

585-XPE

# HIGH SCHOOL MAY NOT BE ENOUGH



## An Analysis of Results from the School Leavers Follow-up Survey, 1995



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School Leavers Follow-up Survey, 1995**

## **Symbols**

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The following are symbols used throughout this publication:

- \* numbers marked with this symbol have a coefficient of variation between 16.6% and 33.3% and are less reliable than unmarked numbers
- data are not reliable enough to be released; coefficient of variation is greater than 33.3%

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# Prologue

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The time during high school and the following first few years represents a critical period in young people's lives. It is a time when youth face many important decisions that can profoundly affect their futures. For many young people, entering the work world during the 1990s has not been easy—the nature and pace of technological, economic and social change have contributed to the challenges of getting established.

Results from the 1991 School Leavers and the 1995 School Leavers Follow-up Surveys present a unique opportunity for examining the nature of transitions that take place between school and work. The initial survey interviewed youth aged 18 to 20 to provide useful information about the school leaving phenomenon. Four years later, the 1995 follow-up survey re-interviewed the same people who by then were aged 22 to 24. Used together, these sources enable us to assess the progress of not only school leavers, but of all young people this age.

*High School May Not Be Enough* contains the first in-depth examination of results from the 1995 School Leavers Follow-up Survey. The report includes a contextual overview of the youth labour market and a general discussion of transitions between school and work. Other chapters address a range of topics relating to young people's experiences beyond high school: their education and training, their involvement in the labour market, and the kinds of skills they were using. The report also explores the potential importance of early childhood experiences on eventual outcomes.

It is our hope that this information will be useful to people interested in the challenges faced by youth in transition. We also hope that this report will encourage other researchers to further capitalize on the potential of the School Leavers Surveys to shed additional light on these issues.

Mel Cappe  
Deputy Minister  
Human Resources Development Canada

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Ron Gardner worked closely with the authors and generated the statistical tables upon which the analysis in this report is based. In addition to co-authoring one of the chapters, Shelley Harris did much supportive research for the entire volume and helped co-ordinate many aspects of the project.

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# Introduction

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The School Leavers Survey was conducted in 1991 by Statistics Canada on behalf of Human Resources Development Canada (Employment and Immigration Canada at that time). The survey covered young people aged 18 to 20 and explored the school leaving phenomenon: How widespread was school leaving? What were the characteristics and circumstances of young people who left school without graduating? How did leavers fare in the job market? These were some of the questions that the 1991 School Leavers Survey helped to answer.

Because many young people had not yet had much work experience, it was not possible to fully evaluate the relative outcomes of high school leavers and graduates. So in 1995, Statistics Canada, again in co-operation with Human Resources Development Canada, conducted a follow-up survey. The objective of the 1995 School Leavers Follow-up Survey was to examine more closely the education, training and labour market experiences beyond high school of the same group of young people who by that time were aged 22 to 24.

Information from the School Leavers Surveys cannot answer all the important questions we have about youth in transition. Among the most important of these knowledge gaps involves demand in the labour market: the overall availability of work, the kinds of jobs accessible to youth in various parts of the country, and the industries offering them. In addition, more needs to be understood about the development and socialization of children and youth, and how such factors contribute to their well-being as young adults.

Nevertheless, results of the two School Leavers Surveys do enable us to examine key aspects of school-work transitions among youth. This report seeks to contribute to our understanding of school-work transitions by looking in more detail at the education, training and labour market activities of these young people who were in the midst of their transitions between 1991 and 1995.

# Chapter Summaries

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## Chapter 1

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### Looking at School-Work Transitions

The term 'school-work transitions' refers to the variety of pathways that young people can take among and within the worlds of education, training and work.

The Canadian model of school-work transitions is one that offers multiple and flexible pathways, with opportunities to return to school and change direction. A strength of the Canadian system is its flexibility, adaptability and range of opportunity and choice. Youth are responsible for a series of important learning and career decisions and are expected to play a major role in funding their postsecondary education.

As a result of the economic recession and the subsequent, slow recovery period, transitions were difficult for many young people during the first half of the 1990s. In addition, evidence suggests that Canada is becoming a knowledge-based economy, and many more jobs now require higher levels of education and skills. Participation in postsecondary education increased in recent years, while labour force participation among youth declined. Although many young people with less education had a difficult time in the labour market, youth with higher education continued to fare relatively well.

Findings from the School Leavers Surveys reinforce the importance of educational attainment and its relationship to labour market outcomes. Chapter 7, however, takes quite a different perspective by raising the possibility that early childhood experiences may also be important. This perspective reminds us that although the information presented in this report will be useful and informative to many, it remains incomplete. Other surveys that explore factors affecting the development of children and youth, and studies that focus on the demand for labour will continue to be required to further our understanding of school-work transitions among youth.

## Chapter 2

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### Educational Pathways

Higher education is a key ingredient for success not just for individuals, but also for countries. In Canada, educational attainment has increased dramatically over the past few decades.

For youth who were aged 20 in 1991 and 24 in 1995, the high school non-completion rate fell from 18% to 15%, as some young people took longer to complete than others.

High school graduation makes it much easier for young people to pursue further education or training. By 1995, 85% of youth aged 22 to 24 had graduated from high school. Of these, about eight out of ten had pursued further education or training. Among non-graduates or high school leavers, only about one in four had done so.

Not only had a substantial proportion of youth continued their education or training beyond high school, by 1995, 55% had graduated from a postsecondary program or were postsecondary students. Still, substantial numbers of young people had relatively low levels of education: among the entire 22 to 24 year-old group, 11% were high school leavers with no further education or training, and another 17% were high school graduates without further education or training. Taken together, nearly three in ten youth aged 22 to 24 had relatively low levels of educational attainment—in a society where most young people have postsecondary qualifications or are in the process of getting them.

In an increasingly highly educated society, having 'low education' could be considered to include not just high school leavers, but also youth who complete high school but do not pursue further education or training. Some of these less educated youth appear to be constrained by their backgrounds. For example, youth with less education tend to come from families with less education.

Although about two-thirds of school leavers are men, women who leave high school without graduating tend to have circumstances that differ from those of their male counterparts. These differences relate to women's greater likelihood of having family responsibilities and are important when comparing the labour market experiences of young men and women.

## Chapter 3

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### Entering the Labour Market

This chapter begins by explaining some of the concepts used in the analysis of labour market data from the School Leavers Follow-up Survey. It then examines the experiences of young people during the 'gap' between leaving high school full-time and the first 'reference' job. (Reference jobs are those involving 20 hours or more per week and that lasted at least six months. The 'gap' was the period between last being in high school full time and the start of the first reference job.)

The gap between leaving high school and gaining the first reference job involved a diverse set of experiences. Over one-third of youth had their first reference job within six months of leaving or graduating from high school. Even among those who undertook further studies at some point after high school, large proportions had reference jobs on or within six months of leaving full-time high school. At the same time, large numbers of the leavers and high school graduates without further formal education undertook training of some kind during the gap.

High school graduates who did not pursue further education or training were more likely than high school leavers to find a reference job within the first six months of leaving full-time high school, were less likely to be unemployed when the gap exceeded six months, and among men, were unemployed for fewer months during a gap of six months or more. Compared to leavers then, there were some advantages in having a high school diploma even for those who did not undertake further education. However, high school graduates who pursued postsecondary education or training were substantially better off than either of these groups: they spent less time during the gap being unemployed and spent more time in education or training activities.

Overall, analysis of the 'gap' indicates that the patterns documented in the 1980s appear to have continued into the 1990s: transitions from school to work are complex, there is no clear point of transition from school to work, and young people are combining school and work in many diverse ways.

## Chapter 4

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### Labour Market Participation, Employment and Unemployment

About 84% of Canada's 22 to 24 year-olds were participating in the labour force at the time of the survey. More than one-half of the 16% of youth who were not in the job market were full-time postsecondary students. The rest were concentrated among female leavers and female high school graduates without further education or training. Unemployment rates were generally lower for groups with higher levels of educational attainment.

A negligible proportion of youth without jobs were not looking for work because they 'believed no work was available', or because they were simply 'not interested in finding work'. This is consistent with other studies that have found that the work ethic among Canadian youth is strong.

Among the methods young people used to find the jobs they held, personal networks and direct contact with employers were important. Youth with higher levels of education were most likely to have been successful through sending out their resumé, using an employment agency or centre, or by answering newspaper advertisements—all methods that rely more on credentials than on personal connections.

Youth aged 22 to 24 tended to work in service industries and in consumer services in particular. Correspondingly, sales and service occupations were most common. At this age, youth were still very much in the process of transition, as large numbers of youth were working in jobs that did not require the level of education they had attained. Over time, however, many young people, especially those with further education, had moved out of consumer service jobs and into more highly skilled work.

## Chapter 5

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### Quality of Youth Employment

About one-quarter of 22 to 24 year-olds with jobs were employed part time in their main job: 30% of women and 20% of men. These proportions were higher than for the labour force as a whole (28% of women and 10% of men). Attendance at school or training programs was the largest single reason for part-time employment for both men and women. Women were more likely than men to be working part time because of personal or family responsibilities.

Temporary jobs accounted for over 18% of all employment, ranging from 13% among leavers and those with a high school diploma alone, to over 20% among those with further education. Self-employment accounted for less than 10% of all jobs. Its incidence was highest among male leavers (11%) and among men with some postsecondary education (12%).

