were similar for many of the language groups – 40 to 50 percent. Students who lived in homes where the main languages spoken were Chinese, Korean, Russian and South Asian were least likely to enroll in college and most likely to enroll in university. The proportion who enrolled in university was particularly high for the Chinese-language group, followed by the Korean and Russian groups. Students who spoke Tagalog or Filipino (languages spoken in the Philippines) or French in their homes were more likely to register in college. Certainly, for many of these groups the main language spoken in their homes does not seem to act as a barrier to PSE.

Figure 6.5: PSE Destination of Students, by Geographic Region^a of Language Spoken at Home^b (%; 2002-03 Grade 9 Cohort)



^a Allocations of the Geographic Region are based on modifications of the Macro Regions as identified by the United Nations.

^b In this analysis, language groups with substantial numbers were treated as separate entities. Also, people who speak Spanish or Portuguese may be from Central or South America as well as from Western Europe and they were treated separately.

Source: MOE/OCAS/OUAC data file, 2006-07.

C. Summary

In general, students who took ESL courses were less likely to complete an OSSD and register in PSE. However, secondary school achievement and PSE registration rates varied widely across language groups. In terms of main language spoken in the home, students whose main language spoken at home represented languages spoken in China, Korea, Russia and South Asia were most likely to achieve an OSSD and continue on to university, while students who spoke languages of the Philippines or French in their homes were more likely to register in college than other language groups. Students whose main language spoken in the home was Portuguese or Spanish were more likely to leave secondary school without graduating.

Chapter 7: First Nation Students

According to the Ministry of Education's *Ontario First Nation, Métis, and Inuit Education Policy Framework* (2007), there are five cohorts of Aboriginal students: (1) First Nation students who live in a First Nation community and attend a federally-funded elementary or secondary school; (2) First Nation students who live in a First Nation community but attend provincially-funded elementary or secondary schools;¹ (3) First Nation students who live in the jurisdiction of a school board and attend a provincially-funded elementary or secondary school;² (4) Métis students who attend provincially-funded elementary or secondary schools,³ and; (5) Inuit students who attend provincially-funded elementary or secondary schools. While the Ministry of Education identifies these five cohorts of Aboriginal students, Aboriginal students are under no obligation to self-identify, with the exception of First Nation students living in a First Nation community who are attending a provincially-funded school.

In the data file provided by the Ministry of Education (MOE 2005-06), 4,562 students were identified as 'Aboriginal.' These students could include any of the Aboriginal students outlined in the *Ontario First Nation, Métis, and Inuit Education Policy Framework* (2007). However, based on a comparison between the number of Aboriginal students in the MOE file and the number of students funded by Indian and Northern Affairs Canada (INAC) in provincial schools (Table 7.1), it is safe to assume that almost all the students in the MOE file who were identified as Aboriginal were First Nation⁴ students with status under Indian and Northern Affairs, Canada, who lived in First Nation communities and attended provincially-funded Public or Catholic District Schools and private schools.

There were approximately 22,000 Aboriginals aged 15-19 in Ontario in 2006 (Statistics Canada, 2006). This number includes First Nation, Inuit and Métis people. First Nation students include those living on and off reserve, as well as those with and without status under the *Indian Act*. Over two-thirds of First Nation people live off reserve. At the time of data collection, Aboriginal

¹ Most schools in First Nation communities provide programming to Grade 6 and in some cases Grade 8. Most students must leave the community to continue their secondary school education in provincially-funded schools. Some secondary schools in First Nation communities register as private schools; therefore, they can offer credit courses leading to an OSSD.

² A tuition agreement between a First Nation (status) and the federal government covers the cost of education in the provincially-funded school.

³ Education funding is provided through the Ministry of Education's Grants for Special Needs (GSN).

⁴ For the remainder of this chapter, First Nation refers to First Nation students living on reserve and attending provincially-funded schools who are being funded by Indian and Northern affairs.

students were not required to self-identify in the school unless a tuition agreement between the school board and INAC was necessary. The term ‘others’ or ‘other’ students used in the remainder of this chapter refers to all other students who were not receiving INAC funding, including off-reserve First Nation, Métis and Inuit students.

Table 7.1: First Nation Students in Ontario Secondary Schools, by School Type (2005-06)

School Type	Secondary School Enrollment (INAC)	Enrollment (MOE)
Band-Operated	3,403	n/a
Private ¹	549	546
Provincial (Public/Catholic) ¹	4,061	4,016

¹ Source: Indian and Northern Affairs Canada (INAC).

Table 7.2 presents the birth year distribution of First Nation students in provincially-funded schools in the 2005-06 school year. Students born in 1991 were most likely in their first year of secondary school, and those born in 1988 would be in Grade 12. The lower number of students born in 1991 than 1990 indicates that some students born in 1991 were still enrolled in Band-Operated schools and were likely one year behind when entering secondary school. The decline in numbers from Grade 10 to Grade 12 suggests a significant dropout rate, although this is conjecture since the data represent a snapshot at one point in time rather than a cohort trace. More 19 year olds and older First Nation students proportionately than ‘other’ students were registered in secondary school.

Table 7.2: Birth Year Distribution of First Nation Students in Provincially-Funded & Private Schools (2005-06)

Birth Year	Percent	Frequency
1992	.5	23
1991 (Grade 9)	16.7	762
1990 (Grade 10)	23.1	1053
1989 (Grade 11)	20.9	955
1988 (Grade 12)	17.4	792
1987 (Year 5)	10.9	495
1986 and older	10.6	482
Total	100	4,562

Source: MOE data file.

A. OSSD Completion of First Nation Students

Table 7.3 presents the percentages of Years 4 and 5 First Nation and ‘other’ secondary school students who completed an OSSD in 2005-06. The Ministry of Education’s data file contained information on 1,529 Years 4 and 5 students identified as First Nation attending provincially-funded schools. Since the dropout rate for First Nation students appears to be higher than the norm, their ‘real’ OSSD completion figures would probably be lower.

Table 7.3: OSSD Completion of Years 4 & 5 First Nation & Other Students (%; 2005-06)

Year of Secondary School	% Completing OSSD ^a	
	First Nation	Others
Year 4 (Grade 12)	23.7	61.5
Year 5	29.7	55.5

^a These figures are based on the enrollment in each year. For example, 23.7% of all First Nation students in Year 4 (Grade 12) graduated with an OSSD.

Source: MOE data file.

The OSSD completion rates for First Nation students were much lower than those for ‘other’ students.

B. Post-Secondary Applications and Enrollments of First Nation Students

In Table 7.4, First Nation Years 4 and 5 students were compared with ‘other’ students in terms of the proportion who applied to and registered in Ontario colleges and universities. Relatively few First Nation students applied to university and an even smaller proportion registered in comparison with ‘other’ students. A much greater proportion of First Nation students applied to college in comparison to university and although the application-to-registration ratio was similar to that for ‘other’ students, the proportion registering was less than that for ‘other’ students.

Table 7.4: Applicants and Registrants, Ontario Colleges & Universities 2006-07, First Nation & Other Students (% Eligible Students^a)

	College		University	
	First Nation	Others	First Nation	Others
Applicants	12.5	17.0	5.0	29.7
Registrants	8.2	12.0	2.8	21.6
n =	1,529	226,456	1,529	226,456

^a Eligible students include those in their fourth and fifth years of secondary school.
Source: MOE/OCAS/OUAC data file.

Table 7.5 presents the number of First Nation young people in Ontario⁵ who received funding for PSE from INAC for the fall of 2006 and 2007.

Table 7.5: Post-Secondary Enrollment of First Nation Young People in Ontario,¹ by PSE Institution Type & Age Group

Year	Institution	Age Groups					
		18	19	20-21	22-24	25-29	30+
2006-07	College	142	262	449	414	417	734
	University	65	122	245	348	359	863
2007-08	College	158	286	466	392	427	689
	University	88	103	259	307	353	894

¹ First Nation people, including Inuit in Ontario, who received funding from Indian and Northern Affairs Canada through their Ontario regional offices.
Source: INAC.

The majority of First Nation students attending PSE were older than the norm, and the transition to PSE was more likely to be from out of school than directly from secondary school.

C. Course Selection and Achievement of First Nation Students

Table 7.6 compares the 2005-06 achievement of First Nation students in Ontario secondary schools with that of 'other' students, using the number of failed courses per year as the indicator of overall achievement. Just over one-half of the First Nation students had no failures in Grade 9 compared to 83.9 percent of 'other' students. This pattern was similar through the grades. The cumulative effect of this grade-by-grade differential placed the First Nation students far behind 'other' students in credit accumulation after four or five years in secondary school. Since many of the First Nation students were dispersed among many schools, this pattern of failing courses would be less visible than it would be in schools where substantial numbers of First Nation

⁵ These young people applied for funding from INAC from an Ontario Band Council to attend a post-secondary institution in or outside of Ontario.

students were enrolled (approximately 1,800 First Nation students were enrolled in only 12 secondary schools).

Table 7.6: Failed Courses by Grade/Year: First Nation & Other Secondary School Students (%; 2005-06)

Grade-Failures	First Nation	Others
Grade 9^a		
No Failures	53.9	83.9
1-2	25.8	11.2
3-4	12.3	3.4
5+	8.0	1.5
Total	664	147,379
Grade 10		
No Failures	45.2	77.1
1-2	28.4	15.8
3-4	15.4	4.8
5+	11.0	2.3
Total	874	155,255
Grade 11		
No Failures	45.7	76.1
1-2	30.7	17.6
3-4	16.7	4.8
5+	7.0	1.5
Total	714	142,827
Grade 12		
No Failures	52.7	79.4
1-2	28.1	15.2
3-4	14.1	4.2
5+	5.1	1.2
Total	566	129,040
Year 5		
No Failures	38.6	63.4
1-2	39.0	26.1
3-4	17.9	8.1
5+	4.5	2.4
Total	246	27,885

^a Refers to grade appropriate by birth year.
Source: MOE data file.

Table 7.7 reinforces the picture of poor achievement by First Nation students described above by comparing the types of secondary school English courses that they took in comparison with those of 'other' students.

Table 7.7: Type of English Courses, Grades 9 to 12, First Nation & Other Students (%; 2005-06)

Grade/English Course Type	First Nation	Others
Grade 9		
Academic	20.5	69.3
Applied	55.3	24.6
Locally Developed	24.1	6.0
Grade 10		
Academic	23.9	69.4
Applied	60.6	26.6
Locally Developed	15.5	4.0
Grade 11		
University	23.5	64.1
College	58.8	31.6
Workplace	17.7	4.3
Grade 12		
University	22.6	61.5
College	68.5	35.5
Workplace	8.9	3.0

Source: MOE data file.

First Nation students were over-represented in Locally Developed and Applied English courses in Grades 9 and 10, and in Workplace- and College-Preparation courses in Grades 11 and 12. The combination of poor achievement and enrollment in courses that are less likely to lead to PSE provides some insight into why proportionately fewer First Nation students register in PSE institutions.

Ontario's secondary school curriculum includes: Native Language courses (which can be taken in place of the compulsory French course), and ten courses in Native Studies of which there is a Grade 11 English course (Contemporary Aboriginal Voices) which can be taken as a University-College- and Workplace-Preparation course.⁶ As mentioned above, a dozen provincially-funded schools serve approximately 1,800 First Nation students. In these schools, there are sufficient numbers of them to offer Native Language or Native Studies classes. However, in schools which enroll a relatively small number of Aboriginal students, these courses are usually not available.

⁶ Native languages offered include Cayuga, Cree, Delaware, Mohawk, Objibwe, Oji-Cree and Oneida. Also, 10 courses are available in the Native Studies Curriculum including: Expressing Aboriginal Cultures, Grade 9; Aboriginal Peoples in Canada, Grade 10; English: Contemporary Aboriginal Voices, Grade 11 University-, College- and Workplace-Preparation; Current Aboriginal Issues in Canada, Grade 11; Aboriginal Beliefs, Values, and Aspirations in Contemporary Society, Grade 11 College- and Workplace-Preparation; Aboriginal Governance: Emerging Directions, Grade 12; and Issues of Indigenous People in a Global Context, Grade 12. (Ontario Ministry of Education, www.edu.gov.on.ca).

D. Summary

The secondary school achievement level of First Nation students who were funded by Indian and Northern Affairs Canada and enrolled in Ontario private, public and Catholic schools was substantially lower than that of 'other' students. High failure rates, over-representation in Locally Developed and Applied courses, and very low secondary school graduation rates characterized the 4,562 First Nation students for whom records were available for this analysis. Substantially fewer, in comparison with 'other' students, went directly from secondary school to PSE, especially university.

Although the findings in this chapter do not provide sufficient detail and context on which to base recommendations for specific interventions for First Nation students, the chapter does provide basic information on the secondary school achievement and post-secondary destinations of these students that can be used as a starting point.

Chapter 8: Apprenticeship

A. Introduction

Apprenticeship programs in Ontario are available for skilled labour jobs in the following broad areas: Building Construction, Electrical, Industrial and Mechanical, Motor Vehicle and Heavy Equipment, and Foods and Service. New fields have recently been introduced as apprenticeships, such as Child and Youth Worker and Early Childhood Education.

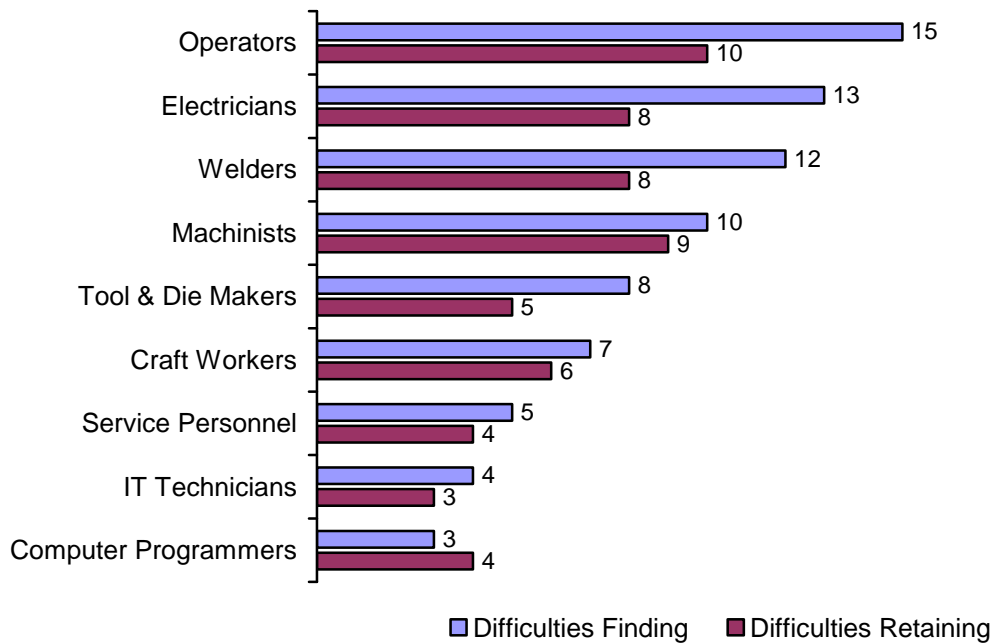
Ontario's Ministry of Training, Colleges and Universities (MTCU) has the responsibility of delivering Ontario's apprenticeship program. To this end, this Ministry oversees the registration of apprentices and their employers, and supervises apprentices as they complete their workplace and in-class training. Employers take responsibility for the apprentice's training, and pay the apprentice throughout his or her apprenticeship training. Most of the classroom training of apprentices takes place in Ontario colleges (85%). The following describes the process of registering as an apprentice.

A person who wants to become an apprentice must first find an employer who wants to hire an apprentice; then either the trainee or the employer must contact a training consultant at the closest Ministry of Training, Colleges and Universities office...A training consultant will meet the trainee and the employer at the workplace to assess the employer's ability to train. Once the consultant determines that a high standard of training can be provided, the trainee and the employer sign an apprenticeship contract which registers the trainee as an apprentice, and training begins.

(Skills Canada-Ontario, 2008 p.6)

Preparing young people for work in the trades has become a priority in Ontario, as in many other provinces, since one-half of the skilled trades workforce is expected to retire in the next 15 years (Office of the Premier, 2008). Figure 8.1 provides an indication of the need for skilled tradespersons in a sample of fields on a Canada-wide basis. The figure percentages are a reminder of the difficulties in attracting and retaining skilled tradespersons.

Figure 8.1: Shortages in a Sample of Skilled Trades Across Canada (%; 2006)



Source: Canadian Manufacturers and Exporters.

Additionally, the average age of the current trades workforce suggests a fundamental need for replacement workers, if not a basic increase overall.¹

Many baby boomers will retire over the next nine years, taking essential technical, supervisory and management skills with them. Due to retirements, an estimated 56,300 workers will be needed just to sustain the workforce at its 2006 level. This amounts to 2.5% of the labour force in later years. These retirement-related demands are more than triple the 17,600 additional workers needed to fill new employment opportunities related to new construction over the 2008-2016 forecast.

(Construction Sector Council, 2008)

To what extent does the interest and involvement of Ontario's youth in apprenticeship programs respond to future workplace needs? The importance attached to apprenticeship programming by the Ontario government is reflected in the effort by the Ontario Ministry of Education to develop programs that facilitate the transition of students from secondary school into apprenticeships. The increased attention given to the Ontario Youth Apprenticeship Program (OYAP) examined in this chapter provides some indication of the effectiveness of this initiative.

¹ The average age of workers in the trades is 40 (Construction Sector Council, 2008).

Current completion rates for apprenticeship training in Ontario are only about 50 percent (Morissette, 2008). Given the increasing need for skilled tradespersons in Ontario, it is critical to understand why this rate is so low. Some key barriers to participation in the trades appear to be the negative perception of trade careers and the limited knowledge of apprenticeship as a learning and career option. The following are summative points found in the research:

- Few youth surveyed believed that skilled trades offered a viable, challenging or fun career choice (Canadian Apprenticeship Forum [CAF], 2004);
- Interviewees and focus group participants in the Canadian Apprenticeship Forum's study *Assessing and Completing Apprenticeship Training in Canada: Perceptions of Barriers*, felt that "the attitude of many guidance counsellors towards apprenticeship is often very negative, reflecting a lack of knowledge of the complexity of the work" (CAF, 2004, p.19);
- University education and, to a lesser extent, college education have a status among youth that is valued above other forms of PSE education. Less than one in 10 Canadian 15 year olds say that they want to pursue an apprenticeship or attend a post-secondary trade or vocational school (Learning Policy Directorate, 2004);
- Students in the Hypatia Project study thought that careers in trades meant stocks or professional sport trades. "The students in the focus groups who had the most knowledge of trades were those who had a family member or family friend who worked in the trades" (Hypatia Project, 2002); and
- A consultation report done by the Canadian Apprenticeship Forum with First Nation people and visible minorities found that both groups lacked information about trade-related jobs and held negative attitudes and a poor image of trades (CAF, 2004).

A recent analysis of apprenticeship training in Ontario summarized the difficulties in developing a meaningful picture of the current status and future of apprenticeship training in Ontario.

There is a lack of Ontario-specific data on apprenticeship barriers. In particular, there has been no work done on how Canada-wide barriers to apprenticeship training manifest themselves in Ontario.

Little work has been done to assess the uniqueness of Ontario's apprenticeship demands, given its relatively mature manufacturing sector.

Ontario-specific quantitative work – such as apprentice or employer surveys – is almost totally absent. This forces prospective researchers to infer certain conclusions about public and apprentice attitudes without the ability to substantively demonstrate them.