Non-standard employment (temporary, self-employment as well as part-time work) represented 41% of total youth employment. When students were excluded, the percentage was 34%. In comparison, 31% of the total work force had some form of non-standard employment during 1995. Multiple job holding (13%) was much more common among youth than in the work force as a whole (5%).

Among non-students, male university graduates had the highest median weekly wage (\$577), while the lowest (\$260) was earned by female leavers. Women's wages were significantly lower than those of men in all groups except students, partly reflecting their higher rates of part-time employment.

Young people who were working expressed a remarkable degree of satisfaction with their work, even among those who had jobs that did not require high skill levels. The intrinsic rewards of the work (i.e., the type of work, work demands) were the most important source of satisfaction.

## Chapter 6

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### Skill Use Among Youth

As Canada's economy becomes more knowledge-based, demand for workers with higher level skills has increased. The 1995 SLF set out to measure how often young people used various types of skills: reading, writing, numeracy, verbal communication, learning, and group or teamwork. It also asked youth to assess their own level of ability in these same skill areas.

Skill-use measures as well as self-assessments indicated that writing and verbal communication skills were least used among youth aged 22 to 24. Learning and teamwork skills were more commonly used.

Low skill use appeared to be more common among youth with less advantaged backgrounds, although after taking other factors into account (such as education and employment status), these differences largely disappeared. Low educational attainment, whether high school leaving or graduation with no further qualifications, was associated with low levels of skill use. Youth who were employed or who were post-secondary students were most likely to have reported higher levels of skill use and self-assessed skill abilities.

## Chapter 7

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### Do Early Childhood Experiences Affect Labour Market Outcomes?

This chapter explores the possibility that labour market difficulties among some youth may be related to problems in early childhood—problems that might also be factors contributing to school leaving. Thus, for some young people, labour market difficulties may not be solely indicative of educational attainment.

Many high school graduates without further education or training may be in the same pool of workers as school leavers. There was considerable overlap in the distributions of these groups in terms of wages and the amount of time spent working.

The analysis investigates a tentative link between early childhood experiences and outcomes later in life. For example, early grade failure (although an imperfect indicator of other childhood difficulties) is related to labour market success, even within the high school leavers and graduates groups taken separately. The evidence from the analysis is far from conclusive and further research using other data sources is needed. Although encouraging young people to stay in school may benefit some, if other underlying factors are at play, then early identification of childhood problems and appropriate intervention remain important.

## Chapter 8

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### Summary and Conclusions

As Canada's economy becomes increasingly knowledge-based, more jobs now require high levels of education and skills. Therefore, 'low education' may exist not just among high school leavers, but also among other youth with relatively low education in an increasingly highly educated society. In terms of labour market outcomes, youth with just a high school diploma did have some advantages over high school leavers. However, high school graduates who pursued postsecondary education or training were substantially better off than either of these groups.

Low educational attainment, whether high school leaving or graduation with no further education or training, was associated with low levels of skill use. Youth who were employed or who were postsecondary students were most likely to have reported high levels of skill use and self-assessed skill abilities. Without the kind of work or learning environment that would allow them to use their skills, some youth could be at risk of not being able to maintain and develop the skills they may have already, and of not having the opportunity to acquire new ones.

Encouraging people to stay in school may help some, particularly if they are able to benefit from further education or training. For others with more fundamental problems, a lack of labour market success may be in store even if they manage to finish high school. This suggests a continued need to identify and address potential problems among children at as early a stage as possible.

The patterns documented in the 1980s appear to have continued into the 1990s: transitions from school to work are complex, there is no clear point of transition from school to work, and young people are combining school and work in many diverse ways. At age 22 to 24, the young people under study were still very much in the midst of their school-work transitions. Nevertheless, the research adds to a growing body of literature suggesting that in a knowledge-based economy, higher education is the major pathway to improved labour market outcomes for individuals.

Although the main emphasis in this publication is on education or training beyond high school, other conditions are also necessary for successful school-work transitions. Early childhood experiences may be important, independent of educational attainment. Also, consideration must be given to the availability of work to youth across the country and over time. Continued gathering and analysis of information on factors affecting the development of children as they grow up, and better information about the availability of work to young people across the country, will be required to further our understanding of school-work transitions among youth.

High school completion remains important. First, high school graduates do fare somewhat better than those without a high school diploma. Also, to the extent that it facilitates further studies, high school graduation is a critical step in gaining access to high-skill, higher paying work for those who aspire to it. For many young people, in an increasingly knowledge-based economy and society, high school may not be enough.



# Chapter 1

## Looking at School-Work Transitions<sup>1</sup>

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### What are 'school-work transitions'?

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The term 'school-work transitions' refers to the way young people move among and within the worlds of education, training and work. For many young adults, the boundaries between these aspects of life are no longer as clear as they may have been in the past. Many young people get their first job experience while they are still in school. Participation in postsecondary education is higher today than ever, increasing the age at which many young people enter the adult work world.

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*School-work transitions: the various ways that young people move among and within the worlds of education, training and work.*

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The work world has also changed: part-time, temporary and contract work have all become more common because of some fundamental changes taking place in the Canadian economy. The term 'school-to-work transition' used to reflect the traditional pattern of moving from school straight into the work world. Today, a more accurate term might be 'school-work transitions', taking into account the variety of movements and overlaps that can exist among education, training and work.

### How has the economic context changed?

---

There are some fundamental changes taking place that have affected the Canadian labour market. Everyone has heard the buzz words:

*globalization, information revolution and economic restructuring, to name a few. These changes have had, and will continue to have, a profound impact on the availability and nature of work in this country.*

### Cyclical changes

The labour market has always been affected by fluctuations in the business cycle—the periodic expansion and contraction of the economy. For example, unemployment rates rose during the economic recession of the early 1980s, declined during the period of economic growth in the mid to late 1980s, and then increased again with the recession of the early 1990s. However, the most recent economic recovery has not been accompanied by declining unemployment rates to the same extent as in previous recoveries. This is largely because more fundamental changes are taking place in the Canadian economy.

### Structural changes

Technological change and trade globalization are having profound effects on the structure of the world economy. In Canada, many of the industries on which the economy had traditionally been based (including resource industries and manufacturing) have had to change the way they do business in order to remain competitive in an increasingly international market-place. In some cases, this has meant considerable downsizing of work forces and the increased use of part-time or contract workers.

Increasingly, Canada is becoming a knowledge-based economy with a growing service sector. 'Knowledge workers'—those who work with ideas—are the fastest growing category of

## What's Been Happening to Youth?

There is a general perception that transitions for young people have become more difficult in recent years. Although youth have always had higher rates of unemployment relative to adults, there is no doubt that the recession of the early 1990s created a difficult labour market for young people. This section provides some background and context for understanding the youth labour market of the 1990s.

### The youth population declined over the 1980s

The size of the youth population decreased over the 1980s. In fact, there were 800,000 fewer people aged 15 to 24 in 1990 than there were in 1980. During the 1990s, the size of the youth population remained about the same.

As a proportion of people in the labour force aged 15 to 64, the youth population is declining. In 1976, people aged 15 to 24 accounted for 30% of the labour force. By 1995, this proportion had declined to 20%. While the youth population is projected to grow over the next 20 years, its share of the labour force is expected to continue to decline slightly, reaching 18% in 2016.<sup>2</sup>

### Postsecondary participation has increased

Despite declines in the size of the youth population, postsecondary enrolments have continued to increase throughout the 1980s and 1990s. As a result, an increasing proportion of youth are enrolled in school. Full-time enrolment has increased from about 40% of youth aged 15 to 24 in the early 1980s to 56% today. Although enrolment for youth aged 15 to 19 has plateaued at around 80%, enrolment for youth aged 20 to 24 has more than doubled since the early 1980s, now standing at about one in three young people this age.

### Youth have been participating less in the labour market

Coinciding with the increased likelihood of young people to be students, smaller proportions of youth have been working or looking for work in recent years. Labour force participation among people aged 15 to 24 has fallen since the late 1980s.

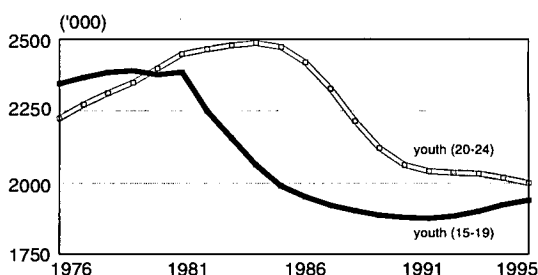
### Youth experience higher unemployment than adults

The youth unemployment rate has consistently exceeded that of the adult population and has been more affected by the business cycle. Historically the youth unemployment rate has been about twice the rate of the adult population. Young workers are often the 'last hired and first fired' because of their relative lack of seniority and experience. As a result, they have a higher turnover rate and, therefore, a higher unemployment rate than their older counterparts.

In 1991, when the initial School Leavers Survey was conducted, the Canadian economy was in recession. Since then, unemployment rates have remained persistently high, despite the recovery. By 1995, the labour force participation and unemployment rates of youth had not yet fully benefited from gains in economic growth.

CHART 1-1

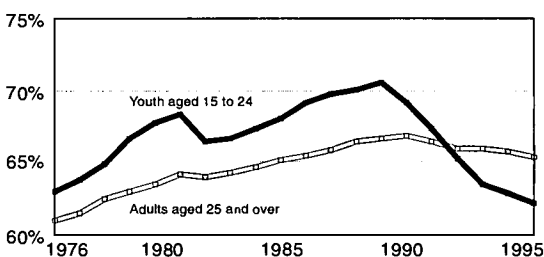
### Youth population has declined



Source: Statistics Canada, Labour Force Survey, Annual Averages.

CHART 1-2

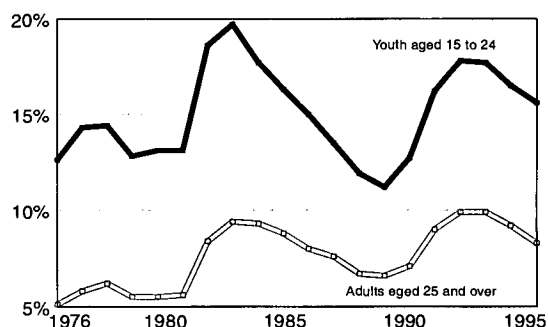
### Labour force participation among youth has declined in recent years



Source: Statistics Canada, Labour Force Survey.

CHART 1-3

### Youth unemployment rates more volatile

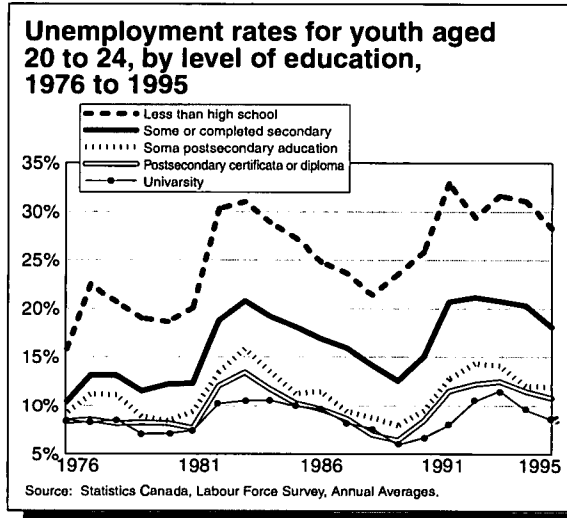


Source: Statistics Canada, Labour Force Survey.

### Employment prospects for less educated youth have deteriorated

For young people with postsecondary education, unemployment rates are much lower than for those with less education. This finding has been consistent over the past two decades. These differences in unemployment rates have been most pronounced in recent years, largely because the demand for labour has been shifting in favour of more highly skilled workers.

CHART 1-4



### Substantial declines in average earnings for younger workers

The average earnings of young men and women have declined substantially since the early 1980s. The gap in earnings between people aged 17 to 24 and older age groups has widened over this period. In part, this is due to larger numbers of students who are combining work and full-time school. However, increases in part-time and seasonal employment among non-students are also behind the decrease in average earnings for youth.

### Youth with higher education faring better

Despite the effects of the early 1990s recession, the employment prospects of postsecondary graduates have remained quite stable. The unemployment rate of university educated 20 to 24 year-olds has followed the ups and downs of the economy, but has displayed no upward trend. In addition, results of the National Graduates Surveys indicate that the proportion of postsecondary graduates working full time two and five years after graduation has remained stable since the class of 1982. Similarly, the earnings prospects of educated youth have remained stable since the early 1980s.

CHART 1-5

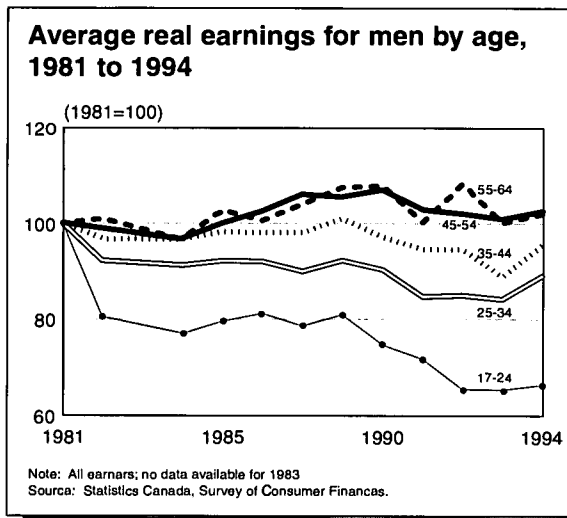


CHART 1-7

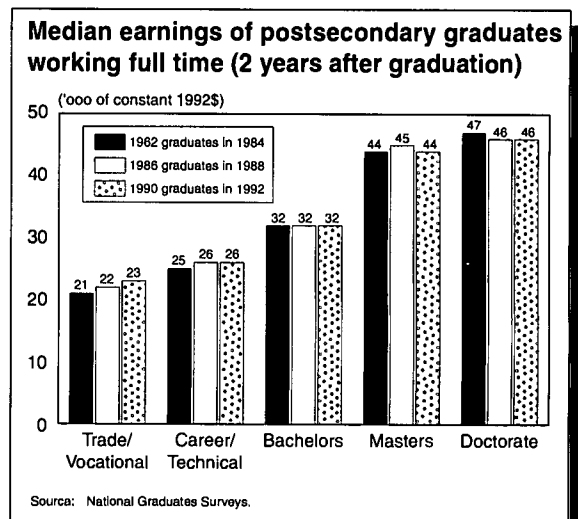


CHART 1-6

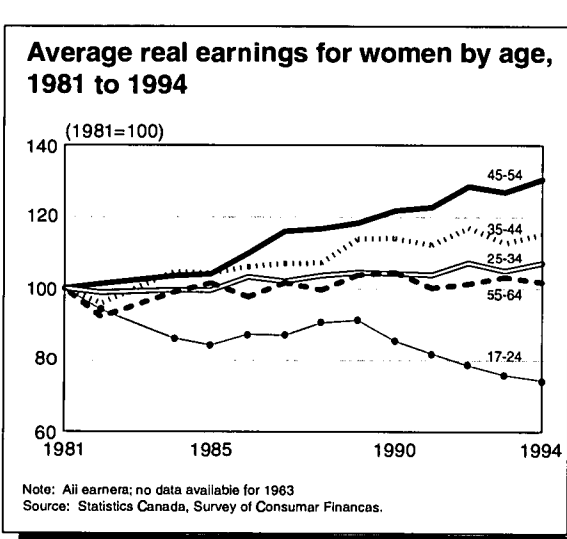
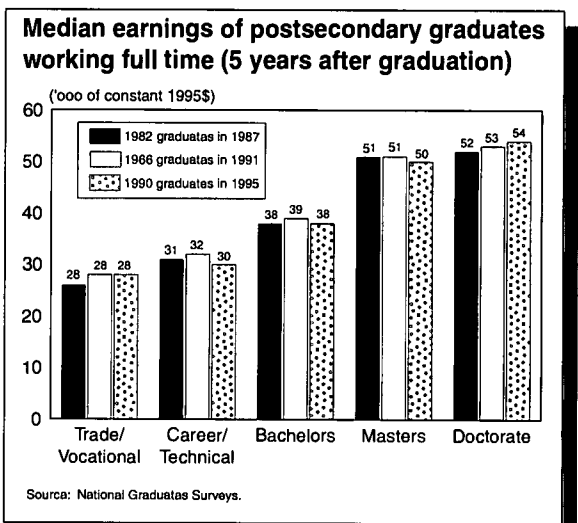


CHART 1-8



employment, increasing to 13% of employment in Canada by 1995 from 6% in 1971.<sup>3</sup> Structural changes are affecting the kinds of employment opportunities available, as well as the types of skills and work patterns required to work in those jobs.

## **Demographic changes**

Demographic forces are also among the factors shaping the economy and the labour market, and will likely affect young people's job and career prospects in the coming years. Many members of the generation that grew up in the shadow of the baby boom have so far had a difficult time in finding rewarding and lasting work. But the situation may improve as Canada's population ages. As baby boomers move past retirement age, people of working age will represent a smaller proportion of the total population.

## **What do these changes mean for Canadian youth?**

Economic restructuring (resulting from globalization of trade and advancing technology) is a fact of life as we move into the 21st century. Major adjustments are taking place in the labour market: substantial reorganization in both the public and private sectors, increases in non-standard employment, and changes in the skill levels required for various jobs. In this kind of environment, the young people who will be successful in the work world will be those who are well-educated and skilled, and who are highly motivated, flexible and entrepreneurial.

Service industries are expanding and changing, creating new career possibilities. These are not just low paying, low skill jobs; many high-skill jobs are also being created in the new knowledge-based economy. High technology, communications and financial services are just a few examples of where new jobs are emerging. In the new job market, however, the stakes have been raised in terms of the education and skills needed to find and keep the so-called 'real' or 'good' jobs.

## **Models of school-work transitions**

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In some countries, school-work transitions resemble a 'market' process, where students make

educational choices about how far to go and in what field, and then compete in the labour market for jobs. In its pure form, the market model would be characterized by a complete lack of formal involvement in the transitions process by institutions or employers. Most often, however, some degree of such involvement does exist in initiatives like co-operative education programs or business-sponsored internships.