(Stewart, 2008, p.3)

To prepare Figure 2.7, Secondary to Post-Secondary Destinations, Fall 2008, we obtained from MTCU the number of 18 and 19 year olds who had registered as apprentices in 2006 – approximately 8,000. This information and the fact that the majority of those taking up apprenticeships did so in their mid-to-late 20s (Skof, 2008), indicates that there is an ineffective transition from secondary school to apprenticeship for young people.

The information used in this chapter came from the integration of Ministry of Education (MOE) data files, as explained in Chapter 1. No direct source was available for data on registration in an apprenticeship directly from secondary school. However, there is a post-secondary destination code on the Ministry of Education file which purports to indicate those students who had entered an apprenticeship directly after secondary school: 1,091 students were classified as entering an apprenticeship at the end of the 2006/07 school year. Although this group represents less than 14 percent of the 18- and 19-year-old apprenticeship registrants reported by MTCU for that year, the analysis that follows is based on their records.

The analysis begins with a review of enrollments in OYAP, which allows students to participate in Apprenticeship programs while they are in secondary school, and offers them the option to register as an apprentice during secondary school. This is followed by a description of those who enrolled in an apprenticeship directly after secondary school with respect to: gender, language spoken in the home, secondary school marks, and course selection. We then use qualitative data to describe the experiences of interviewees who were interested in pursuing Apprenticeship programs in the context of the research summarized at the beginning of the chapter on the challenges and barriers faced by young people pursuing apprenticeship training.

B. Ontario Youth Apprenticeship Program (OYAP)

The Ontario Youth Apprenticeship Program (OYAP) is:

... a specialized program that enables students who are 16 years of age or older to meet diploma requirements while participating in an occupation that requires apprenticeship. [The occupations involved in OYAP may or may not require a student to be an apprentice.]

An OYAP student is a student who is earning Cooperative Education credits for work experience in an apprenticeship occupation. The student may or may not be formally registered as an apprentice while attending secondary school.

All students participating in OYAP must:

- complete sixteen credits towards the OSSD prior to starting the program;
- be enrolled as full-time students during the program;
- complete all compulsory credits required for the OSSD.

excerpts from *Cooperative Education and Other Forms of Experiential Learning: Policies and Procedures for Ontario Secondary Schools Data*
Ontario Ministry of Education (2000)

All OYAP students are required to have a learning plan that references the industry-recognized skills found in the appropriate Apprenticeship Training Standards. The *Transition to College* findings from student surveys concluded that relatively small numbers of students were participating in OYAP (King & Warren, 2006). Many of the students designated as OYAP students were taking Cooperative Education credits and were only differentiated from other Cooperative Education students in that their work placements were in apprenticeable trade areas. Many did not plan on apprenticeships: only 30 percent of Grade 12 and Year 5 students enrolled in OYAP planned on entering apprenticeship programs after graduation.

Table 8.1 presents the OYAP enrollments and apprenticeship registrations between 2001-02 and 2007-08.

**Table 8.1: OYAP Enrollments & Apprenticeship Registrations
(2001-02 to 2007-08)**

School Year	Number of students registered in OYAP	Number of students who register as apprentices while in secondary school
2001/02	10,995	1,683
2002/03	16,101	2,252
2003/04	21,250	3,189
2004/05	24,392	4,031
2005/06	26,206	4,875
2006/07	27,677	5,417
2007/08	29,700	5,536

Source: MTCU (Personal Communication with Provincial OYAP Coordinator, April 2009).

Since that survey, there has been a steady increase in the numbers of students registered in OYAP and, just as importantly, the numbers who were actually registered as apprentices. The proportion of OYAP students registering as apprentices has remained about the same for the past few years. This steady growth in numbers reflects the efforts of the Ministry of Education in facilitating the transition of young people from school to further education and work and the

Ministry of Training, Colleges and Universities regional staff who work directly with school boards to register students as apprentices. Much more effort has been given to the development of school-based programs and the linking of these programs to post-secondary work placements. The effectiveness of these programs has not been fully evaluated, but the numbers appear to be promising.

The data presented in Table 8.2 was obtained from an Ontario rural school board as an example to illustrate the numbers and range of secondary school opportunities for apprenticeship registration. Not only has there been growth overall in the numbers of registrants in this board and its schools but also in the range of trades represented. There is a wide range of trades that students can pursue through OYAP. The variety and number of placements shown in this table draws attention to the support systems that are necessary to deliver secondary schools' OYAP program in terms of securing placements and appropriately supervising students. Since most secondary schools cannot offer a full complement of College-Preparation courses, at least OYAP programming provides opportunities for some students to learn about skilled trade areas and other career options.

Table 8.2: Registered Apprentices in OYAP at Two Rural Schools, by Trade & School (2009)

	Trade	# of Available Positions
School 1	Auto Service Technician	5
	Brick & Stone Mason	1
	Cabinetmaker	1
	Cook 2	2
	Early Childhood Education	2
	Education Assistant	1
	Electrician	6
	Farm Equipment Mechanic	2
	General Carpenter	2
	General Machinist	2
	Hairstylist	1
	Plumber	1
	Retail Meat Cutter	1
	Tool & Die	1
	Truck & Coach	2
	Welder	1
		Total
School 2	Auto Body Br. 1	2
	Auto Service Technician	7
	Cabinetmaker	2
	Construction Millwright	2
	Electrician	5
	Farm Equipment Technician	3
	General Carpenter	6
	General Machinist	1
	Hairstylist	1
	Horse Groom	1
	Plumber	1
	Power Line Worker	1
	Refrigeration	1
	Truck & Coach	3
	Total	36

Source: Personal Communication with School Board Y, Spring 2009.

C. Gender and Apprenticeships

In Chapter 4 we noted pronounced gender differences in apprenticeship registrations as well as in particular apprenticeship sectors.

In the MOE data file, far more males than females entered apprenticeships directly after secondary school (Table 8.3), but young women are closing the gap – 25.3 percent of those who were registered as an apprentice directly after secondary school in 2006 were female. This proportion is significantly higher than that for women currently registered in trades (see Figure 4.5 in Chapter 4).

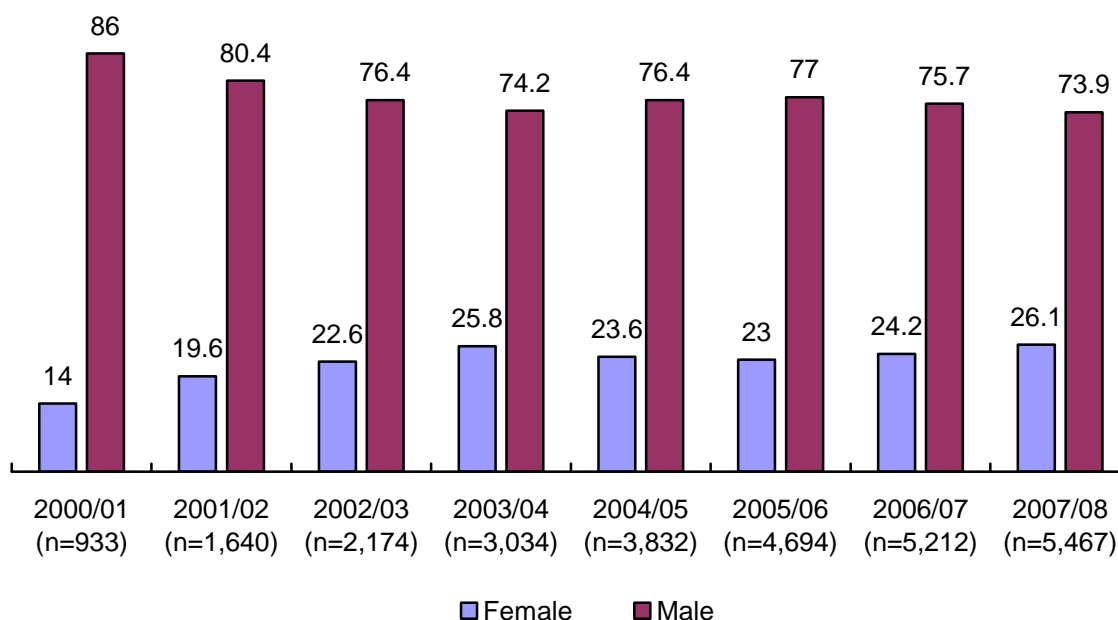
Table 8.3: Secondary School to Post-Secondary Education Destination, by Gender (%; 2006)

Destination	Male	Female
Apprenticeship	74.7	25.3
College	49.9	50.1
University	42.3	57.7

Source: MOE/OCAS/OUAC data file, 2006-07.

Figure 8.2 illustrates the steady growth in the numbers of students taking OYAP and registering as apprentices since 2000-01. Of particular interest is the substantial increase in the proportion of female registrants from 14 percent in 2000-01 to 26.2 percent in 2007-08.

**Figure 8.2: OYAP Apprenticeship Registrations, by Gender & Year
(%; 2000-01 to 2007-08)**



Source: MTCU - Personal Communication with Provincial OYAP Coordinator, Spring 2009.

When apprenticeship, college and university registrations directly from secondary school are combined as representing PSE as a whole, the female proportion of the combined enrollment exceeds the male proportion by 5 to 6 percent.

D. Language Spoken in the Home and PSE Registrants

In Chapter 5, we examined the relationship between main language spoken in the home and the likelihood of enrolling in college or university. We found that students who spoke Asian languages at home were more likely to pursue PSE programs, and students who spoke Portuguese and Spanish languages were the least likely. In this chapter, students who enrolled directly from secondary school into apprenticeships were categorized in terms of the main language spoken in their homes, and then aggregated results² were compared with the percentages who enrolled in college and university directly from secondary school (Table 8.4). The greatest proportion of young people who took up apprenticeships came from homes where English was the main language spoken.

² The numbers registering as apprentices from each language group were too small to be treated separately.

Table 8.4: New Registrations in Apprenticeship, College and University, by Main Language Spoken in the Home (%; 2006-07)

Main Language	Registered as an Apprentice ^a	Registered in College ^a	Registered in University ^a	Provincial 18 & 19 year olds ^b
English	90.5	85.9	80.2	83.5
French	3.1	4.1	3.1	2.8
Other ^c	6.4	10.0	16.7	13.7

^a MOE/OCAS/OUAC data file 2006-07.

^b Statistics Canada, 2006-07.

^c Other refers to all other languages aggregated (see Table 6.4 for the list).

Francophone students registered in apprenticeships in a slightly greater proportion than the overall proportion of 18 and 19 year olds in the province, while those speaking a language other than English in the home were proportionately under-represented.

E. Secondary School Achievement and Course Selection of Apprenticeship Students

In this section, apprenticeship registrants are compared with those who registered in college and university with regard to the courses they selected in Grade 9, Grade 12 and Year 5, as well as their academic achievement. Most apprenticeship programs require an OSSD or an equivalent prerequisite, with the exception of the construction trades (which are still governed by the Trades Qualification for Apprenticeship Act (TQAA) where a Grade 10 education is the minimum academic prerequisite). The apprenticeship students in the analysis had completed an OSSD.

Just over one-half of the students who went directly from secondary school to an apprenticeship had taken Applied English and Mathematics in Grade 9 (Table 8.5). A much greater proportion of college-bound students had taken Academic English and Mathematics, and almost all of the university-bound students had taken Academic courses.

**Table 8.5: Grade 9 English & Mathematics Courses Taken, by PSE Destination
(%; 2006-07)**

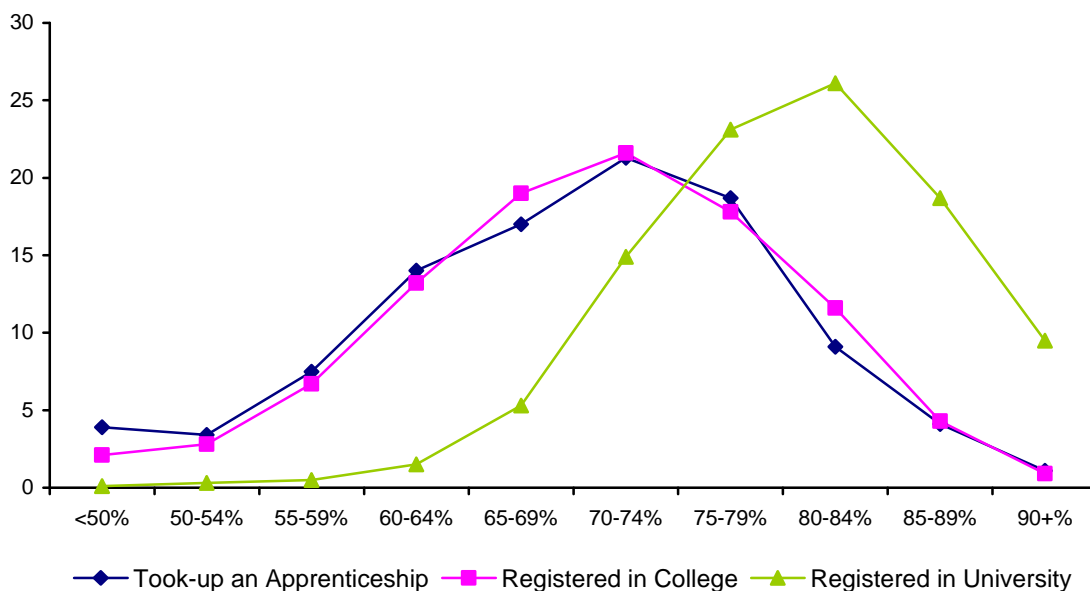
Student Destination	Course	Locally Developed	Applied	Academic
Apprenticeship	English	3.1	51.8	45.1
	Mathematics	5.9	50.2	43.8
College	English	0.9	27.0	72.1
	Mathematics	1.6	33.3	65.2
University	English	0.0	1.7	98.2
	Mathematics	0.0	3.1	96.9

Source: MOE/OCAS/OUAC to 2006-07.

When apprenticeship registrant transcripts were examined, it was found that of those with Grade 12 English, approximately three-quarters of apprenticeship registrants had taken Grade 12 College-Preparation English; 17 percent had taken Grade 12 University-Preparation English and 8 percent had taken Grade 12 Workplace-Preparation English (Table D-35 in Appendix D). About one-third of them did not have a Grade 12 Mathematics credit. Fifty-four percent had taken at least one Workplace-Preparation course in Grade 11 or 12. Overall, in terms of course selection, the transcripts of students who registered as an apprentice looked similar to transcripts of those who went to college – with the exception that more apprenticeship registrants took Applied courses in Grade 9, Workplace-Preparation courses in Grades 11 and/or 12, and Grade 12 College-Preparation English.

In order to compare the achievement in senior-level courses of apprenticeship-, college- and university-registrants, we compiled an average mark for the students in each group involving a composite of their Grade 11 and Grade 12 marks and then compared the marks distributions (Figure 8.3).

**Figure 8.3: Student Average Marks Distributions¹
(Grades 11 & 12), by PSE Destination (%; 2006-07)**



¹ To be included in this analysis, students had to have at least four Grade 11 or Grade 12 marks on their transcript.

Source: MOE/OCAS/OUAC data file.

Students who enrolled in an apprenticeship had a similar marks distribution to that of college registrants, except that apprentices were more likely to have marks below 60 percent (14.8% compared to 11.6%). Since the apprenticeship-bound students were more likely to have taken Workplace-Preparation courses, they were less likely to have met minimum college admission requirements. The majority of the university-registrant group had average marks much higher than those of the other two groups. Not surprisingly, the apprenticeship group were also far more likely to have taken Cooperative Education courses than the other two groups, and the transcripts of the apprentices in almost all cases included at least two Cooperative Education credits.

F. Interest in Apprenticeship

In the post-secondary plans analysis in the *Transition to College* study, the following proportions of these groups planned on taking up apprenticeships: 5.7 percent of Grade 11 students, 5.4 percent of Grade 12 students and 7.3 percent of Year 5 students (King & Warren, 2006). It is not surprising that more of the Year 5 students planned on apprenticeships because a large segment of the student population going on to college and university had left before Year 5, and

those young people taking up apprenticeships directly after secondary school were as likely to come from Year 5 as Grade 12. The overall numbers of secondary school students planning on apprenticeship appears to be lower than the projected needs of Ontario employers.

G. Factors Affecting Access to Apprenticeship

Similar to students seeking a place in a college or university program, those interested in apprenticeships must also apply (by seeking employment) in their desired field. However, unlike students in college or university, students interested in apprenticeship have the additional demands of knowing the logistics of the apprenticeship program and of finding an employer to support their training.

At present, information and guidance about the trades is not readily available for either students in high school or adults in the workforce. They must actively seek out this information, find an employer and co-ordinate with the ministry apprenticeship office, before they can sign a contract to begin learning. By contrast, application to several universities and programs can be completed through a single, online transaction.

(The Honourable Bob Rae, 2005, p.50).

Youth are often poorly informed about opportunities in the skilled trades, especially regarding working conditions, job satisfaction, salary expectations, and opportunities to learn new things. They are frequently misinformed by parents, teachers and guidance counsellors, who regard the skilled trades as 'dead end' or second best jobs, to be pursued only when other avenues are closed. Many parents under the guise of 'wanting the best' for their children (i.e., opportunities they never had, like going to university) route them into academic streams. Teachers and guidance counsellors still regard the trades as best suited for students who have difficulty achieving academically and do not recommend them as first choices for students who achieve at relatively higher levels of performance.

(Conference Board of Canada, 2002)

The purpose of this section was to identify the barriers between interest in and access to apprenticeship.

1. Inaccurate or Incomplete Knowledge

Post-secondary training in hairstyling, carpentry, electrician, and auto mechanics, among others is available through college programs or apprenticeships. In college programs, students spend most of their time in class, but also complete on-the-job training through practicum. When completed, the college program yields a certificate that could serve as a credit towards apprenticeship requirements, if a person registers in an apprenticeship program.

In apprenticeship programs, apprentices spend most of their time training on-the-job, but also have an in-class component (which is often completed at a college). When completed, the apprentice meets prerequisites for Red Seal qualification exam (in the case of Regulated trades), or certification (for non-regulated trades).

In comparing these two PSE pathways, both have an in-class component (often delivered by the college) as well as an on-the-job training. These similar pathway components can cause confusion for young people. As noted in previous research (King & Warren, 2006), students who planned on apprenticeship or college commented that they were going to college to take up an apprenticeship.

Generally, those interviewed for this study did not understand the requirements and delivery path of apprenticeship programming. Many did not realize that securing a willing employer³ was the necessary first step in this post-secondary pathway.

The interviewees from colleges, the workplace and employment centres were asked about their knowledge regarding accessing apprenticeship programs. Their answers reflected their lack of knowledge about the process.

I was trying to get into an apprenticeship and I couldn't. I figured if I come to school it would probably be easier for me to get an apprenticeship.

[Male, 23, OSSD, College: Heavy Equipment Repair]

I asked about [apprenticeship programs], but they said I was too late and that I'd have to re-apply next year because everything was full.

[Female, 19, OSSD, PSE Plans, Workplace]

³ For students seeking Red Seal certification who have taken college courses, it is common for them to register with MTCU as an apprentice after completing their PSE in order to complete the prerequisite working hours for qualifying to write their certification exam. It is also possible for interested young people to receive all their training as registered apprentices without prior PSE.

The following case study illustrates how a lack of accurate information about apprenticeship programs can affect PSE decision making.

Case Study – Example of Misinformation Affecting Apprenticeship Career Plans

Interviewee: 23-year-old female, OSSD.

Current Status

I am the assistant manager of a shoe store. [I help] customers find shoes, looking at their walk....

Educational Background

[It's been] three years [since I've graduated from secondary school]. [It was during] the middle of high school, I decided to work a year after I got out of high school, but I kind of just kept working...[for] the money.