With an 'institutional' approach, on the other hand, there are organized interactions between businesses, schools, unions and governments to facilitate school-work transitions among young people. Under this model, there is formal involvement by educational institutions and employers in the transition process in an effort to link supply with demand. Many European countries have a long tradition of using this type of approach to connecting youth to the labour market (for example, apprenticeship programs in Germany).

The Canadian model of school-work transitions is one that offers multiple and flexible pathways, with opportunities to return to school and change direction. A strength of the Canadian system is its flexibility, adaptability and range of opportunity and choice. Youth are responsible for a series of important learning and career decisions and are expected to play a major role in funding their postsecondary education.

It is possible to blend good features from both the market and institutional approaches. Indeed, many examples of school-work programs (such as co-operative education, youth internships and business-education partnerships) can be found in Canada.

## **How do researchers think about school-work transitions?**

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There are many schools of thought on how to conceptualize the school-work transitions process. Some focus on the supply side of the equation: what education and skills do young people require to successfully enter the labour market? This 'human capital' perspective suggests a variety of interesting and useful research questions. What levels of education and skills do young people have, and how do they acquire them? Is it really the skills people gain through education and training that get them their jobs, or do credentials just

give employers an easy way to distinguish between prospective employees?

A related approach looks at the degree of segmentation that exists in the labour market to understand school-work transitions. That is, to what extent do young people have access to only certain kinds of jobs in only certain industries? This approach is also useful for thinking about the labour market activities of particular target groups, such as women, people in visible minorities and immigrants.

Yet another approach focuses on the factors that affect the demand for labour. How do changes in the work environment (such as technological or organizational changes) affect the skill sets required of young workers? How do globalized markets and freer trade with other countries affect Canadian industries and the demand for labour? How will the shifting age structure of Canadian society impact on the job prospects of youth in transition? Clearly, this kind of a focus suggests a different range of questions to investigate, and a completely separate set of policy implications as a result.

Thus, there are many ways of looking at the issues that affect how young people move into the world of work.<sup>4</sup> Each approach has its own set of assumptions, and each is valid in its own way. The chapters that follow do not necessarily share the same theoretical perspective or set of assumptions. Neither are they necessarily contradictory. Instead, they focus on different aspects of school-work transitions and serve to increase overall understanding.

## **What do the School Leavers Surveys tell us about school-work transitions?**

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### **The 1991 School Leavers Survey**

The 1991 School Leavers Survey (SLS) provided important information more about the school leaving phenomenon than about school-work transitions.<sup>5</sup> By surveying a sample of young people aged 18 to 20, we learned that the high school leaver rate was actually considerably lower than what was commonly thought. Newspapers, policy makers and politicians had come to accept as fact that the leaver rate was 30% or more. Such estimates based on administrative data, however, do

not take into account people who 'stop out' of the system. The 1991 SLS indicated that only 18% of 20 year-olds had not graduated from high school. This finding was consistent with information on educational attainment available from the Census and from the Labour Force Survey (which also indicate a steady improvement in educational attainment among youth in recent decades).

In addition to giving us better information about the magnitude of school leaving, the 1991 SLS also provided rich information about the circumstances of youth who left school. Young men were more likely than young women to be school leavers. Surprisingly, almost 40% of leavers were aged 16 or less when they left school and one in three had Grade 9 education or less.

Leavers were more likely to come from single-parent families, from families who did not think high school completion was very important, and from lower socio-economic backgrounds. However, the fact that 31% of leavers did not come from these high risk groups and that one out of three high school graduates came from high risk groups indicated that there was a lot more to leaving school than just family background.

The school experiences of leavers and graduates were also different. Leavers were more likely than graduates to report that they did not enjoy school; to express dissatisfaction with their courses and school rules; to have problems with their teachers; to not participate in extracurricular activities; to participate less in their classes; to have friends not attending any school; to associate with peers who did not consider high school completion important; to not fit in at school; and to skip classes.

In comparing the labour market and life outcomes of school leavers and graduates, the original School Leavers Survey indicated that leavers were far worse off. Many more leavers than graduates had not taken any further education or training. More leavers than graduates encountered unemployment, worked in blue collar occupations (for men) and in service jobs (for women), and worked long weekly hours. Despite lengthy hours, both leavers and graduates had low incomes, and leavers had greater dependency on employment insurance, social assistance and family allowances. Financial dissatisfaction was high, particularly for leavers. In light of long work hours, it may have been difficult for leavers

to escape from their economic and educational circumstances. More leavers than graduates had difficulty filling out job applications and indicated that their basic skills restricted their job opportunities. Leavers revealed more uncertainty about their future career directions than graduates. Leavers were also less involved than graduates in almost all leisure time activities.

The overall picture that emerged from the results of the 1991 SLS was one of 'cumulative disadvantage'. Leavers appeared to benefit less from their family backgrounds, school experiences, academic performance, part-time jobs and social behaviours. Having left school, they were at a further disadvantage regarding employment and life opportunities.

## The 1995 School Leavers Follow-up Survey

The people responding to the 1991 SLS were aged 18 to 20: still a fairly early stage to be assessing employment and life outcomes. Therefore, conducting a follow-up survey of the same group of young people four years later (so by 1995 they were aged 22 to 24) would give an updated picture of how they were doing. By asking more detailed questions about their education, training and labour market experiences since high school, the 1995 School Leavers Follow-up Survey (SLF) gives us a unique chance to further study school-work transitions among youth.<sup>6</sup>

First of all, what kind of educational activities had they pursued? How many school leavers had gone back and earned their high school diploma? What proportions of leavers and graduates went on to take further education or training? What type of education or training? Did they complete any certificates, degrees or diplomas beyond high school?

Next, were these young people able to find work? If so, what kind? How long did it take them to find it? The 1995 SLF asked questions about their first 'reference' job (involving at least 20 hours per week for at least six consecutive months), their most recent reference job, and their current job. This allows us to examine the industries and occupations that they were working in, as well as a variety of contextual information surrounding those work experiences. Were their jobs full or part time? How common was self-employ-

ment? Which aspects of the work were satisfying? Which were dissatisfying? What job search strategies did they use to find their jobs?

The 1995 SLF also asked a range of questions about skills: reading, writing, numeracy, verbal communication skills, learning skills, and group or team work. How did they assess their own skill abilities? What skills did they use? Were these skills related to their level of education or job experience?

Also, all the background data collected during the 1991 SLS are still available. Using this information together will help to further our understanding of school-work transitions. This publication does not pretend to have exhausted this rich data source. A public-use microdata file is available for researchers to explore questions not answered in this volume, as there are many more details to examine and issues to address. In addition, what we learn as a result of the School Leavers Surveys will assist in the development of future surveys of youth and school-work transitions; we will have a better appreciation of what questions to ask and how best to ask them.

## High School May Not Be Enough?

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The title of this publication, *High School May Not Be Enough*, could be interpreted in a number of ways. High school may not be enough what? Not enough further education or training beyond high school? Not enough quality or appropriateness in the high school experience itself? Or not enough quality education in earlier years?

Could 'not enough' also involve factors related to the labour market? Not enough experience on the part of youth? Not enough entry-level opportunities in the job market? Or not enough demand for labour at different skill levels?

Or could 'not enough' perhaps allude to developmental factors? Not enough nutrition as a child? Not enough appropriate parenting to provide youth with the necessary social and coping skills? Not enough support and encouragement from parents, teachers or others during the formative years? Or not enough access to effective health or social services for those who required them?

Many factors affect the development and well-being of young people. In much of the analysis presented in the following chapters, however, the emphasis is on the level of educational attainment of youth. Indeed, this was the way the original School Leavers Survey was designed: to examine the relative outcomes of high school leavers and high school graduates.

But this does not mean that educational attainment, in and of itself, tells the whole story. Nor should the implication of the publication's title necessarily suggest that everyone ought to go to college or university. Despite the expansion of the knowledge economy, there will always be work available that does not require higher levels of education or skills. Moreover, many people will continue to seek and find fulfilment in various kinds of work and in other aspects of life.

The demand side of the youth labour market equation is not addressed directly in this publication. By the very nature of the School Leavers Surveys, the focus is on the supply side: the relative levels of education and skills that different groups of youth bring to the labour market, and the various outcomes that result. Chapter 7, however, takes quite a different perspective by raising the possibility that early childhood experiences may also be important, independent of the level of education a person manages to achieve. This perspective reminds us that although the information presented here will be useful and informative to many, it remains incomplete. Other surveys of children and youth that explore in much greater detail some of the factors outlined above, and studies that focus on the demand for labour will continue to be required to further our understanding of school-work transitions among youth.

## Notes for Chapter 1

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1. The material contained in Chapter 1 came from many sources, including the references listed for this chapter. Specific contributions came from Sid Gilbert (in the description of models of school-work transitions) and from Philip Jennings (in the 'What's Been Happening to Youth' section). In addition, discussions with all the contributors and comments from reviewers (particularly Louise Boyer, Valerie Clements, Doug Giddings and Harvey Krahn) also resulted in various ideas

that found their way into the chapter. Jeff Frank put them into the form presented.