Educational Plans

I want to go back to college soon. [In three years I would like to be] working in a hair salon. [I have wanted to be a hairdresser] for a long time. Since I was about 10, I wanted to do hair.

I would [consider a hairstyling apprenticeship], except that you actually have to have your hairstyling license before you can go into an apprenticeship. You actually have to take a course first before you can get an apprenticeship.

Hairstyling Apprenticeship Definition:

Hairstyling is a restricted certified trade, meaning that a person working in this trade must hold either a Certificate of Qualification or be registered as an apprentice. A license is not required to enter a hairstylist apprenticeship. Hairstylist apprenticeships are approximately 2.5 years in length. To become a hairstylist apprentice, one seeks employment from a hairstylist who meets the requirements to supervise an apprentice as outlined by the Ministry of Training, Colleges and Universities. Candidates must also have completed secondary school. A hairstyling apprenticeship, like other apprenticeships, consists of 90% on-the-job training, and 10% in-class instruction. The in-class instruction is delivered within a college. Apprentices pay a nominal fee for these courses, with the majority of the costs being funded by the federal government. Ministry of Training, Colleges and Universities, Karl Skof, Trends in Registered Apprenticeship Training in Canada. (retrieved April 23, 2009 from Ontario Job Futures <http://ontariojobfutures.ca/profile 6271.html>)

2. The Role of Personal Networks

The challenge of securing an employer seems to be a significant barrier to becoming an apprentice. Those interested in a particular apprenticeship must find employers who are willing to hire them. While there are government subsidies to support employers who train apprentices, the employer is the one responsible for supporting this PSE pathway. Currently, employers pay 75 to 90 percent of the costs associated with apprenticeship in Ontario (Stewart, 2008).

Although an employer receives tax credits for training an apprentice, having a poor experience with an apprentice can have a great impact on the employer's business. Securing an apprenticeship with or through friends or family members is a more convenient route for both employer and apprentice. The literature on apprenticeship emphasizes the role of family and friends in not only obtaining a placement but also completing the program (CAF, 2004). Numerous examples of placements through family or friends were evident in the qualitative data.

I was in school. I got out of school. I met up with my cousin at a family reunion and I happened to tell her what I wanted to become. [I guess it's her fiancé now,] works in the electrical field and he offered me a job through his company. I got in [to become an electrician] that way.

[Male, 23, No OSSD, Electrical Apprenticeship]

I did not get introduced to [apprenticeships] until I left school and that was by one of my friends. Because he joined one and basically after that I tried to get into that myself, because he told me it would be a good field to get into.

[Male, 19, No OSSD, PSE Plans, Workplace]

This next case study is a typical example of the role that personal contacts play in obtaining a placement. In this instance, the interviewee relied both on his family's understanding of the apprenticeship system to follow the steps required to become an apprentice, and personal contacts to find a suitable apprenticeship placement.

Case Study – Personal Contacts and Apprenticeship

Interviewee: 19-year-old male, OSSD

Current Status

I work at [a sporting goods store selling] shoes. [I have also been] working with my stepdad who's a contractor. I've been doing some things for him with contracting.

Educational Plans

I [just signed up for a] 5-year sheet metal apprenticeship and I start on Monday. I just filled out that form today. I'll be working, well the first year I'll be doing roofing, because the company does roofing, so I'll be doing that. ... putting metal roofs on houses, businesses, all that.

Either way it was going to have to be a trade for me. It was a business I could get into because I know the guy who owns the business, or I could work with my stepdad full time. I'm not the guy who can do an office job. I won't be able to sit down and write... I'm a hands-on guy and that's something I need. [But if I didn't have these connections], I think I'd still be [selling shoes].

Influence of Personal Contacts

I became interested in sheet metal after my friend and I helped build my stepbrother's deck in the back - it's a part deck and me and him just talked about it really, and he told me about all the stuff that he's done and that's kind of how I got interested. My stepbrother's best friend [asked] me [if I was interested in sheet metal and told me that] his father still needed another junior, so I kind of know people... I went to the union, they just told me about the sheet metal apprenticeship. I got a letter in the mail and they gave me a date and time that I had to be there and there were seven guys like going for the interview and there were ten guys interviewing. So they just talked to us and all that.

Sheet Metal Apprenticeship Definition:

Sheet Metal Worker is a construction apprenticeship requiring a secondary school diploma and employment with a registered sheet metal journeyman. Sheet metal apprentices are required to complete 9,000 hours of apprenticeship. Sheet metal apprenticeships consist of 90% hands-on training and 10% in-class training, which is delivered at a college or at a trade union training centre. Ministry of Training, Colleges and Universities, Karl Skof, Trends in Registered Apprenticeship Training in Canada. (retrieved April 23, 2009 from Ontario Job Futures <http://ontariojobfutures.ca/profile 6271.html>)

3. Access Limited by Current Legislation

Currently, most jurisdictions impose a minimum journeyman-to-apprentice ratio on participating employers to ensure that each apprentice receives appropriate instruction and supervision. However, the literature suggests that this requirement makes it difficult for many

small and medium enterprises to hire new apprentices, as they may not be able to support a sufficient number of journeypersons within their organization (CAF, 2004).

In the following case study of a young male, the legislation regarding journey-person-to-apprentice ratios made it difficult for him to secure an apprenticeship placement. In this instance the interviewee's employer was willing to hire him as an apprentice, but only when the present apprentice completed his training.

Case Study – Finding an Apprenticeship Placement

Interviewee: 22-year-old male, OSSD

Current Status

[I am] pumping gas [at a gas station]. I [also] clean the shop, pump gas, stock the cooler and shelves [and I] run the till. [I've had this job for] three years

Educational Background

I took a body shop [course in Grade 10 and I also] worked as a co-op student. I worked there for about two or three years, I think. [After working in autobody] I decided I wanted to try the automotive part of it, and there was a garage next door and he was willing to take a co-op student so I [did a] co-op next door at the garage.

Educational Plans

[I began thinking about apprenticeship around] Grade 11. [M]y co-op teacher in high school told me to do apprenticeship. [He tried to help me find an employer and he] found somebody that does [autobody], but [the employer] sort of wants people who have four or five years experience into the trade or something.

I started looking for a job after high school. So I sort of had a year wandering around doing nothing.

[In the next year I will] hopefully be getting an apprenticeship in the automotive business. [My boss is] thinking about putting me on as an apprentice after the next guy graduates.... Maybe in a year or two. [Although I think there may be opportunities elsewhere], I think I might just stick it out [and stay here until an apprenticeship position becomes available].

Automotive Service Technician Apprenticeship Definition:

Automotive Service Technician is a regulated apprenticeship trade whereby candidates must pass a Red Seal test. Completion of a four-year automotive service technician or related apprenticeship program, or a combination of over four years of work experience in the trade and high school, college or industry courses in automotive technology is required to be eligible for trade certification. Ministry of Training, Colleges and Universities, Karl Skof, Trends in Registered Apprenticeship Training in Canada. (retrieved April 23, 2009 from Ontario Job Futures <http://ontariojobfutures.ca/profile 6271.html>)

H. Summary

This chapter mainly serves to contribute to the research literature on the role and delivery of apprenticeship training in Canada and, in particular, Ontario. As well, this chapter contributes to a greater understanding of the secondary school experience of young people who register in an apprenticeship directly from secondary school. Although many of them would have qualified for college programs, their secondary school marks were slightly lower than those for college-bound students, and they were far more likely to have taken Grade 9 Applied and Grade 11 and 12 Workplace-Preparation and Cooperative Education courses. Males made up the majority of apprenticeship registrants (female registrants made up about one-quarter of the total in 2006).

There has been a steady growth in OYAP enrollments, and an increasing proportion of OYAP students were actually registered as apprentices while in secondary school. This means that the flow of young people into apprenticeship directly from secondary school is steadily increasing, reflecting the efforts of the Ministry of Education to promote apprenticeship training.

Our interviews indicated that most of the barriers to apprenticeship access still remain – in particular, difficulties in obtaining suitable placements and continuity of apprenticeship delivery. Having a relative or friend in the trades is still a major avenue to access. Confusion regarding the respective roles of employers, unions, colleges and the ministry continues to be prevalent. In spite of the federal and provincial governments' financial incentives, widespread concern still exists about the most effective and cost-efficient mode of delivery of apprenticeship training.

Chapter 9: Post-Secondary Decision Making

A. Introduction

As stated in Chapter 1, this study has two main components: the first is based on the quantitative analyses of large data files that provide specific details on Ontario's secondary school students' transition to college and university. That component was designed to describe those young people who did not go on to PSE directly from secondary school with regard to their demographic characteristics, course selection and academic achievement. The second component is a qualitative analysis of a group of young people who did not go from secondary school into PSE. The qualitative component was designed to broaden our understanding of those young people who do not go directly to PSE, and to identify the factors that contribute to their post-secondary school decision making.

Throughout the course of this study, the quantitative findings have informed the analyses of the qualitative data and vice versa in an iterative, complementary process that enriched both the qualitative data collection and analyses as well as the overall quantitative analyses. The two components of this study come together in this chapter showing how the quantitative data have informed the qualitative data analysis. The qualitative findings provide insights into the quantitative trends described in previous chapters, as well as provide a clearer picture of the direction that interventions could take. The ultimate purpose of this integrated analysis is to develop strategies to facilitate the direct transition of young people in greater numbers from secondary school to PSE.

Derived from the original research questions, a number of additional questions evolved from the earlier quantitative analyses that, if answered, could provide the foundation for developing the interventions to facilitate the transition of young people from secondary school to PSE. These additional questions were:

1. Why do the majority of young people who attend university do so directly from secondary school, while the majority of those who attend college do so having been out of secondary school for one or more years?
2. Why do secondary school students with achievement and demographic characteristics similar to those who go to college directly from secondary school decide not to go?
3. To what extent does participation in extracurricular activities (e.g., sports, clubs, musical events) and the social life of secondary school influence PSE decision making?

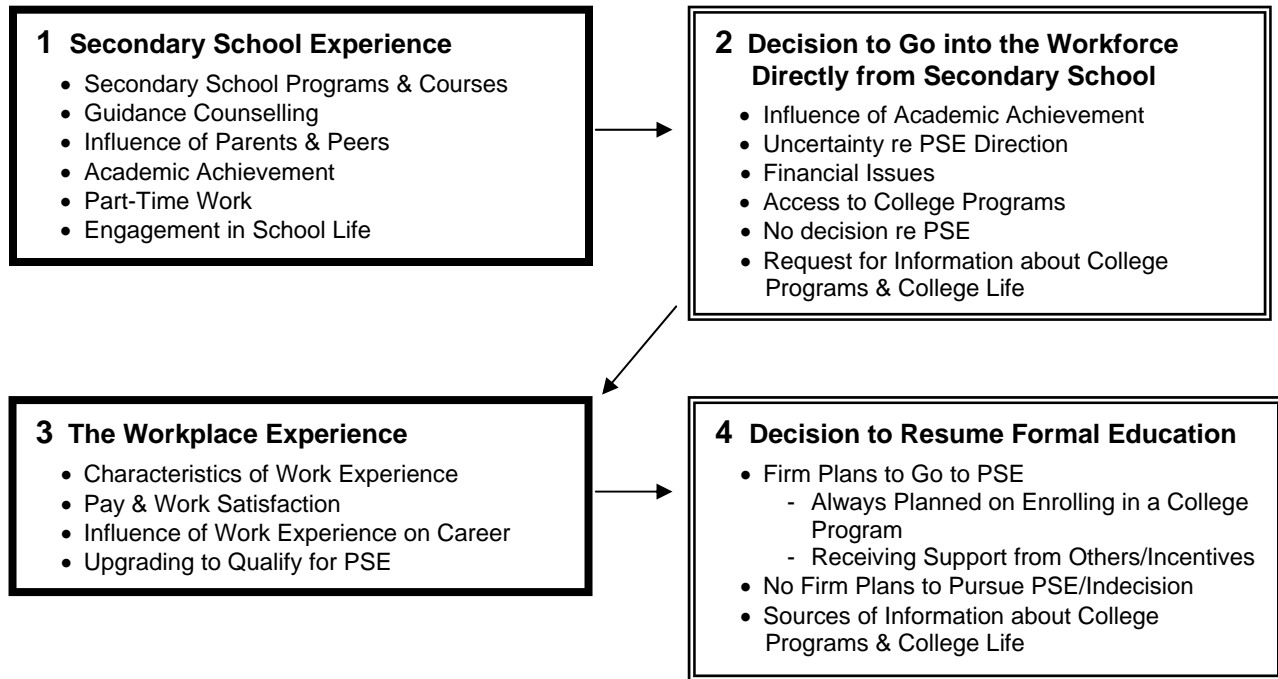
4. How does the post-secondary school work experience influence whether or not young people re-enter formal education? and,
5. What are the actual dynamics of young people's PSE decision making while in secondary school and within the workplace; that is, how do the following factors interact to affect PSE decisions: parent/teacher/guidance counsellor/peer influences, school and work experiences, financial issues, and other incentives and disincentives?

The focus in the following analyses is on the transition of young people to college. The transition of young people to apprenticeship is examined in some depth in the previous chapter. Since over 80 percent of first-year university registrants come directly from secondary school, the issue of delayed registration is not as important as it is with the colleges.

Rather than coming directly from secondary school, about three-fifths of college registrants come from the workforce or other PSE (having obtained complete or incomplete PSE certificates or degrees). Young people who went to college from the workforce had a range of experiences, motivation and influences that affected their educational decisions: some had always intended to continue and enroll in college, and some were influenced by their work experience to return to formal education. Others in the workforce who may have contemplated going to college were influenced by their work experience to remain in the workplace, and others never intended to continue their formal education. Nevertheless, the value of higher education was acknowledged by almost all interviewees, particularly the economic benefits.

In this chapter, we describe the experiences and decision making of a group of young people who went into the workforce directly after secondary school. These young people had either entered college later from the workforce or remained in the workforce. Figure 9.1 outlines the framework for the decision making of young people, and provides the structure for this chapter: experiences in secondary school; the decision making process which led them into the workforce; description of the interviewees' work experiences; and finally, the decision-making process that encouraged some to return to formal education and some to remain in the workforce. Rather than analyze each subset of study participants separately, they are treated collectively through the description of each of the four stages outlined in Figure 9.1 below.

Figure 9.1: Post-Secondary Decision-Making Framework



The topics in this framework are derived from the research questions listed in Chapter 1 and expanded upon in the research themes (Appendix E) and from the research literature. The direct questions and probes in the Focus Group and Interview Guides were developed to explore those themes. Briefly summarized in Chapter 1, those guides as well as the one-page Background Questionnaire and the qualitative research methodology can also be found in Appendix E.

The subjects for this phase of the research were between ages 18 and 23 and were selected because they represented those young people who chose: (1) to join the workforce directly after attending secondary school; and/or (2) to re-engage in formal education after being in the workforce. The subjects were selected as a convenience rather than a random sample (see Appendix E), and a few sectors of the workforce are noticeably absent (e.g., the manufacturing sector). As a result, the young people interviewed are not necessarily representative of the youth-in-the-workplace population, and, therefore, the findings must be interpreted with caution. Nevertheless, the interviews reveal views that are worth noting and trends worth further investigation.

The first group of interviewees includes the Workplace participants (WP, n=70) who currently held a job, and Employment Centre¹ participants (EC, n=41) who were mostly unemployed (a few were seeking better jobs). The second group delayed their decision to attend college for at least one year after having been in the workforce (Delayed College Entrants; DCE, n=100). The description and actual comments of DCEs, some of whom may have come close to not attending college at all, allowed us to explore retrospectively how they arrived at their decision to actually enroll in college. The interviewers met with young people who had been out of school for no longer than five years because we anticipated that they could more readily recall influences and stages of their decision making. Verbatim quotes from the interviews are inserted throughout this chapter in order to illustrate and elaborate points made in the analyses.

Table 9.1 presents the background characteristics of the interviewees.

¹ Youth Employment Centres are community-based career and employment training centres associated with adult centres that are non-profit corporations, usually operating under a volunteer board of directors. These centres offer a wide variety of services (i.e., resources and programs) designed to assist young people to find meaningful employment (e.g., through a program called Job Connect), return to school, access training, and become productive members of the community. The services can include language training, workshops in being interviewed for a job, assistance with resumés. One centre espouses the vision of 'a community in which individuals can foster their work potential and make positive life choices'.

Table 9.1: Study Participants: Gender, First Language, Years Out of School, Age & OSSD (n=211¹)

Characteristics		Delayed College Entrants	Workplace Participants	Employment Centre Participants	TOTAL	
					#	%
Gender	Male	43	38	21	102	48
	Female	57	32	20	109	52
First Language	English	84	58	41	183	87
	French	16	12	0	28	13
Years out of School ²	<1	4	7	7	18	9
	1-2	23	17	10	50	24
	2-3	18	14	6	38	18
	>3	51	25	18	94	44
	n/a ³	4	7	0	11	5
Age	18-19	18	30	14	62	29
	20-21	40	21	16	77	37
	22-23	39	16	10	65	31
	24 ⁴	0	3	1	4	2
	n/a	3	0	0	3	1
OSSD	Yes ⁵	86	55	23	164	78
	no	10	9	18	37	17
	n/a	4	6	0	10	5

¹ Includes 47 participants in 17 focus groups.

² The time for out of school ranged between 8 months and 7.5 years.

³ Represents those for whom questions were not answered (n/a) on the questionnaire.

⁴ Participants who were 24 years of age had turned 24 in recent months before the data collection sessions.

⁵ Includes 3 Workplace participants and 3 Employment Centre participants who completed their OSSD after leaving high school. This question was not asked of Delayed College Entrants.

Of particular note in Table 9.1 are the following points:

- A large majority of the interviewees had completed an OSSD and were likely, therefore, to be at least minimally qualified to enroll in college. A relatively small number (17%, mostly from Employment Centres) had not completed an OSSD, but most of this group maintained the possibility of obtaining an OSSD or equivalent.
- Overall, slightly more females than males (52% vs 48%) participated in the interviews or focus groups. The larger number of females among the Delayed College Entrants was offset by more males among Workplace participants.
- Thirteen percent of the interviewees were francophones.
- Two-thirds (66%) of the interviewees were between 18 and 21 years of age, while less than one-third (31%) were between the ages of 22 and 23. The few over 23 years of age (4 or 2%) had only recently turned 24 before the interview.

- Three of each of the Workplace and Employment Centre participants had completed their OSSD after leaving secondary school.

The chapter is organized into five main sections, the first four as outlined in Figure 9.1 followed by a summary. The first section (B) focuses on their secondary school experience, both curricular (courses and achievement) and extracurricular (sports, clubs, social life), and the influence of various factors at this stage in their lives. In the second section (C), we attempt to clarify the factors that were considered in the decision to enter the workforce directly from secondary school, and to determine the importance given to each factor. The third section (D) discusses the workplace experiences of the interviewees in some detail with the emphasis on understanding why some individuals chose to re-enter formal education and others did not. In the fourth section (E), the factors that contributed to the decision of the interviewee to either stay in the workforce or resume their education are considered. And, finally, the fifth section (F) summarizes the chapter findings.

B. Secondary School Experience

All aspects of the interviewees' secondary school experiences had to be taken into account in order to assess the extent to which they contributed to their decision to enter the workplace upon leaving school. What courses and course combinations did they take as they moved through secondary school? How did they describe their time in school in terms of their academic achievement, participation in extracurricular activities and social interaction? What was their exposure to information about PSE, particularly college programs, through secondary school courses and other activities, as well as to information and support they received from school personnel? To what extent and how were they influenced by their parents and peers about applying to PSE or going into the workforce?