2. Based on Statistics Canada Population Projections, 2006 to 2016, medium-growth scenario.
3. Lavoie, Marie and Richard Roy, "Employment in the Information Economy: A Growth Accounting Exercise for Canada," in *Quarterly Macroeconomic & Labour Market Review*, Human Resources Development Canada, Spring 1997.
4. For more detailed discussions of labour market theories, see Krahn, Harvey and Graham S. Lowe, *Work, Industry and Canadian Society*, Chapter 4, Scarborough: Nelson Canada, 1993, and Van den Berg, Axel and Joseph Smucker (eds.), *The Sociology of Labour Markets*, Scarborough: Prentice Hall, 1997.
5. For more information, see Gilbert, Sid, Lynn Barr, Warren Clark, Matthew Blue and Deborah Sunter, *Leaving School—Results from a National Survey Comparing School Leavers and High School Graduates 18 to 20 Years of Age*. Human Resources Development Canada and Statistics Canada, Catalogue Number LM-294-07-93, September 1993. (Also available on the Internet at <http://www.hrdc-drhc.gc.ca>).
6. Initial results of the School Leavers Follow-up Survey, 1995 were presented in *After High School, The First Years*, Human Resources Development Canada and Statistics Canada, Catalogue Number LM-419-09-96. (Also available on the Internet at <http://www.hrdc-drhc.gc.ca>).

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Statistics Canada. *Labour Force Update: Youths and the Labour Market*. Catalogue Number 71-005-XPB, Spring 1997.

Statistics Canada. *Perspectives on Labour and Income*. Various issues, Catalogue Number 75-001-XPE.



# Chapter 2

## Educational Pathways

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*Sid Gilbert and Jeff Frank*

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### Emergence of a high education society

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Education is extremely important—not just for individuals, but also for whole societies. According to a recent report of the Organisation for Economic Co-operation and Development (OECD),

A well-educated and well-trained labour force is critical to the social and economic well-being of OECD countries. Education plays a role in expanding scientific knowledge and transforming it into productivity-enhancing technology, as well as in raising the skills and competencies of the population, thereby improving the capacity of people to live, work and learn well.<sup>1</sup>

Historically, Canadians were not highly educated as they are today. In 1951, over one-half (52%) of the adult population had less than a Grade 9 education. Forty years later, however, just 14% had this amount of education. On the other hand, between 1951 and 1991 the proportion of Canadians holding a university degree increased over fivefold.<sup>2</sup> By 1991, 46% of the Canadian population aged 15 and over had completed some form of postsecondary education.

These changes represent a significant shift in the level or stock of education in the overall Canadian population, young and old included. If older, less highly educated Canadians are excluded from the analysis and only the young examined, the change is even more pronounced. By 1991, the proportion of Canadian youth with less than a Grade 9 education dropped to only 4%, or one-tenth of what it was in 1951.<sup>3</sup>

Canada is becoming a high education society, at least in terms of attendance and graduation.

Students are staying in school longer and are attaining higher levels of education. In a society where educational attainment is increasing, what are the outcomes for those who have less education? 'Less education' refers not just to those who leave high school before completion, but also to those who graduate from high school and do not pursue further education or training. Another key issue is the extent to which educational attainment varies by young people's background characteristics. If educational attainment is socially structured or patterned, then opportunities are not equal, unfairness results, and human talent and abilities are wasted.

### Examining the change in high school status

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In this section we describe the change in high school status between 1991 and 1995 for the entire group under study. This change is summarized graphically in the top two bars of Chart 2-1.

In 1991, the young people surveyed were aged 18 to 20: 63% were high school graduates, 16% were school leavers (were not in high school and did not have a high school diploma), and 21% were high school continuers (were still attending high school). By 1995, these same young people were aged 22 to 24: 85% had graduated from high school, 14% were school leavers and less than 1% were still attending high school.<sup>4</sup> Clearly, finishing high school is a longer process for some young people than it is for others. Some stay in school but take longer to complete, while others take longer because they 'stop out' and complete their high school studies later.

The top two bars of Chart 2-1 show how young people's high school status evolved

## Updating the high school non-completion rate

The 1991 SLS interviewed youth aged 18 to 20. Because many of the 18 and 19 year-olds were still in high school, only youth aged 20 were used to calculate the high school non-completion rate (also commonly referred to as the 'high school leaver rate'). In 1991, 18% of 20-year-olds were not in high school and had not received a high school graduation certificate, diploma or its equivalent.

By 1995, the young people interviewed in the follow-up survey were aged 22 to 24. To see how the high school non-completion rate changed over the four-year period, we examine only those who were 24 years of age (the same youth who were aged 20 in 1991). The proportion of 24-year-olds without a high school diploma in 1995 was 15%.

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*For youth who were aged 20 in 1991 and 24 in 1995, the high school non-completion rate fell from 18% to 15%, as some young people took longer to complete than others.*

---

**Table 2-1 High school non-completion rates of youth aged 20 in 1991 and 24 in 1995, Canada and the provinces**

	1991 (age 20)	1995 (age 24)
Canada	18%	15%
Newfoundland	24%	19%
Prince Edward Island	25%	21%
Nova Scotia	22%	17%
New Brunswick	20%	16%
Quebec	22%	19%
Ontario	17%	14%
Manitoba	19%	14%
Saskatchewan	16%	11%
Alberta	14%	11%
British Columbia	16%	13%

between 1991 and 1995. The first and most obvious observation is that 100% of the 1991 graduates were still graduates in 1995. Second, the overwhelming majority (88%) of those still in high school in 1991 (continuers) had graduated by 1995, and only 10% became leavers. Perhaps most interesting is the fact that one in four of those who were high school leavers as of 1991 had returned to school and graduated by 1995. This phenomenon has always been known to exist, but data from the 1995 SLF give a good indication of the extent to which leavers return to complete their high school studies.

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*One in four of those who were high school leavers as of 1991 had completed their high school studies by 1995. It has always been known that some leavers eventually become high school graduates, but data from the 1995 SLF give a good indication of the extent to which this takes place.*

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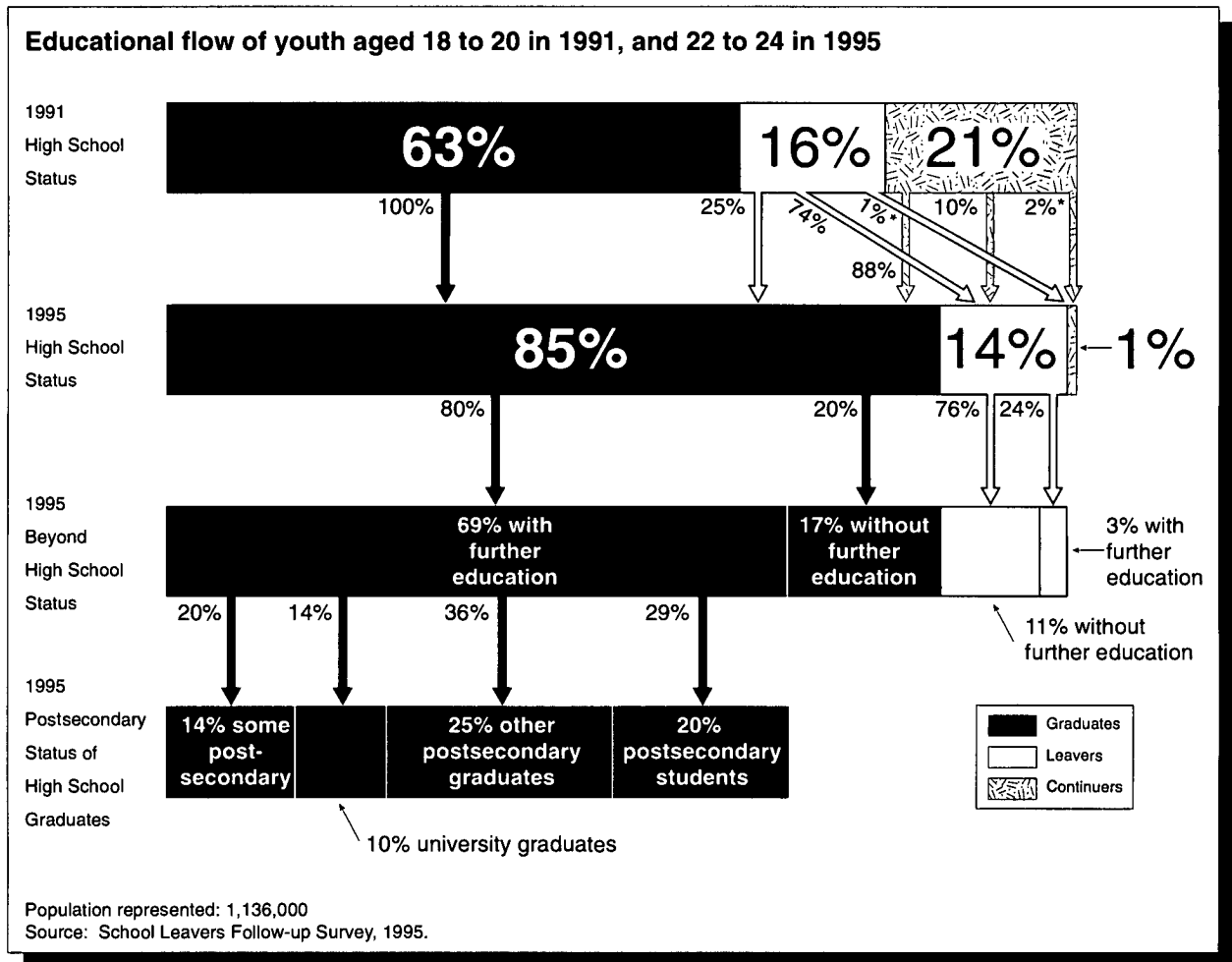
In summary, the high completion rate among those who were high school continuers in 1991, the fact that one in four leavers returned to school and graduated, and the substantial proportion of those who were already graduates as of 1991, together result in the high rate of high school completion and the low rate of non-completion among youth aged 22 to 24 in 1995.