1. Secondary School Programs and Courses

How well does secondary school programming prepare prospective college and university registrants? In the case of students going on to university, their trajectory through secondary school is consistent and predictable. They typically take Academic courses in Grades 9 and 10, and University-Preparation courses in Grades 11 and 12. These courses were designed specifically as preparation for university programs.

Most college programs are career-focussed, and enrollees need to have a specific job in mind when they register (e.g., as a dental hygienist, paramedic, early childhood educator); it therefore becomes important during secondary school to assist young people who may go to college in understanding the nature of college programs and the occupations that they represent. Many specialized College-Preparation courses were developed by the Ministry of Education to facilitate the transition of students to these college programs. In the Double Cohort Study: Phase 4 (King, Warren, Boyer & Chin, 2005) and the *Transition to College* study (King & Warren, 2006), we described in some detail the difficulties experienced by college-planning students with regard to the lack of availability of College-Preparation courses in most schools. We noted that, for some college programs, courses were recommended (not required) that were not available in the majority of Ontario secondary schools.

In Chapter 3, we observed that the transcripts of college applicants are widely varied in both course type and subject area as a result of their changed PSE plans, mostly related to academic achievement and the difficulties schools have in offering a full range of College-Preparation courses. As previously described, college applicants from secondary school could be divided into three main groups: (1) those who took University-Preparation courses; (2) those who took mainly College-Preparation courses; and (3) those who took a mix of course types. It could be argued that none of these course combinations adequately prepares students for the transition to the very specific career-oriented programs in college-

It could also be argued that the secondary school preparation of young people going to university does not have to have a specific career focus, and university programs can afford a student three or four more years of study in which to decide about a specific career. Most university students have sufficient flexibility in their programs to change their majors. As well, some professional programs offered in universities require a degree which can give university students even more time to make a definite career decision (e.g., Law, Medicine). The difference between college and university programs in this regard has major consequences for students who started out preparing for university and who end up being college bound: if they want to go directly to college from high school, they face the need to make a career choice at an early stage in their lives. The interviewees were well aware of this dilemma.

The majority of students across the province took Academic courses in Grade 9 (73.6% English and 69.2% Mathematics), and the majority of the students in this group actually planned on attending university. Since less than one-half of them would ultimately attend university, the subsequent secondary school years of the remaining students were characterized by a necessary shift in course types and in post-secondary education plans.

Most students who enrolled in college had taken Academic courses while in Grade 9, but only 28 percent of them took Academic sets of courses in Grades 9 and 10 followed by a course combination in Grades 11 and 12 that prepared them for university. Over 50 percent of those who enrolled in college had a mix of College- and University-Preparation courses in their senior years. Relatively few college enrollees took Grade 9 and 10 Applied courses, followed by Grade 11 and 12 College-Preparation courses. Many interviewees commented on the pressure they felt to take Academic courses in Grades 9 and 10 either created by direct comments from teachers or parents, or by a general impression of stigma attached to Applied and Locally Developed courses.

[W]hen you're in high school and you're taking all the Academic and University courses, the general consensus is that you're wanting to go to university. Like that's it, there's no other recourse.... And that's what was expected of us. Like it wasn't said out loud, but it's just you're going to go to university and it's a bit of pressure, so you're like, okay, well if I just choose a college, it's kind of stupid.

[F, 20, OSSD, College: Pharmacy Technician]

[In Grade 9] they ask you about courses, Academic or Applied. They all push you towards the Academic; [because they think] everyone should be going to university.

[M, 21, OSSD, PSE Plans, Workplace]

The decision to change course types after Grade 9 or 10 may have come from a teacher or guidance counsellor's advice, or from a failing or near failing experience in a course(s). The decision to switch a course type, however, was often accompanied by uncertainty about whether this change would improve their marks enough to enable further education.

[I]f you start off with Academic in Grade 9 and do bad at a subject, they don't encourage you to keep going. But when you're ready to apply to university, they're like "no, you need this, this and that." I think if I knew better, I'd just stay with Academic and stick it out and then I'd be able to go straight to university if I wanted to.

[F, 18, OSSD, PSE Plans, Workplace]

[I chose college courses because] at the time, in Grade 11 when I started out, like I wasn't really thinking about the future so much, at the time. I guess in Grade 12 I wanted to take some University[-Preparation] ones, because I wanted to keep my options open, but it was too late.

[F, 19, OSSD, PSE Plans, Workplace]

A Career Studies course is offered in Grade 10 that was designed to help students with course selection and consequent career planning.

Career Studies, Grade 10, Open (GLC20)

This course teaches students how to develop and achieve personal goals for future learning, work, and community involvement. Students will assess their interests, skills, and characteristics and investigate current economic and workplace trends, work opportunities, and ways to search for work. The course explores postsecondary learning and career options, prepares students for managing work and life transitions, and helps students focus on their goals through the development of a career plan.

Prerequisite: None (2006, revised)

<http://www.edu.gov.on.ca/eng/curriculum/secondary/guidance910curr.pdf>

/Retrieved March 20, 2009, p.33

A careful analysis of the course selection process of college enrollees described above illustrates how the timing of this course in Grade 10 does not fit well with the critical decision points regarding the goal to go to college. For those who held on to the university goal, perhaps longer than was realistic in terms of their marks, a later review of career options would be appropriate. For the majority of college-planning students, more support through the difficult years of changing aspirations was required. This view was commonly reflected in the interviews.

I think it's pointless [to have the Career Studies course so early in high school], or maybe they should do it for people more in Grade 12 or graduating – [when] they know for sure what they are doing or classes they're taking for what they want to do.

[M, 22, OSSD, PSE Plans, Workplace]

The opportunity to take Cooperative Education courses proved to be a real incentive for many of the interviewees in terms of career choice.

I'd probably say my Co-op [helped me get ready for college], because I didn't really know exactly what I wanted to do. Then when I had my Co-op, I was helping people, I like helping out in the hospital, and it was just like, yeah, this is what I want to do... I think that [a Co-op] is the best idea anyone can ever do.

[M, 20, OSSD, College: Pre-Health Science]

The thing that encouraged me the most was doing that Co-op. I was placed in a special needs class and prior to that I thought I was going to go on to sociology, but when I worked in there I finally decided what I wanted to do.

[F, 20, OSSD, College: Early Childhood Education]

Recently the Ministry of Education has introduced the Expanded Co-op program which allows students to apply Cooperative Education credits towards the compulsory credits required for an OSSD. This would appear to be a very useful strategy to increase the exposure of secondary school students to career possibilities that involve college programs.

Expanded Co-op is a program that allows students to apply two co-op credits towards their compulsory high school graduation requirements, with no limit on earning optional co-op credits. This program is for students who are heading for university, college, apprenticeship or the workplace. It provides students with the opportunity to:

- Experience hands-on learning
- "Test-drive" career options
- See the relevance of their classroom learning
- Develop the essential skills and habits required in the workplace
- Gain valuable work experience to help build a resumé for postsecondary programs and future employment

(<http://www.edu.gov.on.ca/eng/6ways/credits.html>) / Retrieved May 14, 2009

2. Guidance Counselling

Currently the numbers of guidance counsellors are spread quite thinly across the school population in most secondary schools. Much of their time is spent with senior students advising and helping them to prepare applications for PSE. Although students are typically assigned a guidance counsellor, they may not take advantage of the opportunity to obtain career counselling.

I've never been to the guidance office because I wasn't, well I wasn't in trouble or anything, so....I never had any academic advice.

[M, 22, OSSD, College: Upgrading]

The common perception of interviewees was that guidance counsellors were most helpful when the student had a sense of purpose or clarity regarding a career and the counsellor could help them plan toward that career.

[Guidance counsellors] would help you if you know what you wanted to do, but they're not much help if you don't know what you want to do.

[F, 19, OSSD, PSE Plans, Workplace]

Descriptions of PSE programs and requirements are useful information, but there were interviewees who felt that providing a 'reality check' about the consequences of not having their OSSD or not going to college is another kind of information that might have proved useful. They felt that students needed to know that many of the jobs they would be qualified for would only

pay minimum wage and would often provide very little job satisfaction. They felt that knowing this would have motivated them in high school, and may have motivated them to consider PSE. Often by the time individuals learned this, they were living on their own and responsible for paying their own living expenses. They were caught in a catch-22 where they needed to make money to earn a living, often with long hours at a low-paying job, and did not see a way that they could have changed their situation.

[Guidance counsellors] do not tell you the importance of [PSE]. They do not tell you that if you do not pass high school then you are going to end up working some bullshit job the rest of your life.

[M, 21, No OSSD, PSE Plans, Workplace]

[I would tell high school students] to finish [their OSSD] and get it over with now rather than later, because it is harder to get it done later...when you are working [and] paying bills...Might as well get it done and over with because there are jobs out there where you do need your Grade 12.

[M, 18, No OSSD, No PSE Plans, Workplace]

Given guidance counsellor workload, it is not realistic to expect them to provide the support and information necessary for all secondary school students. It is easy to see how students can fall through the cracks of an overextended system.

The role of teachers in career counselling and support is not very clear and varies widely across teaching disciplines. Teachers of vocationally-oriented subjects were more likely to be viewed as helpful.

When I was in my focus program for arts, my teacher was very good.... Gave me the reality of it basically – that interior design is a difficult program to get into. Basically encouraged [you] to work hard at what you want. And do as much research as you can.

[F, 21, OSSD, PSE Plans, Workplace]

My electrical teacher influenced me. I really liked his course. He had his Master's License. He convinced me that I might as well have a career in something I enjoyed.

[M, 22, OSSD, No PSE Plans, Workplace]

The *Transition to College* study indicated that, on the whole, the majority of students who planned on obtaining a college diploma (73%) or going directly into the workforce after graduation (63%) reported that their teachers transmitted to them a positive view of a college education. Nevertheless, some interviewees perceived that the lack of encouragement and the lack of useful college program information from teachers and guidance counsellors were factors in dissuading them from wanting to apply to college.

[I]n high school the teachers didn't tell us that you get more hands-on in college. The way I remember them explaining it was with lower grades you go to college, and the higher you go to university ... People who are looking at me because I go to college so often think your grades are not good enough.

[F, 23, OSSD, College: International Business]

From the point of view of some of the interviewees, an element of stigma was associated with going to college as opposed to university.

[I]n Grade 12 we only had universities come in [to the school], so it seemed like it was the only choice that you should be making. And also just the stigma attached – that if you go to college you won't be as bright as the university students.

[M, 20, OSSD, College: Child & Youth Worker]

But just the negative stigma that is placed on you, you know, maybe that you're not as smart if you choose college over university.

[F, 19, OSSD, College: Radio Broadcasting]

3. Influence of Parents and Peers

Parents can influence their children in many ways to make decisions about whether to further their education: by valuing education and encouraging them (sometimes perceived as pressuring them) to apply for PSE; by serving as a role model of someone with a post-secondary education; by suggesting alternatives; by financing their application, tuition and/or living expenses; and by facilitating the decision-making process with information about colleges, universities, programs and financial assistance.

Findings from the *Transition to College* study (King & Warren, 2006) revealed that a number of parents of college-planning students' (20%), apprenticeship-planning (15%) and work-planning students (12.2%) expected them to go to university, which likely placed considerable stress on students to achieve. Nevertheless, most college-planning students (87%) agreed with the statement 'My parents would encourage me if I applied for a college program'. The powerful influence of parents on students' choice of university as their educational destination was evident in both that study and this current one.

The effect of parents' influence on young people's career decision making begins early with their pre-school experiences and the role modeling that parents reinforce. By secondary school, parental influence takes a very specific form – i.e., pressure to take particular courses, especially courses that lead to university. Many of the interviewees commented on this pressure.

[My mom is] like “no, you are taking [Academic courses], you have to go to university, you have to do this career.” ... [D]o I get to do what I want to do, or do I have to do what my mom wants. I get confused. And then I end up taking whatever she wants and then I fail.... I’m sure I’m not the only one who gets pressured to take a particular course.... [What] your parents or your siblings are saying does have an impact on what you choose to do.

[F, 23, OSSD, College: Human Resources]

[My foster parents] were making me taking Academic Math. And I ended up failing and taking summer school and got tutoring. I did not think I would have grades enough to get into college or university.

[F, 20, No OSSD, PSE Plans, Workplace]

In the MOE and OCAS data files, we were not able to include an indication of SES, but an extensive body of research comments on the role of SES as well as parental education.

Level of parental education is one of the strongest factors in predicting the level and type of education desired by their children.

- Youth were more likely to aspire to a non-university program, or not want to pursue education after high school, if their parents did not pursue postsecondary education.
- Youth whose parents had postsecondary education were more likely to aspire to university education than those whose parents without postsecondary education.

(Cheung, 2007)

Interviewees who were the first members of their immediate or extended family to attend college faced additional challenges in having the confidence to attend, and of placing higher expectations on themselves for succeeding.

And when I said no to [university, my mom] kind of lost it.... [I]t was kind of rough at the first, but then she was the one who suggested “if you don’t want to go to university, go to college...at least you didn’t give up on your education.”

[F, 20, OSSD, College: Pharmacy Technician]

My father actually struggled with only a Grade 9 education. So I watched him kind of struggle until he, you know, made something of himself and got this great paying job and I mean now he is doing really well for himself. But it was a struggle to get there and I didn’t want to have to go through that.

[F, 23, OSSD, College: Human Resources]

My parents [influenced me the most to go to college].... [M]y dad had to drop out of high school part way through because his dad needed him at home on the farm. And my mom also had to drop out of high school for health reasons. So they both wanted all their children to get more than a partial high school, or even full high school, education. They always encouraged us to go on to something more.... I have three brothers and they’re all in trades.... So they did come to college for their trade school.

[F, 22, College: Practical Nursing]

Rather than being influenced because of family members' experience in PSE, interviewees who entered college from the workplace were more likely influenced by their parents' realization of the importance of PSE in terms of financial return and job satisfaction.

[P]robably my dad [influenced me the most] considering that I will be the first one that graduates from a college program, because neither anyone in my dad's family or in my mom's family (cousins included) have graduated from college yet. So I will be the first – which is both kind of great but kind of scary at the same time because [what] if you end up failing.

[F, 19, OSSD, College: Music]

[My mom's] a single parent, she didn't finish her high school, she's not making the best money... So my mom would be my number one [influence]... she's my support system.... I'd be the first to graduate in my family, if I graduate college.

[F, 19, No OSSD, College: Upgrading]

Peers were often mentioned by interviewees as one of the reasons for their poor academic achievement, in that social activities took precedence over attending classes or studying. Peer influence can have long-term educational consequences, as early school leavers and youth who did not pursue PSE are less likely to have friends who value education (Brunson, Butt & Déziel, 2001; Cheung, 2007). Some young people spoke quite openly about the negative influence placed on them by their friends.

My grades were pretty good at first. But as I progressed into high school my grades got worse. [If I had better grades], I would have definitely gone to college... What would have improved my grades was just not being around all the other kids I think. Because being around all the other kids, that is where the problems start.

[M, 22, No OSSD, PSE Plans, Workplace]

On the other hand, some participants spoke of being positively influenced to go to college because of their friends who did value education.

I actually want[ed] to go to college because a lot of my friends were going and I was kind of jealous but I knew I did not have the money to go.

[F, 18, OSSD, PSE Plans, Workplace]

4. Academic Achievement

Students' academic achievement in a course can develop their interest in the content area, and impact their decision to pursue the subject at the next grade level. Success in particular courses determines whether students will have access to post-secondary programs that have specific academic course and achievement requirements.

How did the secondary school academic achievement of the interviewees affect their PSE decision-making process? The same question could be asked of the young people who chose to go directly to college from secondary school since, as found in Chapter 3, their secondary school marks were very similar to those who successfully completed an OSSD and went to the workforce.

Most of the interviewees reflected on their lack of success in secondary school courses and its impact on their PSE decision making.

My main focus was just to graduate from high school, my marks were pretty low. I believe my guidance counsellor was encouraging me to finish out high school.

[M, 20, OSSD, College: TV & Broadcasting]

Not only did their secondary school achievement affect their goals, but it affected their self-perception.

After I lost encouragement I didn't know what I was born to do, especially since my marks were so bad it didn't seem to be going right. I did consider the workforce. That's what I wanted to do.

[F, 18, OSSD, PSE Plans, Workplace]

Many participants stated their preference for hands-on learning, and they often found success, as a result, in their college programs.

[The advantage of college is that] it's hands-on because I'm a hands-on person, I learn better from doing it. I can't read a book and get it. I have to do it a million times. But if I do it the first time I'll catch on more easily.... I'd rather spend more money to get it and learn it my way, than to spend a lot of money at university and not understand it. So money's not really an issue as long as I'm learning it my way so I can grasp it.

[F, 18, OSSD, PSE Plans, Workplace]

You ease your way into the workforce, better and easier when you go through college. And it's more hands-on, so you're actually ready to do what you need to do. And they offer placement. So I feel that I'm more strong about attending college than university.

[F, 23, OSSD, College: Human Resources]

The low to moderate level of achievement of interviewees appeared to be a critical factor in their decision to go directly to work after secondary school. Their most common comment related to their secondary school experience was that they were tired of school and needed a break.

[When I was in high school, I thought college would be] more work, harder work. After four years of high school I was just pretty tired and I wanted to just do something. Like just get a job and start living my life.

[M, 22, No OSSD, College: Accounting]

[My high school experience was] long and boring....for me it was sitting in a class, no hands-on type stuff.

[M, 19, OSSD, PSE Plans, Workplace]

It seems that this 'tired of school' phenomenon was not as powerful a draw to enter the workplace after leaving secondary school for the university-bound students because academic success for them was a more powerful incentive not only to like school but also to continue studying.

5. Part-Time Work

Some interviewees often faced financial circumstances that led them to working during high school, usually on a part-time basis, but occasionally full time. Excessive time spent on a job outside of school had detrimental effects on their academic achievement due to fatigue and less time for studying.

Working some hours in high school can be beneficial, while working a great number of hours (over 20) can be detrimental, leading to a greater risk of dropping out of high school. Working over 20 hours a week in high school was also associated with teens delaying their attendance at a postsecondary institution following high school.

(Hango & de Broucker, 2004)

The comments made by interviewees about the need for part-time jobs and the detrimental effects of part-time work are consistent with findings in previous studies (King, 2002; King & Peart, 1994; King & Peart, 1990; Ferguson et. al., 2005).

I started working when I was 16. I have been living on my own since I was 16.

[M, 22, OSSD, No PSE Plans, Workplace]

[I worked full-time while at school, because] for me it was the money ... [I]f my friends wanted to go out, I could say I can go out and get these things because I have the money to do it. At first I started working just a few five-hour shifts but I did not like the paychecks I was getting so I started working a 3pm-11pm closing shift. ... I would get home, spend a hour on homework, then go to sleep, and then get up early. ... The treacherous thing was getting up at 7 am in the morning. I would absolutely change working so much.

[F, 20, OSSD, PSE Plans, Workplace]

6. Engagement in School Life

Secondary school is more than going to class and doing homework. Schools usually offer a wide range of extracurricular activities such as sports, clubs, and musical and drama events that can provide an enriching social experience. There is a body of research, including the *Transition to College* study, that indicates students who feel engaged in their secondary school life through

extracurricular and other school activities are more likely to be motivated to do well, gain in self-confidence and to continue in school (King & Warren, 2006; Cheung, 2007; Ferguson et al., 2005). Also, there is a correlation between school involvement and the pursuit of higher education: the more involved students are in their school, the higher the level of PSE attained (Shaienks & Gluszynski, 2007; Lambert, Zeman, Allen & Bussière, 2004).

Participation in extracurricular activities is regarded as a means to increase one's social capital, which is positively correlated with higher educational aspirations and attainment.

(Cheung, 2007)

For the interviewees, the social experience of school was not sufficiently strong that they were encouraged to go directly to PSE, but it did have a role in supporting the re-engagement of those who enrolled in college from the workplace.

[High school] was good for the most part. I was on student council ... everything that had to do with music, like all the bands, choir, even music – all that I did. I even played rugby for two years. I was quite involved.

[F, 19, OSSD, College: Music]

[Mon expérience à l'école secondaire] été les plus beaux cinq ans de ma vie – sérieusement, j'ai vraiment adoré... J'ai gagné un prix pour la fille la plus engagée dans l'école.

Translation: *[My high school experience] was the best five years of my life – seriously, I really adored it...I won a prize for the most involved young woman in the school.*

[F, 21, OSSD, College: Radio Broadcasting]

I loved high school. I loved it, everything about it I liked. I liked all my friends.... I've gotten dressed just to go to high school to socialize. That what I loved about high school, to socialize.... I had more fun in high school [than I do in college].

[F, 20, OSSD, College: Operations Management]

However, for many of the workplace interviewees, their lack of involvement in extracurricular experiences did not help kindle an interest in school or in PSE.

I hated [high] school... [I might have considered college] if high school was more fun. I had a lot of trouble in school, English and that kind of stuff. I got bullied a lot as a kid, that was another thing. So just the high school experience, like four years, it's not having a good time waking up every morning, not wanting to go. It just kind of made me 'down dream' the high school years.

[M, 20, OSSD, College: TV & Broadcasting]

[High school was] horrible. Grade 9 I went maybe only one semester. I skipped pretty much every... I think it was up to 56 days, or classes, I had missed. And the reason why is there's not enough, like they try to be strict, but they're not strict in like materials. ... they don't get you excited about wanting to learn. They say, here's a book, here's your questions, do it, have it done by tomorrow and we'll take it up.

[F, 19, No OSSD, College: Upgrading]

For some interviewees, part-time work and the costs associated with extracurricular participation discouraged participation.

[I was not involved in extracurricular activities because of] work things. Other than that, not enough time.

[M, 23, OSSD, PSE Plans, Workplace]

[Extracurricular activities were] too expensive. I had to pay \$40 just to get a card. It is an activity card which would let me go to do any sports or anything major. On top of \$40 for just the card, yes I would be paying for my yearbook, but I would have to pay for certain equipment like football. I would have to buy all my own so I just did not have the money for it.

[M, 19, No OSSD, No PSE Plans, Workplace]

C. Decision to Go Into the Workforce Directly from Secondary School

This section explores the interviewees' post-secondary decision making during secondary school with regard to the influence of academic achievement, clarity of career goals, financial issues, and information about college programs.

1. Secondary School Academic Achievement as Disincentive

In Chapter 3 and Section B of this chapter, we described in detail the academic achievement of a substantial number of young people who went into the workforce directly after secondary school. Even those who had successfully completed an OSSD had experienced varying degrees of academic success; but overall, the majority of this group experienced a pattern of moderate to low achievement, and many with a College-Preparation OSSD had at least one failure in a key course. This record of school achievement must not have been satisfying while it was happening, and it was unlikely to encourage students to go directly to PSE where they might experience more of the same lack of academic success, perhaps to a greater extent. It was not surprising to find that many of the interviewees reflected on their achievement in secondary school, the stress it created, and the need they felt to escape school for a period of time.

I was failing and [there] was not really a thought in my mind as I was more concerned with getting through high school. My grades were pretty good at first. But as I progressed into high school my grades got worse.... I do think [my decision about what to do after high school] would have been different [if I had better marks]. I would have definitely gone on to college.

[M, 22, OSSD, PSE Plans, Workplace]

Well I didn't go to college right after because I didn't plan on going to college. I just wanted to work. I thought to myself college would take more time, you know. And university, well I certainly didn't have the marks to go to university. So, that wasn't really an option for me.

[F, 22, OSSD, College: Office Administration]

The general dissatisfaction with academic aspects of school life and, for some, the absence of meaningful participation in school life appears to create a need for change and escape from school, even if this need was for short-term change prior to PSE. This need for change was expressed in a variety of ways, but it invariably had an element of concern about academic achievement.

[I started working because] I had nothing better to do. I had to make some cash, I guess.... I just wasn't really going anywhere. I wasn't really doing that great in school.

[M, 19, No OSSD, No PSE Plans, Workplace]

I thought I kind of needed time off and I wanted to get the experience....

[F, 19, OSSD, College: Early Childhood Education]

I was just happy to get out of high school. I never really put more thought or effort into it after....every once in a while I think I should go back to school but I didn't have those goals and follow through on it...

[M, 22, OSSD, No PSE Plans, Workplace]

Some interviewees had been quite successful in attaining relatively high marks in secondary school, and still they made the decision to enter the workforce – most of them postponing the decision to attend PSE.

2. Lack of Clarity Regarding Post-Secondary Education Direction

It is difficult to determine which was more important in the decision not to pursue PSE directly from secondary school: a pattern of mediocre or poor academic success, or a lack of clarity regarding a future career direction. Certainly both factors weighed heavily in the decision. Almost every interviewee stated that in their last year of secondary school they had no clear sense of a possible vocation.

I guess for me it was money. And I guess I really didn't have a clue about what I wanted to do. Those were the two reasons why I kind of stalled on it.

[M, 21, No OSSD, College: Business Administration]

[When I graduated from high school] I was completely terrified. I had no idea what I was going to do.

[F, 19, OSSD, College: Social Services Worker]

I decided not to go [directly to college] because to be honest with you, I didn't know what I wanted to do. ...In Grade 12 as you can see, I was not a very good student because like there were things going on at that time in my life and then I was just so sick of it, to come to school everyday.

[F, 22, OSSD, College: Early Childhood Education]

Changing their mind many times about what they wanted to do throughout their school years was not uncommon. Almost all study participants who elaborated on how they arrived at a decision about a college program and career described changing their mind at more than one point in time before and after enrolling; i.e., after committing to one particular field, they decided on an often unrelated field of interest and those who had enrolled in a program switched to another.

I actually was here in college for about a week in a different course, and I decided it wasn't for me, so I decided to take the rest of the year off to make sure that I knew come September what I wanted to do. like if I were to just switch courses instead of taking the year off, I look back and I would have rather done that.

[F, 19, OSSD, College: Hairstyling]

I worked at [a pizza place] for a couple of years and then I decided to [study journalism at college] and did that for a year, and discovered that journalism wasn't for me. So then I took another year off and still tried to figure out what I want to do and discovered radio and now I love this. ... a lot of my really good friends [were] already in their second or third year of university and I'm still ... delivering pizza, and feeling like I'm going to be doing this for the rest of my life. And that's not a good feeling. It felt really dead-end and I wanted to go and get educated.

[M, 22, OSSD, College: Radio Broadcasting]

The decision to take time off from furthering their education was viewed as commonplace among the peers of interviewees, and this perspective legitimated taking time off themselves before returning to education.

I wasn't quite sure what I wanted to do yet, not that I am really clear right now anyways. But, yeah, I wasn't really sure so I decided to take a year off. And a lot of my friends are doing the same... Plus I wanted to make more money so I wasn't as far into debt as I could be.

[F, 20, OSSD, College: Early Childhood Education]

The majority of my friends, my good high school friends, did not continue on to post-secondary and still have not. They just jumped into the workforce right away. And I guess it was kind of an obvious influence on me.

[M, 21, OSSD, College: Police Foundations]

As previously noted in the quantitative analysis, the combination of courses that these young people took in secondary school rarely prepared them for a decision to attend college. But other issues were a concern regarding career decisions; that is, (1) the need to be informed about specific college programs and their characteristics related to a possible career of interest, and (2) to define a career early if they were to consider enrolling in college.

For the first two years of my high school I wasn't able to take the course I wanted because they didn't have it at the school I was at...I wanted to take auto.

[M, 18, No OSSD, No PSE Plans, Workplace]

That is another thing that got me really mixed up about school was the fact that I did not even know what I wanted to be, so it is hard to pick courses... I really do not know what I want to be.

[F, 18, No OSSD, No PSE Plans, Workplace]

We recommended in the *Transition to College* report that, because so many students have been forced to change their aspirations as they reach their final year of secondary school, it is advisable for all students “to have a broader understanding of the full range of educational and work opportunities” (King & Warren, 2006, p.80). This need was corroborated by responses from the current study participants.

[M]aybe if somebody had told me about this program before, and how short it is ... I would probably have gone right ahead and done it.

[F, 22, OSSD, College: Office Administration]

We had a few college presentations come. There was always more university presentations than college.

[F, 19, OSSD, College: Radio Broadcasting]

The issue of the need for specific program information is further discussed in Section 4 – Requests for More Information about College Programs.

Unlike many university programs that have a common first year or are focused on liberal arts, most college courses are highly specialized – a circumstance which forces college registrants to commit to a particular career at the time of enrollment. The decision to go on to university can have the effect of delaying a career decision; however, the decision to enroll in college optimally requires defining a career goal beforehand. While colleges do offer General Arts and Sciences, many of the interviewees preferred to gain experience in the workforce in order to confirm their post-secondary intentions *before* pursuing a specific college program.

I didn't know what I wanted to do, so why apply and spend all that money when I didn't know... I guess my goal was to get information and on-the-job experience before I decided that this is what I want to do for the rest of my life.

[F, 19, OSSD, PSE Plans, Workplace]

At the time of school leaving, apart from the issue of academic achievement, it appears that a critical factor in young people's decision not to go directly to PSE was the absence of a clear picture of the career that they wished to pursue. Not only was there a lack of career clarity but also there was a concern about the value of enrolling in a college program that would not necessarily be related to their career interests.

3. Financial Issues

The role of finances as a disincentive or barrier to attending a post-secondary educational institution is contentious. While the current research in Canada is clear on the issue of finances as a barrier to completion of a post-secondary program (Berger, Motte & Parkin, 2007; Malatest & Associates, 2007), much of those analyses were quantitative in nature. Financial issues were identified in the Youth in Transition Study (YITS) data as one of the categories accounting for 20 to 33 percent of all barriers to PSE access (the other barriers described in that study are motivational, academic and informational; Junor & Usher, 2004). Berger et. al. (2007), basing their analysis on data from the School Leavers Survey (SLS), Postsecondary Education Participation Survey (PEPS) and YITS, described three common financial issues: (1) unwillingness to borrow money to pay for PSE (debt aversion); (2) belief that the cost of higher education is not worth its outcome ('price constraint' emphasizing the negative perception of PSE's cost-benefit); or (3) not having enough money to attend (cash constraint). These themes were reinforced by the interviewees in this study.

The concept of debt aversion refers to the belief that it is harmful to go into debt because of the risk, since many people are never able to clear their debt, or their family has experienced debt and has not recovered from it. It is difficult to determine how important this factor was for the college-planners, especially since it does not seem to influence those planning on attending university to the same extent; however, it was very real for some of the interviewees.

I have always worried about loans because of the fact that I just do not want to become in debt. Most of my family is in debt and I have tried almost all of my life not to be in debt, so that is one of the reasons I have not already taken an apprenticeship as I was basically scared of taking a loan.

[M, 22, OSSD, PSE Plans, Workplace]

And I just wanted to try to save money for school.... I wish I [had gone directly to college from high school]. I should have applied for OSAP... because it would have saved me time.... [I]t's cost efficient staying at home [instead of] living on my own and having to pay for everything.... I wanted to pay for it all myself.... It's still an issue because I'm going to have to pay for the rest of it. I don't want to get OSAP. I don't want to make it an option.
[F, 23, OSSD, College: Practical Nursing]

Some of those who had no PSE plans expressed that they would not consider going to college because of the debt they believed they would incur in financing it. To them, working was the better choice to avoid the debt.

*Ben si j'voulais avoir quelque chose ben j'aurais plus d'argent que de rester à maison. Ben si tu vas à l'école, ben là tu t'endettes. Là [si tu travailles], t'es pas obligé.
Translation: If I wanted to have things, well, I would have more money than staying at home. If you were to go to school, well there you would go into debt. [If you work], you don't have that obligation.*

[M, 23, OSSD, No PSE Plans, Workplace]

The interviewees who planned on college often stated that they had insufficient funds at the end of secondary school to pursue PSE and, therefore, needed to work to achieve the necessary financing. Many stated that it was unlikely that they would receive financial support from their families as their parents were not able to financially support their PSE endeavours. The responsibility was then on these young people to finance their own college programs, and this meant that many of them needed to work to save money to fund the programs in which they were interested.

I'm not sure who was going to be paying for [my PSE] or where I would be living at the time. Yeah, cost was going to be an issue and I thought I'd probably end up paying for it myself.

[M, 21, OSSD, PSE Plans, Workplace]

[My parents] were supportive of [going directly to the workforce after secondary school] and the fact that I stayed home and made some money to pay for my college because they can't help me financially.

[C61, F, 22, College: Practical Nursing]

[If I were to go to college] I'd have to go on OSAP. I don't live with my mother, and I know she wants me to go [to college], but I don't think she has the money. I would have to go on OSAP or something.

[F, 19, No OSSD, PSE Plans, Workplace]

For other interviewees, the issue was not resolved with regard to what they would gain from taking a college program in terms of economic return and job satisfaction weighed against the loss of time and money from their work.

I was working two jobs and I basically decided well, do I want to incur more debt because I would have had to get a bank loan [to go to college]. Do I want to incur more debt or do I want to continue to work and maybe work up a ladder somewhere and not even have to go to post-secondary education, and be ahead of the game because I wouldn't be incurring any debt ...

[F, 23, OSSD, College: Practical Nursing]

Interviewees felt that relatively few scholarships and bursaries were available for entrance to college compared to university. The shortage of college-oriented scholarships/bursaries available to students upon leaving secondary school and the lack of information about what funding is available appear to be barriers to PSE. It could also be that some young people who have a record of poor academic achievement do not think to apply for need-based bursaries that do exist.

And colleges... there are no entrance scholarships. There's bursaries that you can apply for when in second year, and there's different scholarships that ...are awarded to you, but in your first year there's nothing. There is no incentive to really come to college like there is for university if you have higher marks.

[F, 19, OSSD, College: Radio Broadcasting]

[If I could have changed anything in high school], I think I would have tried harder in my last two years because a lot of people got scholarships and bursaries.... I think I would have tried harder if I realized that you could get that. I did not really know.

[F, 18, OSSD, PSE Plans, Workplace]

In a few cases, scholarships and bursaries acted as an incentive.

[My dad] has a bad back and Crohn's Disease, so he can't work at all. And my mom works like one part-time job. So there's no money in my family. So for me to actually go to college, I had to find a way. I had really good marks, and so that kind of got me a bunch of scholarships and bursaries and stuff, that actually paid my tuition last year.... [If I didn't have that support], I probably wouldn't have been going, it's plain and simple. If I don't have the money, I can't go.

[M, 20, OSSD, College: Pre-Health Science]

a. Access to College Programs

Generally, college-planning students in the workplace preferred to remain in their home communities to attend college. Access to the local college was an important part of their decision when they actually did apply and enroll (see Chapter 5). In particular, young people in several major urban centres were more likely to state that they were not willing to move away to pursue PSE, and would instead continue to work until they secured a place in their respective home areas. A few interviewees were willing to move, within reason, to pursue a specialized program (these programs tended to be oversubscribed); however, most expressed a desire to pursue college in their local area to offset the expenses of attending college. Many young

people who did not live at home still wanted to stay in their local area to maintain their family ties and already established friendship groups. While staying at home helps to curtail living expenses incurred in attending college, having the means to fund a college education through scholarships and loans is essential to managing the costs of registering in a college program. Even living at home, some college students commented that they had to shoulder the financial responsibility for college costs.

[I chose this college because] it was definitely the closest one. It turns out it was the only one I even talked to. I wasn't really planning on moving out just yet because I knew I'd end up working too much. [If I did have to move] it would have taken longer [because] I would have had to save up more money, for sure.

[M, 20, OSSD, College: Correctional Services]

... Like I have my whole family here, why would I want to leave it just to stress myself out when I know that I can just go here and then go see my parents and cool off and see my friends, you know.

[F, 19, No OSSD, College: Upgrading]

b. Postponing the PSE Decision

A number of interviewees did not make a conscious decision regarding PSE. They had a job while in secondary school and had gradually increased their hours at work until they were nearly working full time. After leaving secondary school, it was easy to simply continue working. Most of this group had already completed their OSSD before entering the workforce, but others went to work without graduating. For some of them, pursuing work was a necessity as they were living independently of their family and needed to support themselves, while others held jobs as a means of saving money that could be later used to pay for PSE.

In addition to being employed in order to support their living expenses, some interviewees noted that their work experiences also gave them time to consider their PSE interests, since as mentioned previously, many of these young people had no clear idea of the PSE program they wanted to pursue. Being in the workforce seemed to alleviate the pressure of having to make an early decision about a PSE pursuit, and as well gave some an idea of what working in a particular field would entail.

[I decided to go straight into the workforce for the] money.... Yeah I really just needed the money at the time. So I decided and there was a job waiting for me as soon as I left school. I basically just saw an opening right there....[I worked] night to morning, but it took me a couple of months to get used to [working the night shift] and then after a while I just got used to working. So I never thought about going back to school at the time. [I had my first job at] the beginning of Grade 12.

[M, 19, No OSSD, PSE Plans, Workplace]

[My experience working during high school] deeply influenced [my decision]. I just kept on working. I was more worried about living conditions than schooling at that time.

[M, 22, OSSD, No PSE Plans, Workplace]

I had an idea about what I wanted to do at some point and I just went with the flow, and when the work all of a sudden got to the point where I could make more money I just decided that ... I could come back [to school] later.... And most of the jobs I found they didn't really care if you had a Grade 12 or not.

[M, 23, OSSD, PSE Plans, Workplace]

Oui, j'ai appliqué au collège. J voulais rentrer au collège.... Fallait faire des tests pour rentrer, mais j'ai juste décidé de pas y aller parce que j'avais commencé à travailler dans l'été pis j'aimais mieux ça. J'ai continué [à travailler].

Translation: Yes, I applied to college. I wanted to enter college... It was necessary to pass tests to get in, but I just decided not to go because I had started to work in the summer, and I preferred that. I continued [to work].

[M, 23, OSSD, PSE Plans, Workplace]

4. Requests for Information about College Programs and College Life

Secondary schools attempt to provide PSE information to students through the Career Studies course in Grade 10 and Cooperative Education courses (both mentioned previously), through guidance counsellors, and through orientation sessions (e.g., career information days involving visits from college representatives). The suggestions from interviewees, however, indicate that crucial information that may have helped them move directly to college was missing: what is a typical day in college like, i.e., how will it be similar or different to a day in high school?; how do I navigate the application process?; what programs are available?; how long are the programs?; what are the total costs besides tuition?; and, how do I finance my college studies?

Interviewees typically lacked information about specific program characteristics and admission requirements, recalling that few, if any, college representatives visited their high schools and those who did visit rarely provided program-specific information that would have helped them in a decision to consider a particular program and a possible career. Some mentioned the lack of information about how the college learning environment would be different than what they had experienced in secondary school, and how the learning in college programs related to possible future jobs. They felt that if they had received this knowledge in secondary school, they would have proceeded directly from secondary school to these programs.

My high school didn't really offer great preparation. ... I felt that I wasn't ready and my high school could have been a little bit more help in that aspect, I think. For example, we didn't have any classes talking about the transition. We didn't have any, we didn't know what to expect. Like, we knew like that it would be bigger classes and more work, you know, very tedious. But we didn't have any preparation in regards to any aspect at all. I think that was the downfall on my high school's part.