## Age at high school graduation

Among high school graduates, about seven in ten earned their diploma at age 18 or younger (72%). Another 17% graduated at age 19. Consequently, nearly nine in ten graduates completed high school by the time they were 19 years old.<sup>5</sup> Female graduates (92%) were slightly more likely than their male counterparts (86%) to have done so.

Conversely, 11% of graduates finished high school at age 20 or older, with men more likely to be in this category (14%) than women (8%). Thus, about one in ten graduates completed high school between the ages of 20 and 24, indicating that these additional years make a difference to

CHART 2-1

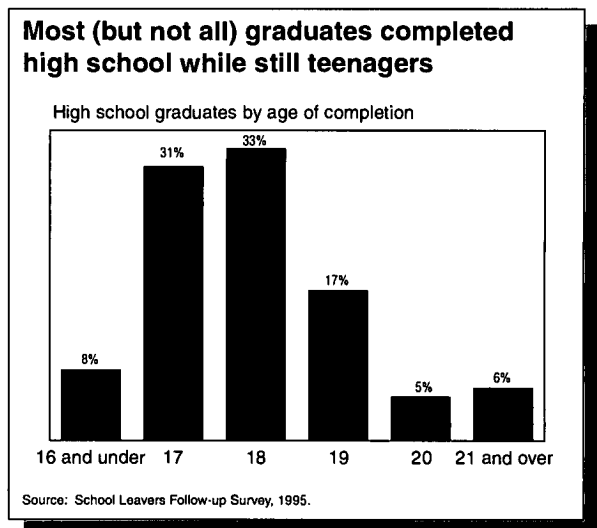


high school completion rates. Using an older age cut-off more accurately estimates the rate of high school completion among youth.

*While most graduates completed high school while still teenagers, one in ten graduated between age 20 and 24.*

Thus, a notable proportion of high school graduates aged 22 to 24 received their diploma on or after their 20th birthday. Institutions and programs that make high school studies or equivalencies accessible to adults likely played an important role for many of these older graduates.

CHART 2-2



## Further education beyond high school

The progress of the high school graduates and leavers also needs to be reviewed in terms of postsecondary attendance and graduation. How many took further education or training after high school towards a certificate, diploma or degree? What postsecondary destinations were selected and how many students had actually completed a program by 1995? What was the distribution of youth aged 22 to 24 along the educational attainment ladder?

The bottom two bars in Chart 2-1 show the distribution of the 1995 graduates and leavers in terms of postsecondary education and training. The vast majority of the high school graduates (80%) acquired at least some further education or training towards a certificate, diploma or degree while 20% did not. For high school leavers, the situation was essentially the reverse: 24% of leavers took some form of postsecondary education or training while 76% did not. These leavers

may have lacked the credentials or prerequisites often necessary for further study, making access to postsecondary education more difficult for them.

---

*Four out of five high school graduates had taken education or training towards a degree, diploma or certificate beyond high school. Only one in four high school leavers had pursued further education or training.*

---

Overall, the youth under study were highly educated. Among people aged 22 to 24 in 1995, 85% were high school graduates. Of these, four out of five had taken further education or training toward a degree, diploma or certificate beyond high school. And of these, about 80% had either completed a postsecondary program or were still enrolled as students. This indicates a substantial level of participation in postsecondary education and is characteristic of a high education society.

**Table 2-2 Educational categories for analysis**

1991 high school status (youth aged 18 to 20)	1995 high school and postsecondary <sup>a</sup> status (youth aged 22 to 24)
Leavers (16%)	Leavers (14%): Without further education or training (11%) With further education or training (3%)
Graduates (63%)	Graduates (85%): Without further education or training (17%) With further education or training (69%): Some postsecondary (14%) University graduates (10%) Other postsecondary graduates (25%) Postsecondary students (20%)
Continuers (21%)	Continuers <sup>b</sup> (1%)
Total <sup>c</sup> (100%)	Total (100%)

- Only high school graduates with further education or training are further categorized by type of postsecondary education.
- The analysis in this publication does not include, as a category, people who were high school continuers in 1995. Because of the small numbers involved, estimates of the characteristics and activities of continuers are not reliable enough to publish.
- Percentages may not add up to sub-totals or totals due to rounding.

Source: School Leavers Survey, 1991 and School Leavers Follow-up Survey, 1995.

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*Results from the 1995 School Leavers Follow-up Survey indicate a substantial level of participation in postsecondary education among youth aged 22 to 24. This is characteristic of a high education society.*

---

This brings us to the bottom row of Chart 2-1 that gives the most detailed breakdown: the distribution of high school graduates with postsecondary education. Of youth aged 22 to 24 in 1995, 69% were high school graduates with further education or training; 14% had some postsecondary education or training; 10% were university graduates; 25% were other postsecondary graduates; and 20% were still postsecondary students at the time of the survey. Seventeen percent of the cohort were high school graduates with no further education or training. The two categories of leavers (those with and without further education or training) complete the distribution: 11% of youth aged 22 to 24 were high school leavers with no further education or training and 3% were leavers who had taken some postsecondary education.

These seven categories are the basic education categories used throughout this volume in various combinations and sub-sets. For example, leavers with no further education or training are sometimes compared to graduates who similarly had no further education or training. On other occasions (usually to ensure adequate numbers of leavers for analysis), all high school leavers are grouped together.

### **What could be considered 'low' education?**

---

Not only had a substantial proportion of youth continued their education or training beyond high school, by 1995, 55% had graduated from a postsecondary program or were postsecondary students. Still, substantial numbers of young people had relatively low levels of education: among the entire 22 to 24 year-old group, 14% were high school leavers and about three-quarters of these leavers had not pursued any further education or training. Another 17% were high school graduates without any further education or training. Taken together, nearly three in ten youth aged 22 to 24 had relatively low levels of educational attainment—in a society where most young peo-

ple have postsecondary qualifications or are in the process of getting them.

---

*Nearly three in ten youth aged 22 to 24 had relatively low levels of educational attainment—in a society where most young people have postsecondary qualifications or are in the process of getting them.*

---

As previously published results of the 1991 SLS and the 1995 follow-up have indicated, and as subsequent chapters will further demonstrate, labour market outcomes tend to improve with higher levels of education. A labour market in which favourable opportunities increasingly require high levels of education and skills can only intensify this relationship. This is not to say that everyone must pursue higher education in order to find appropriate work, or to have meaningful lives. Certainly, many people with lower levels of education are in labour market or life situations that they find satisfying. But for those for whom gaining access to high-skill, higher paying work is important, further education beyond high school seems to be the main way to achieve it.

### **Educational pathways**

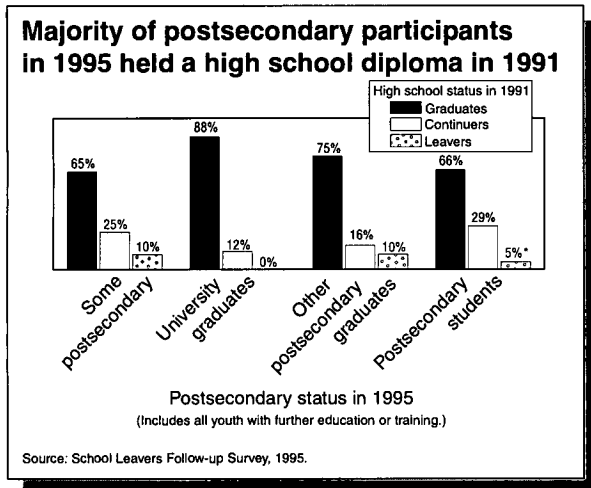
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There are a number of possible routes to the various educational destinations. How is postsecondary status in 1995 connected with high school status in 1991? Chart 2-3 shows postsecondary status for youth aged 22 to 24, according to 1991 high school status. Not too surprisingly, most people who were university graduates in 1995 had been high school graduates in 1991 (88%), while virtually no 1991 leavers had become university graduates by 1995. Among other postsecondary graduates, a large proportion were 1991 high school graduates (75%), compared to 1991 leavers (10%). For youth who had some postsecondary education as of 1995 and for those who were postsecondary students at the time of the survey, both groups were largely made up of 1991 high school graduates and, to a lesser extent, 1991 continuers.

There has been a great deal of speculation over enrolment in multiple postsecondary programs, especially the combination of university and college. How common was pursuing more than one postsecondary program? What propor-

tion of graduates with further education or training had actually completed more than one program?

CHART 2-3



In fact, only small proportions of young people had pursued or completed multiple postsecondary programs by age 22 to 24. While the phenomenon may be more common than in the past, it is impossible to assess any change over time using SLF data. What can be said, however, is that most high school graduates with further education or training (79%) pursued just a single postsecondary program, 13% took both a university and a college program (most of these were Quebec youth who had pursued a university program in addition to CEGEP), and 8% took other combinations of postsecondary programs. Smaller proportions completed more than one program (again, most of these cases were in Quebec).

*About four out of five high school graduates with further education or training had pursued just one postsecondary program. The remainder, however, did enrol in more than one program. A small proportion of these postsecondary participants (9%) even managed to complete more than one program by 1995.*

## Completion rates for postsecondary programs

What proportion of high school graduates with further education or training managed to complete a postsecondary program by age 22 to 24? How much time did postsecondary graduates take to complete their programs? Data from the 1995 SLF can be used to describe the postsecondary experiences of the group under study. At age 22 to 24, however, it is still too early to give the final word on the completion of postsecondary programs. Many young people 'stop out' for a term or semester, take fewer than the maximum number of courses, or transfer between programs, institutions and streams, thereby lengthening their time to completion. As already indicated, 11% of the high school graduates were between the ages of 20 and 24 when they graduated. Some of these students would not have had enough time to complete a postsecondary program, even if it was of relatively short duration.

Nevertheless, by 1995, 14% of high school graduates with postsecondary education had completed a university program, and 36% had obtained a college, CEGEP, professional or trade/vocational diploma or certificate. Taken together, one-half of high school graduates with further education or training had completed a postsecondary program of some type.

Among university graduates, less than one-half (43%) finished their programs within four years of completing high school. About one-third (34%) did so in five years, 15% in six years, and 8% took seven years or more. In comparison, a greater proportion of other postsecondary graduates (64%) completed their programs within four years of finishing high school, reflecting the shorter duration of most non-university programs. There were no significant gender differences in the amount of time taken to complete postsecondary programs.

**Table 2-3 Postsecondary programs pursued and completed by high school graduates with further education or training**

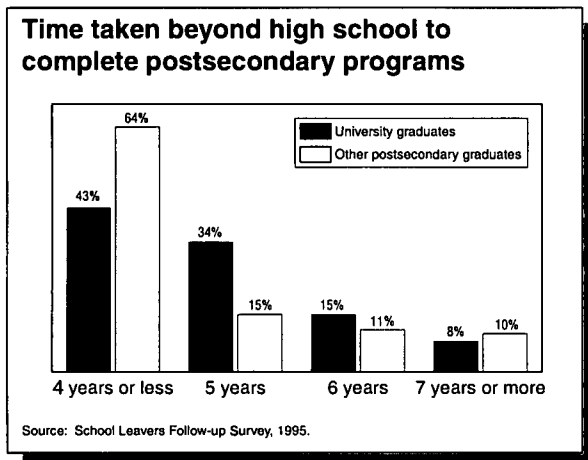
	Men		Women		Total	
	Pursued	Completed	Pursued	Completed	Pursued	Completed
One program only	81%	52%	76%	60%	79%	57%
University and college	12%	4%*	15%	8%	13%	6%
Other combinations	7%	2%*	9%	4%*	8%	3%
Total	100%	58%	100%	72%	100%	66%

Source: School Leavers Follow-up Survey, 1995.

About 43% of university graduates completed their programs within four years of finishing high school. Nearly one in four took six or more years beyond high school to complete. Completion times for non-university programs were shorter.

Young people who last attended high school in Quebec exhibited unique completion patterns for postsecondary programs. This was largely due to the likelihood that these people continued their studies in Quebec and to the unique characteristics of that province's education system. For example, a university-track student might complete high school at age 16 or 17 and then complete a two-year CEGEP program before entering university.

CHART 2-4



In addition to those who completed a postsecondary program, about three in ten high school graduates with further education or training were still postsecondary students at the time of 1995 SLF. Consequently, it is still too early to estimate postsecondary completion rates for this group of 22 to 24 year-olds. If age 24 is a reasonable age at which to estimate high school completion rates, perhaps age 29 may be a more appropriate age cut-off for estimating postsecondary completion. By the time all of these young people are 29 years old, postsecondary graduation rates, especially for university, will likely have increased substantially.

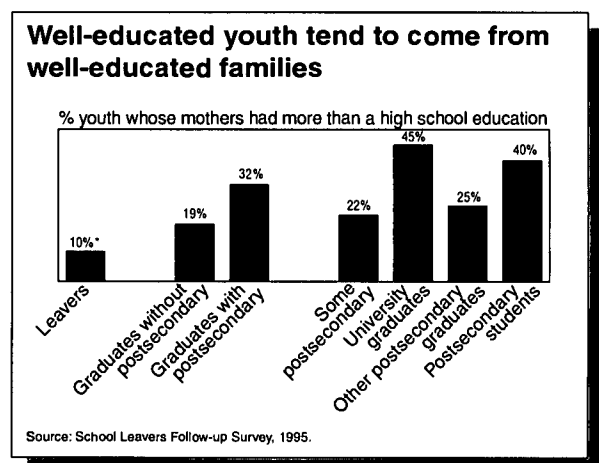
## Educational attainment related to background characteristics

Certain background characteristics, such as gender and family socio-economic status, were associated with educational attainment levels among youth aged 22 to 24. For example, men (18%) were more likely than women (10%) to be high school leavers; conversely, women (89%) more often than men (81%) were graduates. Male leavers, however, were more likely to have further education or training (most often in trade, vocational or apprenticeship programs). In contrast, a larger proportion of women (75%) than of men (63%) were high school graduates with postsecondary education or training.

Family socio-economic status (SES) is often measured using family income, parents' occupation and parents' education. These factors are closely related and, therefore, the education level of one of the parents is often used as a reasonable substitute when all the components that ideally go into a measure of family SES are not available. This is the case with the 1995 SLF. Mother's education,<sup>6</sup> as an indicator of the socio-economic status of the youth's family, was related to the level of education attained by the young people themselves.

Well-educated youth were more likely to have mothers with more than a high school education. For example, high school graduates (29%) were about three times as likely as leavers (10%\*) to have mothers with more than high school education. Among the groups of youth examined, university graduates (45%) were the most likely to have mothers with more than a high school education.

CHART 2-5



**Table 2-4 Youth aged 22 to 24 by 1995 educational status and gender**

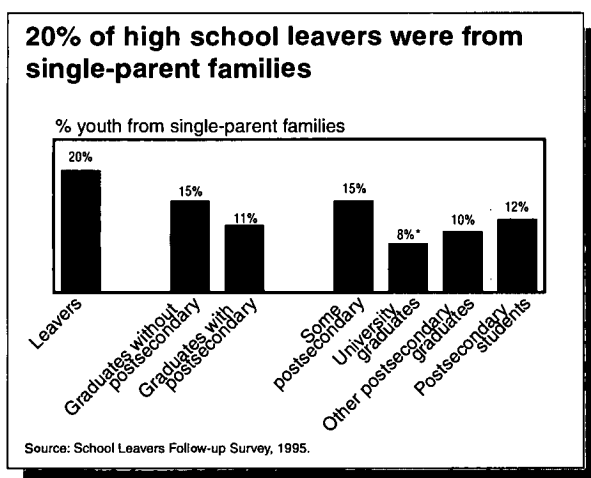
	Men	(Percent) Women	Total
<b>High school leavers:</b>	<b>18</b>	<b>10</b>	<b>14</b>
Without further education or training	13	8	11
With further education or training	5	2*	3
<b>High school graduates:</b>	<b>81</b>	<b>89</b>	<b>85</b>
Without further education or training	19	15	17
With further education or training	63	75	69
Some postsecondary	14	13	14
University graduates	9	12	10
Other postsecondary graduates	20	30	25
Postsecondary students	20	20	20
<b>Total<sup>a</sup></b>	<b>100</b>	<b>100</b>	<b>100</b>

a. Components and sub-totals may not add to totals because of rounding.

Source: School Leavers Follow-up Survey, 1995.

Whether or not these young people came from single-parent families also made a difference to their level of education. One in five high school leavers came from single-parent families—a higher proportion than in any other educational group. Conversely, high school graduates who by 1995 were university graduates were least likely (8%\*) to have come from a single-parent family, where limited resources may have made pursuing further education more difficult.

CHART 2-6



### Some 1991 leavers had become graduates by 1995

One group of particular interest is the 25% of 1991 leavers who had received their high school diplomas by 1995. What social background characteristics distinguished this group from youth who remained leavers?

The social background characteristics of these 'leaver/graduates' were compared to those who had remained leavers or graduates all along, as well as to 1991 continuers who became either leavers (continuer/leavers) or graduates (continuer/graduates). The background characteristics examined included coming from a two-parent family, mother's education, marital status, presence of dependent children, immigrant status, parental and peer attitudes to high school completion, disability and high school grades. These are displayed in Table 2-5.