[F, 23, OSSD, College: Human Resources]

[College representatives] just sort of described what the school is about and what it was like, and all the great campuses for you if you want to come out. That's nice and all, but what is your program going to teach me, how are they going to teach me. I don't want to sit in a theory class for three hours and have someone talking. I'd rather have hands-on.

[M, 21, OSSD, College: Electrical Engineering Technician]

Visits by college and university representatives varied depending upon the high school. Visits by university representatives appeared to be more numerous, and often students attended only a college or a university presentation but rarely both.

I felt... high school was more geared to university. Looking back they didn't give us much information about college. ... I don't remember any colleges visiting my school.

[F, 19, College: Early Childhood Education]

Because I was in university level programs I didn't go to any of the college [visits] ... I don't think any students from the university level programs attended those, or even necessarily were fully informed when the college visits were. Just like the college students weren't fully informed on university visits.... And because I wasn't really even considering college based on my choice of classes it would have been a bit of a stretch that I would have come across appropriate information or considered it as an option.

[M, 22, No OSSD, College: Television Broadcasting]

Il y avait pour les gens qui savaient quelle direction où ils s'en allaient, oui à cause qu'à chaque semaine il y avait des présentations du collège, des universités à l'école, mais à cause que je n'étais pas encore certaine dans quel domaine, j'allais pas aux présentations.

Translation: For those who knew the direction they were going in, yes, because every week there were presentations from colleges and universities at the school, but because I was not certain of my field [of interest], I didn't go to the presentations.

[F, 20, OSSD, College: Social Work]

Interviewees would like to have had more information (i.e., a visit to the college) about the 'reality' of being in college.

I didn't really have a tour of the college or anything, so I think maybe ... having a tour and seeing like a day in the life of a college or university student. You know, what they have to go through, what to expect, what the different types of learning are.

[F, 23, OSSD, College: Human Resources]

In addition, interviewees felt it would have helped them to have had current college students visit high schools as college representatives. This kind of immediate, up-close information might have helped reduce students' anxiety and helped them consider taking the risk of applying to college, because they would have had a better idea of what to expect.

[What might have helped me while in high school in making my decision to go to college would have been] more information about the college programs ... and also people who actually attended the college come in and talk to us.

[F, 22, OSSD, College: Office Administration]

I think they should probably have college and university students go and talk to... their high school that they attended and explain to the students what it's like. I think that would be a good way to help bridge the gap.

[F, 23, OSSD, College: Human Resources]

I guess I could have had more conversations ... more guest speakers, people who would have been in the situation after they graduate – [have them] come and talk rather than teachers trying to talk to the students about what they are doing...

[M, 20, No OSSD, PSE Plans, Workplace]

All those who had gone from the workplace to college, or planned to do so, commented on the need for assistance with the application process and also with the next steps, i.e., online applications and navigating any testing that is required before an offer can be accepted.

[The application process] was difficult. I came to the college and I applied.

[F, 23, OSSD, College: Business Operations Management]

I think like the application process...like if you've never done it before, it's like a major learning curve, right.... I think that website gave me such a hard time and I said forget about it, and then my prof like actually finished the application for me.

[F, 23, OSSD, College: Hospitality, Tourism & Culture]

J'aurais mieux aimé ça que quelqu'un donne plus d'informations, qu'ils me guident, parce que j'ai fait de la recherche mais il n'y avait personne pour guider comme les étapes à suivre. Il fallait que je fasse ça tout par moi-même.

Translation: I would have liked it better if someone gives more information, that I was guided because I did the research but there was no one to guide me through the steps to follow. I had to do it all by myself.

[M, 22, OSSD, College: Commerce]

Several of those who left the workforce to enroll in a college program said that they would have gone directly to college from secondary school if they had known more about the program in which they were enrolled.

And I kind of always knew I wanted to work in a medical office.... [I]f somebody had told me about this program before, and how short it is ...I could spare two years, you know, because it's the rest of my life I'm talking about. I mean if I knew about this program before... I would probably have gone right ahead and done it.

[F, 22, OSSD, College: Office Administration]

Peut être si j'aurais eu, si j'avais eu en fait plus d'informations sur nos possibilités en ... [cette place] si j'aurais été mieux informée finalement, j'aurais probablement pu savoir où aller après le secondaire.

Translation: [If I'd had more information about the possibilities in ...[this place], if I would have been better informed in the long run, I probably would have gone directly after high school.]

[F, 21, OSSD, College: Radio Broadcasting]

Although the colleges provide general information about financing a college education and the financial benefits associated with successful completion of each program, the availability of specific financial information remained an issue for many interviewees.

I still do think [college is] expensive and I think there should be more education on how to pay for college, subsidies and all that, like OSAP. In high school they should tell you more about OSAP, maybe, or finance questions.

[M, OSSD, College: Small-Medium Enterprise Management]

D. The Work Experience

All interviewees had proceeded directly into the workforce after secondary school. For some, it was an interim stage and they fully expected to resume their education by enrolling in a college program. For others, doing so was not a priority, but later they may have had the incentive to continue with school because of their work experience and other influences. When they left school, the major factors that influenced their decision making seemed to be general dissatisfaction with school experiences, a lack of clear career direction, and concerns about financing further formal education. How then, did their experiences in the workforce reshape the effect that these factors had on them?

In this section, we examine the interviewees' work experiences in order to assess the impact of this time in their life on their decision to enroll in college or not. The major themes included: the types of employment found, the financial returns and work satisfaction associated with the work, and the impact of their work on their career aspirations. In the final part of this section, the responses from interviewees who left secondary school without an OSSD are summarized with reference to how they might complete their diploma.

1. Characteristics of Work Experience

What kind of jobs would one expect youth who had recently left high school to have? For youth aged 15-19, according to Statistics Canada, employment is mostly found in the retail sector (Usalcas, 2005). For young women aged 20-24, the top three industries were health care/social assistance, retail, and accommodation and food services; for young men in the same age range, the top three industries were construction, manufacturing, and business, building and other support services (Usalcas, 2005). Some of interviewees in this study had or were in the process of seeking jobs in accommodation and food services or business, building and other support services.

Table 9.2 lists the types of jobs that interviewees had held in the workforce since leaving secondary school.

Table 9.2: Interviewee Types of Jobs*

Employment Sector	Job Types
Accommodation & Food Services	cook/prep cook, server, coat check clerk, bartender, fast food server
Administrative	clerical/administrative staff, post office clerk, program assistant
Business, Building & Other Support Services	auto detailer, electronics technician, plumbing assistant, security staff, electrician apprentice, gas station attendant, call centre telemarketer
Construction	construction worker, sewer pipe installer, labourer, roofer, mechanic (small engines), welder, trucker
Health Care / Social Assistance	hospital porter, babysitter
Retail	assistant manager, cashier, cleaner, clerk, sales associate, stock person, lab technician (eyeglasses), retail worker, florist assistant, convenience store worker, customer service
Manufacturing	factory worker
Other	farm worker, guide (hunting/fishing), musician, landscaper

* Past and current jobs at time of interview.

In terms of their work experiences, the interviewees fell into three general categories: (1) those who had moved from job to job; (2) those who had held multiple jobs simultaneously; and (3) those who had maintained one job. The first type of work experience was most common among those who had gone to work without an OSSD. Interviewees from Employment Centres had commonly held several jobs since leaving secondary school, and had gone to the centre to find a new job.

I have had, like, 10 jobs since I got out of high school [2 years ago].

[M 19, No OSSD, No PSE Plans, Workplace]

I started working when I was 16. I have been living on my own since I was 16. [Since high school] I started at a gas station. Worked there for 3 years. Then went to work for Coca-Cola as a merchandiser. Then telemarketing for a while. Also a dishwasher many times. I worked for a fiberglass shop right before I came up here. Making fiberglass tubes. ... [I moved to this city] looking for more opportunities. Bigger city, better jobs. [I feel] good [about staying in work]. Offers me a little more freedom than living with my parents.

[M, 22, OSSD, No PSE Plans, Workplace]

Many of those who had held a number of jobs at the same time were building financial support for college.

[Between high school and college], I worked most of the time, for the majority of the year, making money to come to school. I worked in a pizza place making and serving pizza. I worked at a counselling centre doing night secretary and watching children while parents were in the counselling centre. And I babysat and I worked at a burger stop where I cooked and served people and made ice cream... Yeah, I did [all jobs at the same time].

[F, 20, OSSD, College: Early Childhood Education]

I did a lot of management jobs running restaurants [before coming to college]. I was running my first Tim Horton's restaurant at 18....and then I moved from there to Swiss Chalet...my career goals were to save as much money as I could to come here to the [college] program.

[F, 22, OSSD, College: Practical Nursing]

The majority of interviewees, particularly those who were enrolled in college, had held one full-time job in the workplace. Many spoke of having assistant managerial or managerial positions. Some participants were also in managerial positions which paid wages that were significantly above minimum wage. The duties and pay seemed to be satisfactory for these young people.

I took another semester and then I took a year off. And I just wanted to try to save money for school. I worked as a manager at a McDonald's.... It was okay. I learned that in order to be successful and make money you have to work hard.

[F, 23, OSSD, College: Practical Nursing]

Currently, I am an assistant manager at [a clothing store]. [It involves] basically, whenever the manager is not there, I am in charge kind of thing, so I make sure the girls do what they are supposed to do, I am in charge of the receiving room, mark down, paper work, all that kind of stuff, cashiers. I have been with this company two years.

[F, 24, OSSD, PSE Plans, Workplace]

Many of the positions that interviewees had held were entry-level jobs that often paid minimum wage, did not offer full-time hours, and required shifting from one position to another. This type of work (e.g., fast food outlets, retail stores) may have been satisfying while young people were in secondary school, offering acceptance and financial rewards that they may not have found in

school. However, these jobs tended to have lost their appeal when increased hours at a higher rate were necessary in order to meet their living costs.

I am working full-time right now but I am at a desk job. I input numbers all day ... it's boring. I have been there for about 2 years. [I am looking for something] more or less either retail or I have done a lot of customer service.

[F, 20, OSSD, PSE Plans, Workplace]

[Since I left high school, I have been working] casual. So it is no amount of hours. It is whenever they need you. [I work in] services.

[M, 21, OSSD, PSE Plans, Workplace]

2. Pay and Work Satisfaction

What are the financial returns for young people in the workforce with no PSE? And how do these young people view their current salary and its ability to support their lifestyle. At the time that this report was written, the minimum wage in Ontario was \$9.50/hour² and the average hourly wage for 15-24 year-olds was \$12.25, which was less than one-half of the hourly wage for those over 25 years of age (\$24.54).³ Based on the 2004 National Labour Force Survey, males aged 15 to 19 were working an average of 23 hours a week, and females the same age were working an average of 19 hours a week (Usalcas, 2005).

Table 9.3: Average Hours Worked per Week, by Gender & Age

Male/Female, Age Category	Average Hours Worked per Week
M, 15-19	23.2
F, 15-19	19.2
M, 20-24	34.9
F, 20-24	29.5

* Usalcas, 2005.

As mentioned, many of the jobs that interviewees had secured paid minimum wage or a slightly higher wage, and these jobs may not have been full time.

I worked at Tim Horton's. I worked at [a department store] for a bit, but really like low end, minimum wage.

[F, 19, No OSSD, PSE Plans, Workplace]

I work seven hours every day [at a drug store] and my cheque comes every two weeks and it still looks pathetic.

[F, 19, No OSSD, PSE Plans, Workplace]

² http://www.labor.gov.on.ca/english/es/guide/guide_4.html.

³ <http://www40.statcan.gc.ca/l01/cst01/labr69g-eng.htm>.

The financial limitations of low-paying jobs became a reality for those who struggled to pay rent, buy groceries, and in some cases support a family and/or save for PSE. Many of the Delayed College Entrants continued to live at home which allowed them reduced living expenses and helped to curtail debt; the portion of their income that they were able to save for PSE was substantially more than for those who were living away from their parents.

I made a lot of money [between secondary school and college]. I'm not in debt yet, because I'm still working on the money I earned.

[F, 20, OSSD, College: Early Childhood Education]

I was a Directory Assistant ... and I worked full-time, and I took extra hours too, because I wanted to save money for college and I didn't want to take any loans ... I thought maybe I wasn't going to make enough money, but I actually did. The extra hours really helped.

[F, 19, OSSD, College: General Business]

Others secured jobs in which they were experiencing satisfaction in terms of work quality and/or financial return, and that experience changed interviewees' minds about pursuing PSE for the time being and/or encouraged them to stay on in their job.

I am making okay money now. I don't really need to get into college right now, it is just an added expense.

[F, 23, OSSD, PSE Plans, Workplace]

I've been working [at a restaurant] for almost three years. I got hired when I was 16... Waitressing is good money, and so right now, I'm not in a position where I'm hurting for money and I want to go out and get a real job. So it kind of one of those things where you feel comfortable and you don't really want to move.

[F, 19, No OSSD, PSE Plans, Workplace]

Two interviewees who had secured salaried employment with a benefits package were earning above \$30K a year and felt financially comfortable in their positions; therefore, they thought that it would not be advantageous to pursue other job ventures or PSE in a different field. Both of these young men recognized the importance of PSE to support advancement in their current positions, but preferred to seek formal education on a part-time basis so that they could retain their present positions. In addition, their employers were supportive of their PSE pursuits through their granting of bonuses for courses successfully completed, and their employers would also reimburse the cost of the course once these interviewees had completed their studies.

[What I like best about my job is] the opportunity. I started out with 25 days paid vacation. I am paid on salary [\$30,000/year], if I miss a day it's not off my pay cheque. We do one hour physical training every day, every morning physical training.

[M, 20, No OSSD, PSE Plans, Workplace]

[My employer] does help me with tuition for [my college program]. If I get a certain grade they give me a certain percentage [bonus]. And if I pass the whole program, they're looking at footing the bill for it. If I can pay for it up front, and submit the bill after, then that's great.

[M, 20, OSSD, PSE Plans, Workplace]

Generally, the interviewees found their work experience unsatisfying. The exceptions, as noted above, were in positions with good salary and working conditions where they could see a future for themselves.

3. Work Experience for Career Direction

An important factor in interviewees' decisions to go directly into the workforce was the lack of information about a PSE program that might have interested them in pursuing a career. To what extent did their work experience help them decide on a possible career to pursue? Certainly for the interviewees who moved from job to job, the duties provided little satisfaction and/or indication of future career prospects. Similarly, those who worked several jobs simultaneously had little insight into future career aspirations although some had a vague idea of what they hoped to do in the future.

[What I am really looking for is] something like in the service industry like waitress or bartending. I took the Smart Serve course recently. Trying to get something in that area.

[F, 19, No OSSD, PSE Plans, Workplace]

For some interviewees, the responsibilities of day-to-day living took precedence over career planning, or even consideration of PSE.

I need an apartment. I need to be, well because we are homeless right now. Definitely going to school is not in my top five priorities, versus getting an apartment, getting a job, getting settled before I can even think about that.

[F, 20, No OSSD, PSE Plans, Workplace]

Some found that their work experience helped them gain knowledge about what they were capable of doing, as well as what they might like to do in the future.

J'ai travaillé sur la construction. Pis j'ai travaillé à l'hôpital parce que c'est un emploi sécuritaire, il y a des bénéfices. Je gagne plus d'argent de nuit que de jour.
Translation: *I worked in construction. And I worked in the hospital because that was a secure job with benefits. I make more money at night than during the day.*

[M, 21, OSSD, PSE Plans, Workplace]

If I wouldn't have went out and worked at the jobs that I did I would have never got to know what I was good at, what I didn't like. I worked at Tim Horton's for two years and the only thing I liked doing was the fast pacing, talking to people, and having a few laughs once a shift. Then I worked construction and I really liked the discipline and the hard work and the environment. Mind you, working with men is not the greatest thing, but it toughened me up a little. And, yeah, if I hadn't have went to work I wouldn't have known what I wanted to do at all.

[F, 19, No OSSD, College: Upgrading]

The work in which most were engaged was unsatisfactory, had low financial returns and little likelihood to be a career prospect. Their current jobs may not have helped interviewees make decisions about what they wanted to do, but their jobs told them a lot about what they didn't want to do.

Like you see everyone going ahead of you or doing this or doing that and you are not really doing anything but working in a restaurant. It kind of makes you think in a way. You don't want to work in a restaurant for the rest of your life. It's not where you want to be. So the more you think about it, that's where the initiative takes place. Like, I've got to do something with my life.

[F, 22, OSSD, College: Early Childhood Education]

[Working after secondary school] just happened, I've been at ... [a grocery store] for five years, but I haven't had a chance to experience life yet...I don't want to be here for the rest of my life.

[F, 22, OSSD, PSE Plans, Workplace]

[I came back to school because] ... I was pretty much tired of making minimum wage in the retail job that I was really unhappy in, you know.

[F, 23, OSSD, College: Practical Nursing]

There were some instances where the work experience reinforced what they planned on pursuing in college by providing the opportunity to work in a field that could be of future interest; that is, they were able to establish a much clearer career direction.

I guess I was thinking about libraries because I just spent so much time in them for other purposes, trying to do research and things like that. I was actually a researcher for one of the professors, so that kind of got me thinking about [taking a college program in this area] ...

[F, 23, OSSD, College: Library Technician & Information]

[I decided to become a nurse after working] part-time with the mentally [challenged] in a group home on the weekends.

[F, 22, OSSD, College: Practical Nursing]

4. Upgrading to Qualify for PSE

For many interviewees without an OSSD who wanted to go to college, their first priority was to complete their OSSD. As noted in previous chapters, thousands of young people leave secondary school each year without meeting OSSD requirements. As seen in Figure 2.7 in Chapter 2, approximately 9 percent left secondary school prior to Grade 12, while another 16 percent dropped out of school without an OSSD after Grade 12 or Year 5 (44% of the Employment Centre interviewees and 14% of the Workplace interviewees had not completed their OSSD).

Some interviewees who did not have an OSSD were only a few credits short, while others required many credits in order to attain this credential. Nevertheless, these young people do have the potential of moving into the post-secondary education system, either by attaining an OSSD or equivalent (i.e., GED)⁴, through adult education centres or continuing education via correspondence courses. Also, they could apply to PSE as a mature student. The majority of interviewees without an OSSD did not seem to be aware of these possibilities.

[[If I can get my high school situation figured out, I can enroll in that course. Actually go to college... I don't know how to get a diploma without transcripts or anything. I think I definitely need to go back to my old high school and figure out who to talk to about it.

[F, 19, No OSSD, PSE Plans, Workplace]

I left high school in Grade 11 and went back in Grade 12, left again, went back, left again, went back.... I am thinking about night school as I still need 2 English [credits]. But from what you are telling me, I could go in as a mature student too.

[M, 23, No OSSD, No PSE Plans, Workplace]

Many of the interviewees were living on their own (some had been since age 16), and their priority was working to pay their living expenses. For some, completing secondary school was out of the question. They had complex challenges around accommodation, and often had very little support and/or poor relationships with their families. The Employment Centre programs and staff appeared to be helpful to interviewees in clarifying strategies to follow in order to obtain an OSSD or equivalent, so that they had better chances of finding suitable employment or could consider enrolling in a college program.

⁴ The General Educational Development test is an international secondary school equivalency examination program for adults. The GED tests cover what secondary school graduates are expected to know in Mathematics, Writing, Science, Literature, and the Arts. Candidates who successfully complete the tests can earn the Ontario High School Equivalency Certificate. (Ministry of Education website: <http://www.edu.gov.on.ca/eng/students/faq-students.html#schools9>)

[After high school], I was going nowhere and I needed more schooling to get a job. I wanted to get more money, so I have been trying to get a steady job so that I can at least earn some money, put it away then get the rest of my schooling through the GED or the ACE (or EC) program or the mature student, one of them whatever. [My intention is to get] my Grade 12 or the equivalent to it so I can go to college or university. I am not sure yet.

[M, 19, No OSSD, No PSE Plans, Workplace]

I could not afford to be in [high] school. Moneywise. I was in school and then I moved in with my boyfriend. I had to pay rent and going to school was not paying my rent. So I dropped out [when I was 16].

[F, 20, No OSSD, PSE Plans, Workplace]

E. Decision to Resume Formal Education

Since over 60 percent of those who enrolled in college did so having been out of secondary school for a period of time, it is particularly important to identify the factors that influenced their decision to enter college. Although they may have planned to go to college earlier, there was no guarantee that they would carry through with their PSE plans. Sixty-five percent of the Delayed College Entrants said that they had made the decision to go to college while in secondary school – one-half of them as early as in Grade 10. By contrast, almost one-half (47%), of the Workplace interviewees and three-quarters of the Employment Centre interviewees had decided before they left secondary school to go to the workforce (see Table D-37 in Appendix D).

Table 9.4 presents the responses that Workplace interviewees expressed in response to the open-ended question about their goals one year from the time of the interview. Thirty-two percent intended to pursue PSE (27%-college, 5%-university) within a year after the interview, while the majority of the others planned on continuing to work or look for work. It must be remembered that even though PSE was almost universally considered to be an important step in advancing one's career and quality of life, most of the Workplace interviewees were not considering PSE.

Table 9.4: Career Plans of Workplace Interviewees* (%)

Career Plans (One-Year Goal)	% Interviewees
Continue working or look for work	42
College (including 'PSE')	27
No goals/unsure	12
University	5
Apprenticeship	5
Finish OSSD	4
Entrepreneur/own company	1
N/A	4

* Workplace and Employment Centre participants.

Many factors influenced young people's post-secondary decision, including the possibility that their workplace experience could have been more satisfying than it was. The first analysis in the following section focuses on those who had made the decision to return to PSE, and had enrolled in college or had planned to do so shortly. The analysis is concerned with the factors in their workplace and home life that acted as barriers (i.e., obstacles) or disincentives (i.e., deterrents) for all interviewees, especially including those who had no plans for PSE.

1. Firm Plans to Go to PSE

Some students had firm plans to proceed directly to college, but decided to take time out for varying reasons mostly related to career choice and financing.

Most of those who returned to formal education, in this case college, had always planned to do so, but at the time of leaving secondary school were unsure of which program to take and the suitable field/career to seek.

I think that for me it was important to take time out and understand what I wanted because in school I was focusing on getting the grades I needed. I didn't have time for myself. I was so young and I didn't know what I wanted.

[F, 23, OSSD, College: International Business]

Once I graduated high school ... I really didn't know what I wanted to do, where I was going. ... I thought I could always survive without school, and I'll be fine and all that. But once I got older, [I realized] that I wanted to have a career ... I'm here like 110 percent.

[F, 23, OSSD, College: Human Resources]

Typically, the workplace experience was formative in shaping college program decisions.

Je dois peut-être aller au collège pour obtenir un diplôme en 'management' afin de pouvoir travailler de jour à l'Hôpital Général. C'est important d'aller au collège car je ne veux pas rester en bas de l'échelle – pour l'argent et position.

Translation: I should perhaps go to college to obtain a diploma in management in order to be able to work full time at the General Hospital. It is important to go to college because I do not want to stay at the bottom of the ladder – for the money and the position.

[M, 21, OSSD, PSE Plans, Workplace]

[Between leaving high school and starting college] I did volunteer work, building my resumé, customer service. I worked for an international business company. I worked on some people's accounts, maintaining their account and things like that. When building my resumé I wasn't sure what I wanted. I was interested in engineering and business though. [What made me decide on a career was that] I tried engineering and I hated it.

[F, 23, OSSD, College: International Business]

Given the circumstances of average to low-average high school achievement and what interviewees described as minimal opportunities provided at school to explore college offerings, the decision to leave secondary school and go into the workplace appeared to make a good deal of sense. However, for almost all of those who were in the workforce and returned to college, there was a realization that remaining in the workforce could lead to a life of low income and a lack of job satisfaction.

[I learned from working that] there was a lot of people in the grocery store that dropped out of high school and didn't go to college, and they ended up at low paying jobs or something like that. And so it was like I don't want to be here for the rest of my life.

[F, 20, OSSD, College: Early Childhood Education],

I think [working before college] was a good idea. I think I gained an appreciation of the college, seeing people in their fifties are struggling making eight dollars an hour.

[F, 22, OSSD, College: Practical Nursing]

For the few who were working in jobs that had some career path and reasonable income (e.g., a managerial position), the desire to do something more satisfying led them back to formal education.

When I became management at McDonalds, it was fine, and actually I liked the store I was working at, it was so fun. A great crew, great manager, and great owner kind of thing. But it was like, okay I'm at the point where you start moving up in McDonalds or I have to get out. Like the only place to go with what I was doing was more McDonalds. And there's people who do that and they have a fantastic careers and life, but I didn't want to. I wanted to do something different. So I decided that I would go to college no matter what in September.

[M, 22, OSSD, College: Radio Broadcasting]

The need to obtain money to finance a college education was another factor in interviewees' decision to obtain a paying job and delay enrolling in college directly after secondary school. With regard to those for whom financing was the major reason, how was the financial issue resolved for those who eventually did enroll? For some, their work experience provided the necessary funding.

I did a bit of work full-time getting ready [to come to college]... I just saved up money...
[M, 20, OSSD, College: Correctional Services]

I had a small business before which gave me enough money to come to school. Money was definitely a factor. It is definitely a real factor right now. Our program is a three year course, but it could be put into a four year program. I'm kind of running low on money, so money is definitely a huge factor right now. Coming into college, I had the money so it wasn't really a huge concern, but it was still on my mind. I didn't use all my money right away.

[M, 20, OSSD, College: TV & Broadcasting]

Others developed a greater tolerance for incurring debt, especially with being able to obtain some financial assistance.

I did get OSAP. Yeah, I had to.... I had savings and I could have paid for my tuition with my savings, and then my boyfriend said keep the savings, get the OSAP, and we have it to fall back on...But money is a large, very big factor in coming to school. You have to be able, especially if you're not living at home, which I'm not, you have rent and bills and food and parking pass and gas is \$1.25 a litre and it costs me \$60.00 back and forth to school, and I lived on the street which is no fun. But I think the biggest factor is money, whether or not you'll be able to survive on very minimal.

[F, 22, OSSD, College: Practical Nursing]

Most support for Delayed College Entrants came from family, friends, and other students who provided encouragement to enroll in PSE and/or provided suggestions as to the vocation and college program in which the interviewee would be well suited. For some, the support for PSE, emotional and financial, came from their parents encouraging them to enroll in a program, and in some cases, agreeing to a college rather than a university education.

[The people who were most influential in helping me decide were] my mom [who] helped me quite a bit and so did my aunt. My aunt was the one who said I should apply for the program that I am in now.

[F, 19, OSSD, College: Esthetician]

[The person who influenced me to go to college] would be my co-worker [who has a diploma from college and]... is doing really well in her career. Like the people at my workplace. My mother has always encouraged me to go to college, but I never realized the value before, and now I realize the importance. I guess it took time for me to realize it on my own.

[F, 22, OSSD, College: Office Administration]

Some incentives to make the decision for PSE came from the Internet as interviewees found information about college programs through various college websites. And for others, it was acquaintances who provided the incentive for enrolling in a particular program.

Well basically I was reading stuff on the Internet, just random sites, and a couple of my friends mention[ed] [the possibility of becoming a guard], and I thought, okay, I'll check that out, that was kind of cool.

[M, 20, OSSD, College: Correctional Services]

I had a couple of friends who were in this program [Human Resources] and they told me about it and it sounded like something that I wanted to do. So I looked it up online and read about it and read the college book on the course and decided that it would be something I wanted to do.

[F, 23, OSSD, College: Human Resources]

Although a rare occurrence, other incentives came from current employers who had established policies to support an employees' PSE pursuits. For example in Section D, we described the positive situation of interviewees whose employer policies encouraged PSE through paying tuition and expenses, as well as assurances that a job would be available after completing a college diploma.

We interviewed seven young women who were mothers or expectant mothers. For all of these women, although it was difficult and often delayed their educational plans, being a mother acted as an incentive to receive more formal education. Three of these women had already enrolled in college and stated that part of their incentive for doing so was to set a good example and provide a better future for their child(ren).

I became pregnant in August 2006 and then moved back to [this city] to be [with] my family. During my pregnancy I started to make plans, like what my plans were for the future. And when I finished breastfeeding I decided to put my plans in effect [for attending college].

[F, 23, OSSD, College: Hospitality, Tourism & Culture]

Similarly, the pregnant interviewees in the workforce who planned to resume their education by completing their OSSD were hoping to do so in the near future for similar reasons – to secure a brighter future for their children and set an example of completing secondary and, later, post-secondary education.

I'm pregnant so that does comes into the picture, so that is why I am trying to get everything set up. I got to do it in a short amount of time.... I want to get my high school diploma and they are going to have someone helping me do that as well.... Not too sure [how many credits I need], but I am almost done, like half a year.

[F, 18, No OSSD, PSE Plans, Workplace]

I think that if I finish high school and I go to college, [my son will] be more apt to go and not say, "hey my mom dropped out, so why do I have to finish."
[F, 19, No OSSD, PSE Plans, Workplace]

2. No Firm Plans to Pursue PSE

For all of the young people without firm plans to continue their education, the reality of pursuing PSE was still full of obstacles, deterrents and risks which included: difficulties in selecting a field of study in which they were sure that they would be motivated; funding their schooling as well as their living expenses; the lingering dissatisfaction with their secondary school experience; and potential problems in accessing a local college program.

Unlike those young people who had returned to college, the workplace offered little guidance about investigating PSE for those who planned to remain in the workforce. Their positions are largely entry-level jobs and, as mentioned, participants have a history of moving quickly from job to job trying to find suitable employment that is both interesting and can support their lifestyle.

[The kind of job I want is] anything really. I am mostly into construction and cars and stuff, but I do not know if that will ever happen. So I am just looking for anything at the moment.
[M, 18, No OSSD, No PSE Plans, Workplace]

And now that I have been homeless and job searching and seeing some college and university [required] ... on every job – it does make a big difference.... I did not know what it was like to not have a job or to not have enough money to get by. To not have.
[F, 20, No OSSD, PSE Plans, Workplace]

[Since high school I have been] working off and on. Going from job to job... [in] automotive, welding, physical labour.
[M, 23, OSSD, PSE Plans, Workplace]

In addition to the challenge of finding a field of interest, many of the young people we interviewed did not have the financial resources to enter PSE. The struggle to earn enough money was often at the forefront of these people's goals, and ideas about PSE pursuits were often pushed aside. On the whole, this group of young people were very resistant to taking out loans for PSE, and did not perceive going into debt as a viable option for funding PSE costs. Because few scholarships and bursaries exist for college-bound young people, many college enrollees must fund most of, if not their entire, post-secondary education on their own. For many coming from the workforce, this was a significant disincentive, especially if most of their earnings were needed to pay living expenses; consequently, they often had no other sources for funding PSE, and were unwilling to explore the option of obtaining loans.

[My decision to leave high school and not go to PSE] was not good. I am still not going to school right now so there is something stopping me.... [What is stopping me is] right now I am in debt so I was thinking about getting the money paid for that. If I ended up getting more in debt, so going to school you gain a little more loan [and it might take] ... 5 or 10 years [until] you get that paid off. I always think about like today. I do not think about a couple of years down the road.

[M, 23, No OSSD, No PSE Plans, Workplace]

The lack of self-confidence of many workplace interviewees still lingered and could be attributed in part to their choice of secondary school courses and low-average to poor marks in those courses. As a result, many were apprehensive that they had the required transcript package that would allow them access to PSE, or they simply thought that PSE was out of the question.

[My marks were] average I would say.... I am not sure I am confident enough to think that I would actually get in [to college].

[F, 24, OSSD, PSE Plans, Workplace]

Many of the young people we spoke to came from families without PSE. Their families were often ambivalent about their pursuing further education and offered little guidance in accessing information about post-secondary programs. In other words, many of these young people had little, if any, emotional or logistical support in going to college.

Well, [my parents] ... think it is a good thing but they don't really care what I do, they think it is my decision, if I wanted to [go to PSE] they'd support it, if I did not want to they'd support it. ... Neither one of them went to college nor university, so I don't think they really understand the opportunities you can have with it....

[F, 18, OSSD, PSE Plans, Workplace]

The expense of travelling a distance to a college was a detracting factor for some Workplace interviewees who had PSE plans. Having to move from home to enroll in a suitable college program was expressed as a disincentive by a few interviewees.

[Des inconvénients financiers à continuer l'éducation] c'est cher. J'habite à 15-20 minutes d'ici... pis à 30 minutes [du collège français]....

Translation: [The problem of financing further education] it's expensive. I live 15 to 20 minutes from here and 30 minutes from the French college.

[M, 21, OSSD, PSE Plans, Workplace]

I'm not interested in moving. This is my home, and I'm planning on getting married next year. I wouldn't move unless we both had a job.

[M, 20, OSSD, No PSE Plans, Workplace]

For Workplace interviewees interested in PSE, financing it emerged again as a disincentive with the low wages from work not necessarily providing the savings hoped for to pursue PSE. Those interested in resuming their education had experienced changes in their priorities regarding PSE before and during workplace experiences. Previous secondary school achievement did not seem to act as a disincentive at the time of the workplace interview in the same way that it did at the time of leaving secondary school. The often less-than-successful school experience was overridden by the improved economic returns and career satisfaction that PSE could provide – advantages which were more clearly seen from being in the workplace. Certainly, the fact that many of their peers with similar levels of achievement had gone on to PSE increased the level of confidence in being able to apply to college. A lack of clarity regarding direction remained a huge concern for many, while for others the workplace experience provided a clearer sense of purpose (i.e., in choosing to stay in their satisfying job rather than return to formal education).

F. Summary

Five questions, derived from the original research questions, were set out at the beginning of this chapter that were designed to guide the qualitative analysis and the integration of the quantitative findings. The questions are repeated below and a brief summary of the answers that were derived from the analyses follows.

1. Why do the majority of young people who attend university do so directly from secondary school, while many of those who attend college (nearly 60%) do so having been out of secondary school or postsecondary education for one or more years?

Secondary school programming tends to be driven by University-Preparation courses in response to the university aspirations of students and their parents. All courses required for university entry are available in every secondary school. Secondary school University-Preparation courses naturally flow into university programs. Although there is no question that uncertainty in choosing career goals is prevalent among many young people planning on university, the three or four years of university studies provide the opportunity for many to postpone making career decisions. In addition, the majority of students who attend university generally have been successful in secondary school and have little cause to feel that this success will not be repeated in university.

In the case of colleges, secondary school programming does not facilitate an effective transition to college. While many College-Preparation courses have been developed, few are offered in many schools because of low enrollments. In addition, an analysis of the transcripts of college applicants shows that 28 percent of this group took a University-Preparation program while in secondary school. As well, the common core course pattern of a shift from Academic courses in Grades 9 and 10 to College-Preparation courses in Grades 11 and 12 for most of the remaining students made for an ill-defined sequence of secondary school progress and PSE planning. Their transcripts were characterized as having moderate to low marks with nearly one-half having experienced at least one failure, typically in a key subject such as Mathematics or English. This pattern of secondary school course selection and academic achievement was common among the interviewees.

Among young people who went directly to the workforce, at the time that they left secondary school, uncertainty regarding career direction and to a lesser extent potential success in college was commonly expressed. Many Delayed College Entrants had always planned to attend after a hiatus, and they and others still planning on college found the workforce experience informative in considering PSE because: (1) it provided reinforcement for interest in a vocation; and (2) it presented an unsatisfactory picture of what their life would be like if they remained in the workforce without PSE.

2. Why do secondary school students with achievement and demographic characteristics similar to those who go to college directly from secondary school decide not to go?

The answer to this question is essentially the same as that above: uncertainty about career direction and potential for success at college, often in combination with a secondary school experience that may not have been that rewarding, discourages some young people from going directly from secondary school to PSE. Also the costs of attending college weighed against the potential benefits were on the mind of many of those who enrolled in college after time spent in the workplace, as well as those who had plans to attend college later.

3. *To what extent does participation in extracurricular activities (e.g., sports, clubs, musical events) and the social life of secondary school influence PSE decision making?*

This research and other studies on the issue of the effects of the school experience on PSE decision making indicate that involvement in secondary school extracurricular life acts as an incentive for either going directly or from out of school to PSE.

4. *How does the post-secondary school work experience influence whether or not young people re-enter formal education?*

Some young people who went directly from secondary school to the workforce found the experience rewarding in terms of being able to make money and gain acceptance for their work; furthermore, they saw no reason that they should continue on to formal education. The most common scenario, however, was that young employees did not want to continue doing the kind of work they were doing with low pay for the rest of their lives. The rare exceptions were individuals who found employment where they received financial support and time off to complete PSE programs.

5. *What are the actual dynamics of young people's PSE decision making while in secondary school and within the workplace; that is, how do the following factors interact to affect PSE decisions: parent/teacher/guidance counsellor/peer influences, school and work experiences, financial issues, and other incentives and disincentives?*

Many factors influence young people's decision to go directly into the workforce from secondary school – the influence of advice from family and friends, guidance counsellors, and special teachers; financial constraints; experience at school and work; lack of career goals; and other incentives and disincentives. Young people attach varying weights to these factors while making the decision to further or not further their education. Certainly, cost-benefit is a high priority with young people who need to balance the difficulty that they would have in managing debt, finances and time away from making money with the potential job satisfaction and increased financial return that they would gain from becoming employed after completing a college program. It is difficult to make an investment in time and money when one is uncertain about the benefits and suitability of a particular college program.

Among those who had not enrolled in college, uncertainty about career direction and the implications of average to poor secondary school achievement were the two major disincentives that affected the decision not to go to college. Concerns regarding finances and career direction were common for those in the workplace, and often outweighed potential benefits.

While in the workforce, the importance of previous academic achievement in the decision to attend PSE receded and the need to develop career goals increased in importance. For Delayed College Entrants, the value of a college education became much clearer as a result of the workplace experience, and they had developed strategies to deal with the costs of PSE.

Chapter 10: Summary & Recommendations

A. Introduction

The primary purpose of this study was to develop a better understanding of the characteristics of the young people who do not pursue post-secondary education (PSE) directly after leaving secondary school. Those who did not pursue PSE were compared with those who did go on to college or to university or who entered an apprenticeship program, as well as those who enrolled in college having been out of secondary school one year or longer.

This study had two main components: the first was based on analyses of data files that provided specific details on the secondary school courses and achievement of Ontario students, as well as whether or not they applied to or registered in college or university. That component was designed to describe those young people who did not go on to PSE directly from secondary school with regard to their demographic characteristics, course selection and academic achievement. The second component was a qualitative analysis of interviews with 211 young people who did not go directly from secondary school to PSE. The qualitative component was designed to broaden our understanding of those young people who go directly to the workforce, and to identify the factors that influenced their decision making. The findings from the analyses of both components were designed to provide objective support for recommendations to improve the transition of young people from secondary school to PSE, and to increase PSE enrollments.

B. Findings

1. Who does not go to PSE?

We estimated that, in 2008, 60 percent of secondary school students enrolled in PSE (34% in university, 20% in college and 6% in apprenticeship) after four or five years in secondary school.¹ There is great variability in the proportion of students who go directly to PSE from secondary school depending on their secondary school program. The students can be divided into four broad program categories. The first group included secondary school graduates who took Grades 11 and 12 University-Preparation courses (46.1% of the base Grade 9 population). Over 90 percent of these students are estimated to have enrolled in university or college in and outside of Ontario within a year of leaving secondary school. Over one-half of those who did not

¹ Percentages are based on 2003-04 Grade 9 enrollment.

enroll in PSE did not have the marks to meet the admission requirements of most Ontario universities.

The second group included secondary school graduates who took Grades 11 and 12 courses that qualified them for admission to college (26% of the base Grade 9 population). Only 45.3 percent of this group registered in college, and another 9.3 percent applied but did not register (44.4% did not apply to college). Most of the group who enrolled in college had very similar marks as those who did not apply. The main reasons for not applying were uncertainty about career directions, concern about achieving at a college level, and financial concerns.

The third group included secondary school graduates whose transcripts included Workplace-Preparation courses and who had not completed the courses commonly required for college or university (3.2% of the base Grade 9 population). Very few of this group applied and registered in college (their transcripts were accepted in a few programs). Their secondary school records were characterized by moderate and low marks, and at least one failed course.

The fourth group included the 24.7 percent of the base Grade 9 enrollment who did not complete an OSSD in four or five years of secondary school. Although they did not enroll in PSE because they had not met admission requirements, in interviews they acknowledged the importance of PSE. About one-quarter of this group were relatively close to completing an OSSD, but the remainder were well short of credits for graduation.

In addition to the groups noted above, there were those students planning on taking up apprenticeships. They came from the College- and Workplace-Preparation OSSD groups. Traditionally, the majority of those taking up apprenticeship had done so in their mid-20s, but enrollment in the Ontario Youth Apprenticeship Program (OYAP) and registrations in apprenticeship by secondary school students indicate that a more effective transition may be taking place. Generally, apprenticeship students had slightly lower marks than the college-bound students and were more likely to have taken Workplace-Preparation courses. Nevertheless, difficulties in obtaining employer sponsors and confusion about apprenticeship delivery, also noted by interviewees, continued to act as barriers to the effective transition of young people from secondary school into apprenticeships.

The following characteristics differentiated between those who went to PSE and those who did not:

a. Gender

- More females than males enrolled in university directly from secondary school (58% compared to 42%).
- Similar numbers of males and females registered in college directly from secondary school.
- Three times as many males as females took up an apprenticeship directly from secondary school.
- More males than females did not complete an OSSD within five years.
- Females were more likely than males to have taken Academic courses in Grades 9 and 10, and University-Preparation courses in Grades 11 and 12.
- Males were more likely to take a Grade 12 Mathematics course.
- Females obtained higher average marks on all secondary school English, Mathematics and Science courses, except one (Grade 9 Locally Developed Mathematics).

b. Language

- ESL students were less likely than other students to complete an OSSD (62.6% compared to 75.7%) and to enroll in university (26.3% to 30.6%) and college (14.9% to 17.1%).¹
- Students from French-Language District School Boards were more likely to attend college (19.9% to 12.7%) and slightly more likely to attend university (24.6% to 22.6%)¹ than other students.
- In general, students whose main language spoken in the home was other than French or English were less likely to enroll in PSE, but there was great variability across language groups. Students from homes where Chinese, Korean, South- and East-Asian languages were mainly spoken were most likely to complete an OSSD and go on to PSE, students who had Spanish and Portuguese mainly spoken in their homes were least likely to do so.

¹ Percentages are based on 2003-04 Grade 9 enrollment.

c. First Nation Students

- First Nation students enrolled in Ontario public, Catholic and private secondary schools were far less likely than other students: to complete an OSSD (23.7% compared to 61.5% of Grade 12 students and 29.7% to 55.5% of Year 5 students); to enroll in university (2.8% to 21.6%); and, to enroll in college (8.2% to 12%).¹
- First Nation students' course selection and secondary school achievement were predictive of their relatively low PSE enrollment.

d. School Board Type

- In general, students from Catholic District School Boards were more likely than students from Public District School Boards to attend university directly from secondary school (26% compared to 21.2%).¹ The proportion of eligible students registering in university varied widely across school boards.
- In general, students from Catholic District School Boards were more likely than students from Public District School Boards to attend college directly from secondary school (16.9% compared to 12.4%).¹ The proportion of eligible students registering in college varied widely across school boards.

e. Region

- Pronounced school board differences from one region to another were evident in the proportions of Grade 12 and Year 5 students who applied to and registered in college and university; these differences ranged from 6.4% to 24.5% for college and 6.9% to 38.4% for university.
- Generally, rural and northern Ontario students were less likely to apply to and register in PSE.
- Differences were evident in the ratio of college-to-university registrations by school board; for example, youth from the Toronto, Ottawa-Carleton and York Region District School Boards were much more likely to register in university than college.
- College offer rates (i.e., offer rates to all programs in a college) ranged from 47.2% in one college to 85.5% in another – excluding offers to programs not applied to.
- The majority of college applicants demonstrated a desire to remain in their home communities to attend college, especially those in the larger metropolitan areas.
- Applicants from communities where local college offer rates were lower than the norm were less likely to receive offers to college programs.

¹ Percentages are based on 2003-04 Grade 9 enrollment.

- College program offer rates were notably lower in the Toronto and Ottawa-Carleton regions indicating that there may be a capacity issue; that is, are there enough spaces available to accommodate eligible students who wish to attend?
- The proportion of local students enrolled in their nearby university was remarkably low in some universities, 8.4 percent in one case although quite high in others (e.g., 79.5%, 79.7%, 85.4%). Therefore, the likelihood of being able to attend a local university varied depending on a student's place of residence.

2. What are the characteristics of those who apply to but do not receive an offer of acceptance from a college program?

Since the ratio of offers to applications differed across colleges and across similar programs, it was difficult to develop a common explanation of the characteristics of who did or did not receive an offer. The major factor appeared to be the number of available spaces in a program. When the number of applicants exceeded the number of spaces, colleges had to use marks, specific course requirements and additional requirements (such as language tests and other prerequisites) to determine whether to make an offer to an applicant for a specific program.

A detailed analysis of the secondary school transcripts of applicants to a sample of colleges and similar college programs indicated that marks played a minor role in offer rates except in the case of oversubscribed programs.

3. What are the characteristics of those who enroll in college having been in the workforce for one to three years?

The secondary school transcripts of those young people who enrolled in college having been in the workforce were very similar to those who went directly to college after secondary school in terms of courses taken and average marks received. Non-direct college enrollees were more likely than those enrolling directly from secondary school to be female and to live near the college to which they applied. Interviewees who entered college after some time in the workforce tended to be influenced by the lack of a clear career direction at secondary school leaving, by concerns about financial issues, and by dissatisfaction with their secondary school experience.

4. What are the factors that act as disincentives or barriers for young people who decide not to further their education directly after secondary school, or not to further their education when they are in the workforce?

Eligible students who did not enroll in college directly from secondary school cited uncertainty about career direction and concern about financing a college education as the main disincentives and barriers for not enrolling then. Other disincentives included dissatisfaction with their secondary school experience (e.g., because of lack of academic success, having moderate to low marks, and lack of involvement in school life), being 'tired' of school, and the lack of encouragement from others (i.e., teachers, guidance counsellors and peers). Some believed that they had not received adequate help at school to make wise post-secondary decisions, and some had been overlooked in a guidance counselling system that has been clearly overextended.

Delayed college enrollees as well as workplace interviewees with and without PSE plans indicated cost-benefit concerns about the advantages of a college education (i.e., the time taken away from making money while having to go into debt to finance it; a few were holding high-paying jobs with secure benefits). Some of the interviewees said they had to obtain jobs to support themselves either at their parents' insistence or because they were not able to live at home.

The financial concerns that delayed college enrollees had about entering a college program became less of an issue while they were in the workforce than at the time of school leaving. Furthermore, some of their peers' academic success in a college program and their peers' prospect of an interesting, financially rewarding career gave enrollees encouragement to apply to college.

5. What are the attitudes about PSE of young people who go directly into the workforce after leaving secondary school, and those who enroll in college after some time out of secondary school?

The attitudes held by interviewees about PSE were generally positive. They recognized the importance of continuing with further education and, in particular, the advantages of attending college. Many delayed college enrollees had planned to take at least one year off from school with the intention of later enrolling in a college program, and their experience in the workforce reinforced this plan.

Some in the workforce reported that, in secondary school, they sensed a stigma associated with going to college: they perceived that their teachers and peers viewed college-bound students as having less status since they did not have sufficiently high marks for university.

Many interviewees cited that their Cooperative Education placements provided opportunities to explore possible career directions which contributed to their positive view of college.

6. How much do young people know about PSE programs, and what are their sources of information?

Young people in the workplace reported that while they were in secondary school they had not received sufficient information about college programs and career possibilities. Visits from college representatives were few in comparison with those from university representatives. In the few sessions that some attended, young people did not receive the information that they wanted, i.e., detailed descriptions of college programs and the approach taken to teaching and learning in college.

Generally workplace interviewees had little knowledge about college programming and college application procedures, nor how to find the necessary information.

Some young people had gained knowledge about vocationally-oriented college programs and apprenticeships from secondary school Technological Studies teachers with experience in the trades. Participating in Cooperative Education and discussions with secondary school teachers and students were viewed as especially helpful in providing interviewees with useful career information.

7. How do young people's PSE decisions evolve from their time in secondary school to their time in the workforce?

Many interviewees indicated that they felt pressure from their parents and teachers to strive to attend university by taking and succeeding in Academic (in Grades 9 and 10) and University-Preparation courses (in Grades 11 and 12). When they felt it was necessary to switch from Academic and University-Preparation courses to Applied and College-Preparation, they also had to change their post-secondary aspirations. The struggle to succeed academically that some had experienced in secondary school often led to disengagement from school and a decision to go into the workforce. College for them was viewed as likely to lead to 'more of the same'.

The vocational orientation of most college programs requires young people to make an early decision regarding a career – too early for many senior secondary school students. College enrollees who had worked one year or longer after leaving school had been influenced by their work experience in their decision to enroll in a particular college program (i.e., by clarifying their career focus and reinforcing the lack of career opportunities without PSE).

While they were in the workforce, some delayed college enrollees made the decision to enroll in a college program when it became clear that few opportunities for advancement existed in the jobs they held (many had numerous jobs and most of them were low-paying, entry-level jobs).

C. Recommendations

The recommendations that follow are premised on the findings of this study as well as other related research findings.

1. Apprenticeship

Many reviews have taken place regarding the delivery of apprenticeship programs in Ontario. However, no research has been conducted in the depth required to provide the necessary direction for restructuring in response to systemic difficulties (e.g., securing placements, variations in opportunity related to the economy, and instability in the training programs resulting in low completion rates). A recent review of the regulated and unregulated trades emphasizes the jurisdictional factors that might impede progress (TE Armstrong Consulting, 2008). Recent trends in secondary school, college, and workplace collaborations indicate a willingness to recognize and respond to what appears to be an interest on the part of some young people to become tradespersons.

On the surface, it would appear that the simplest resolution would be to give the colleges the full responsibility for the delivery of trades training (they are already delivering 85% of the in-class programming for apprenticeship). However, research examining the present system and; in particular, the roles of the various stakeholders in apprenticeship is needed; therefore:

We recommend that a comprehensive study be undertaken on apprenticeship training in Ontario by the Ontario Ministry of Training, Colleges and Universities. The study should examine such areas as: the roles and responsibilities of the colleges, employers, MTCU, and trade unions; the application and work placement processes; and, communication about apprenticeship. The outcome of this study would be to provide clear directions on

the restructuring required to produce an effective apprenticeship system and the strategies required to implement the necessary changes.

2. Transition to College

Currently, less than 40 percent of colleges' first year enrollees attend directly from secondary school. To improve the transition of young people who go directly to college from secondary school, it is necessary to develop strategies to respond to the following concerns:

- Secondary-school-to-college programming is not effective. Although College-Preparation courses appear to be available, in practice they are not offered in many schools and are often not viable when they are offered. As a result, college applicants' secondary school transcripts rarely demonstrate a good fit for college programs.
- Secondary school students' exposure to career options tends not to be timely or thorough, and the prospect of having to make a career decision by selecting a particular college program creates uncertainty that for many secondary school students results in delaying their decision to go to college until some time after secondary school. Differences between those who go directly to college from secondary school and those who do not go directly appear to be less likely related to marks and financial considerations, and more likely related to students' lack of exposure to relevant information about college programs and uncertainty about career direction.

The decision to enroll in college has life-long implications for students. That decision must be made with as much knowledge of and exposure to career opportunities as possible. The following strategies appear to have the potential to respond to this need:

1. Since it is unlikely that most Ontario secondary schools will be able to offer a full range of career-specific College-Preparation courses (because the range of necessary courses is too great, and low enrollments in those that are offered affect their viability), board-wide programming is necessary to create economically viable groups of like-minded students. Fortunately, most school boards have such programs in place (i.e. Specialist High Skills Majors); they draw the necessary numbers for viability by taking in all interested students from across the school board area.

2. Cooperative Education courses are a necessary component of school board-based programs, but they can also provide exposure to career alternatives by being offered at individual secondary schools. Cooperative Education programming (during Grades 11 and 12, and especially during Year 5) should take into account students' career interests. Recent initiatives implemented by the Ministry of Education involving secondary school and college collaboration, and the Expanded Cooperative Education Program appear to be having positive results.
3. Dual Credit and other secondary-school-to-college and to-apprenticeship transition programs contribute to the necessary exposure to college programs and apprenticeships that could help students in career decision making. However, it is important that exposure to information about college programs be made available to a wide range of students and not only to those who are planning to enroll in specific college programs and who have a good academic achievement record in secondary school. A close look at the academic history of those who went directly from secondary school to college and those who delayed attending college indicated a wide variation in academic achievement that is as likely to be associated with motivation as it is with aptitude.
4. The timing of a guidance counseling support system that parallels the timing of decision making (i.e., that captures changes in the aspirations of university-planning students to consider college, and of college-planning students) is fundamental to effecting a successful transition to college. The current Grade 10 Career Studies course does fit in with the timing of course decisions for those students whose aspirations must change because of their switch from Grades 9 and 10 Academic to Grades 11 and 12 College-Preparation courses, as well as for those students already tentatively considering an apprenticeship. However, for those students experiencing uncertainty regarding career decisions in Grades 11 and 12 and Year 5, it is necessary to complement the secondary-school-to-college and to-apprenticeship programming with supportive career counselling.
5. Unless the moderate levels of academic achievement of some students are countered by involvement in the extracurricular and social life of their schools, they may not only feel 'tired of school' but also have a lack of confidence in being able to achieve academically in college. A comprehensive extracurricular program is a necessary component of school programming.

6. Poor achievement in early secondary school years can have a negative effect on those who had hoped to attend PSE. In some cases, interviewees in these circumstances were discouraged from even investigating college as a viable option. In the *Transition to College* study, we found that students viewed teachers as quite supportive of college as a goal, but we recommend that teachers be encouraged to support college as a PSE destination/option in a systematic way. Colleges offer a wide range of programs, and it would help students to have more thorough information across grades regarding these programs, their admission requirements and financial implications. The lack of information about bursaries and scholarships for college was noted by many respondents, as well as the costs and ultimate benefits of a college education. Media reports that emphasize the huge debts accumulated by PSE students appear to act as a disincentive to some college applicants.

We recommend the following:

- **Increase student exposure to possible careers and college programs through current initiatives – Cooperative Education, Dual Credit courses, and enhanced learning options such as Specialist High Skills Majors. Make available opportunities for a wide-range of students to access those programs, not only for those who are planning to enroll in specific college programs and/or who have a good record of secondary school academic achievement. (Ministry of Education, Colleges)**
- **Increase the viability of secondary school College-Preparation courses, for example, by integrating senior (Grade 11 & 12) courses and by combining the courses with across-board secondary school-to-college programs. (Ministry of Education)**
- **Provide focused career counselling in Grades 11 & 12, as well as in Grade 10, that includes comprehensive information about the range of and requirements for college programs and apprenticeship. (Ministry of Education)**
- **Provide information to secondary school students about how to manage the finances for college education. (Ministry of Education, Colleges)**
- **Increase financial awards, bursaries, and scholarships at college entry. (Ministry of Training, Colleges and Universities)**
- **Evaluate the Dual Credit and Specialist High Skills Program models currently in place across Ontario to determine best practices. (Ministry of Education)**

3. First Nation Students

The findings from this study are useful in that they carefully document the patterns of secondary school course selection and academic achievement of First Nation students who were funded by Indian and Northern Affairs Canada and enrolled in Ontario private, public and Catholic schools. Their low-level academic achievement contributes to low levels of participation in PSE. In 2007, the Ontario government announced a special initiative to respond to these concerns. One of the components of this initiative was the following:

Establishing baseline data on the achievement of First Nation, Métis, and Inuit students in Ontario's provincially-funded schools will be a key target in the implementation of the framework.

(Ontario First Nation, Métis, and Inuit Educational Policy Framework, Ministry of Education, 2007, p.10)

We recommend that the findings of this study related to First Nation students be made available to the French Language, Aboriginal Learning and Research Division, Ministry of Education. In addition, we recommend that further research be undertaken on the factors that affect the educational achievement of these students and their off-reserve peers.

4. Gender

The Ministry of Education has recognized as a basic concern the differences in achievement between males and females in the Ontario school system, and has made improving the opportunities and life chances of male students' part of their Reach Every Student initiative. Males are substantially underrepresented in university, and to a lesser extent in college enrollments. It is difficult to imagine the changes that would be required to produce academic achievement equality of both genders. Nevertheless, an effort could be undertaken to further develop the language skills that contribute so much to academic success. Also, supports could be introduced to facilitate the transition to college in those areas of study that have traditionally been of interest to males, such as Business and Technology. Overcoming challenges that students have with secondary school Mathematics would be particularly helpful.

We recommend that the Ministry of Education develop and implement strategies to improve the achievement of males from elementary school through secondary school.

5. Access to PSE

Pronounced regional differences were found in the proportions of young people who pursued PSE. It would be difficult to make a case that all Ontario universities were established to serve their local communities, but the colleges were established and structured to be community-based and were placed throughout the province to achieve this goal. However, parts of the province appear to be underserved by the local colleges because local applicants receive fewer offers of acceptance to them. Since most college-planning students preferred to remain in their home communities, particularly those from out-of-school who represent the main source of college applicants, relatively low offer rates from colleges in Toronto and Ottawa were of particular concern.

We recommend that the Ministry of Training, Colleges and Universities ensure that all individuals across the province have equal opportunity to pursue a college education independent of where they live.

6. Further Research

We noted in the introduction to this report, that the Ontario educational system was in transition and that initiatives were in place to increase secondary school graduation rates and improve the transition of young people to college and apprenticeships. Most of the recommendations above were developed to build on and support programs already in place.

Other issues arising from the findings that would benefit from further research include:

- An analysis of factors that differentiate PSE enrollments from Public District School Boards and Catholic District School Boards.
- The identification of strategies designed to facilitate the re-entry of youth into the education system.

Currently, integrated files such as those used for this study have a number of validity concerns related to file matching and incomplete and inconsistent data; nevertheless, the potential for valuable research is still present, particularly with regard to the impact of the many educational initiatives currently underway. As the data collection from school boards and integration procedures become more refined, the potential for valuable educational research will increase.

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