The results indicate that leaver/graduates had background characteristics that fell somewhere between those who were leavers in both 1991 and 1995, and those who had been high school graduates over the entire period. For example, while 77% of leavers' parents had a very positive



**Table 2-5 Percentage of youth aged 22 to 24 with selected background characteristics**

1991 high school status: 1995 high school status:	Leavers Leavers	Leavers Graduates	Graduates Graduates	Continuers Graduates	Continuers Leavers
<b>From a two-parent family</b>					
Men	71	77	86	79	82
Women	54	69	84	78	61*
Total	65	74	85	79	76
<b>Mother had more than high school education</b>					
Men	20*	--	36	29	--
Women	--	--	36	35	--
Total	15*	22*	36	32	--
<b>Marital status—single</b>					
Men	63	71	77	82	81
Women	41	65	65	77	50*
Total	55	68	71	79	72
<b>Had dependent children</b>					
Men	28	--	7	8*	--
Women	64	46*	16	13	55*
Total	41	26	12	10	27*
<b>No disability</b>					
Men	94	95	96	96	86
Women	86	93	95	96	80
Total	91	94	95	96	85
<b>Born in Canada</b>					
Men	94	91	93	91	88
Women	98	94	94	90	90
Total	96	93	93	91	89
<b>Parents had very positive attitude toward high school completion</b>					
Men	76	90	98	96	87
Women	79	83	97	98	93
Total	77	87	97	97	89
<b>Friends had very positive attitude toward high school completion</b>					
Men	41	62	78	75	60
Women	46	45*	84	85	69
Total	43	55	81	80	63
<b>High school average during last year was A or B</b>					
Men	37	41*	75	54	--
Women	46	57	84	77	71
Total	40	47	80	65	32*

Source: School Leavers Follow-up Survey, 1995.

attitude toward high school completion, this was the case for 87% of leaver/graduates and for 97% of those who were high school graduates all along. Similarly, leaver/graduates were between other leavers and graduates in terms of coming from a two-parent family, having a highly educated mother, having dependent children, average grades when last in high school, and parents' and friends' attitude toward the importance of high school completion. In short, the same factors that distinguished between leavers and graduates in 1991 were also evident, but to a lesser extent,

among those who were leavers in 1991 but had become graduates by 1995.

This analysis of social background characteristics and educational attainment suggests that some young people have access to greater social, cultural and intellectual capital than others. This seems to make a difference to their educational progress. Chapter 7 examines the idea that disadvantages are compounded over a young person's lifetime, and that this 'cumulative disadvantage' affects education and labour market outcomes.

## Young men and women with low education have different circumstances

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Although about two-thirds of school leavers are men, women who leave high school without graduating tend to have circumstances that differ from those of their male counterparts. These differences are important when comparing the labour market experiences of young men and women.

Table 2-5 indicates that 64% of women who were leavers both in 1991 and 1995 had dependent children. This was the case for just 28% of male leavers. In contrast, only 13% of female continuer/graduates and 16% of women who were high school graduates all along had children.

Encouragingly, a large proportion of women who were leaver/graduates (46%\*) also had dependent children. For many of these women, having a child was the reason for leaving school in the first place; after some time, however, they were able to complete their high school studies.

Marital status is also a reflection of the level of family responsibility and indeed is also related to the presence of children. Women who were school leavers as of 1995 were least likely to be single. Just 41% of women who were leavers in both 1991 and 1995 were single, as were one-half of female continuer/leavers. The proportions for women in other educational categories (and for men) were much higher.

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*Women are much more likely than men to have family responsibilities at an early age, and those responsibilities tend to be substantial. This directly affects many of these women's educational attainment and their participation in the job market.*

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In summary, women are much more likely than men to have family responsibilities at an early age, and those responsibilities tend to be substantial. This directly affects many of these women's educational attainment and their participation in the job market. Women who leave school do so for a very different set of reasons than do men. The same can be said of those women who do not pursue further education or training. This needs to be kept in mind when

examining and comparing the education and work experiences of young men and women.

## Working during high school and educational attainment

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An important finding from the 1991 SLS concerned the relationship between part-time work while in high school and educational outcomes. Limited part-time employment appeared to promote behaviours and attitudes that led to staying in school. More intensive work involvement, on the other hand, increased the risk of school leaving for many students, particularly young men.

Results of the follow-up survey confirm these findings. Young men with lower educational attainment were most likely to have worked 20 hours per week or more while still in high school. This included not just leavers (43%), but also those with no more than a high school diploma (42%). Conversely, both young men and women who were university graduates by 1995 were the least likely to have worked long hours during high school.

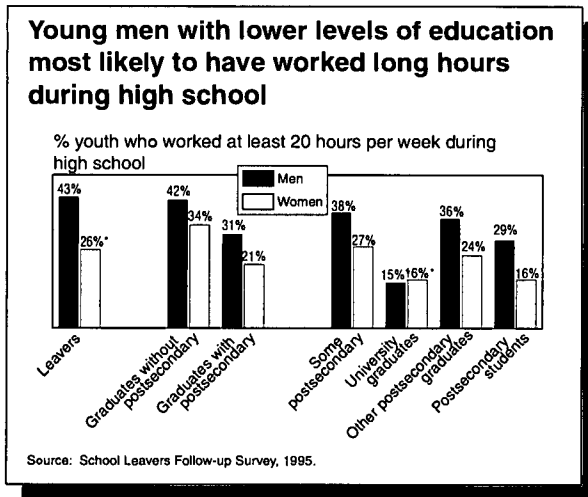
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*For youth seeking access to high-skill, higher paying jobs, the important thing may no longer be just completing high school as an end in itself, but completing high school in order to pursue further education or training.*

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The similarities between youth with low levels of education (leavers as well as those with just a high school diploma) is a recurring theme throughout this publication. Looking at the labour market experiences and skills used by young people in Chapters 3 through 6 uncovers further similarities between these two groups. Thus, for youth seeking access to high-skill, higher paying jobs, the important thing may no longer be just completing high school as an end in itself, but completing high school in order to pursue further education or training. This in turn equips young people to compete for rewarding work in a job market that is becoming increasingly polarized. In addition, postsecondary training improves the ability to adapt and learn new skills. The need for lifelong learning is a growing reality for an increasing number of workers in most occupations and industries.

CHART 2-7



Looking at work patterns during high school and educational attainment also emphasizes a fundamental difference between young men and women. Young men with less education seem to have closer ties to the labour market. Among women, having less education is more often related to family responsibilities. As we will see in Chapter 4, young men with lower levels of educational attainment may also have an advantage over similarly educated women in the type of work available to them.

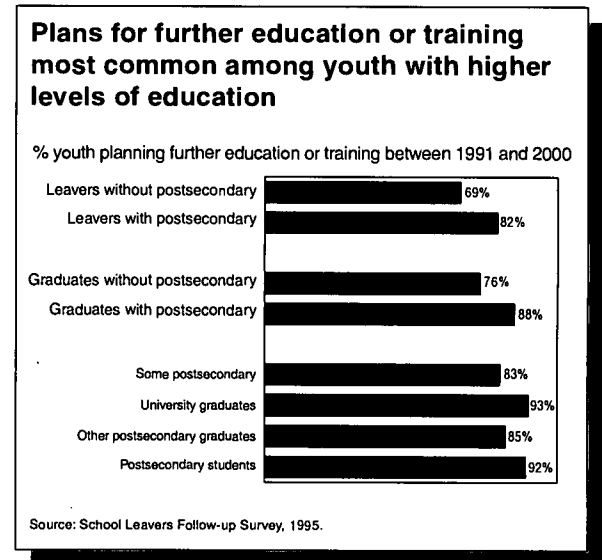
### Most youth had plans for further education or training

The 1991 SLS asked youth about their plans for further education or training. Of those who reported that they had such plans, about nine out of ten actually did pursue further studies. In 1995, young people continued to be aware of the importance of education and training in remaining competitive in the labour market. Overall, about eight out of ten youth intended to take further education or training (through programs, courses, workshops or tutorials) between 1995 and the year 2000. Plans reported in 1991 were largely realized by 1995, and it would appear that most youth still saw a need to carry on with education and training well into their twenties.

Young people who already had higher levels of educational attainment were most likely to have plans for further education or training. This is not surprising for postsecondary students who by definition were still in the midst of their programs. But for those who had already completed a university program, 93% still planned to take further educa-

tion or training. It seems that higher education instills an 'education culture' and this could be considered an important asset. Even among high school leavers (69%) and graduates without further education (76%), substantial proportions of these groups intended to get more education or training between 1995 and 2000.

CHART 2-8



### High school alone may not be enough

Findings from the 1995 SLF indicate that only a small proportion of young people did not have a high school diploma and that many high school graduates were continuing on with further education or training. The high school non-completion rate—15% for 24 year-olds in 1995—is much lower than traditional estimates based on administrative data would indicate. It seems that educational attainment for today's youth is less of a single event and more of a natural progression through the various levels. Overall, the educational levels achieved by young Canadians today are very high.

Nevertheless, some young people today are not climbing as far up the educational ladder as others. Many of these youth with relatively low levels of educational attainment may be quite content with the range of opportunities available to them. But for those with perhaps greater occupational aspirations, higher education may be a necessary requirement for achieving their goals. This would apply not only to high school leavers, but also to other youth with relatively low levels of education in an increasingly high education society.

Some youth with lower levels of education may be constrained by their backgrounds or circumstances, and the provision of opportunities to them is also an important issue. Chapter 7 explores the idea that labour market problems among youth—whether high school graduates or leavers—may sometimes be related to factors originating much earlier in life. The other analyses that follow examine a number of topics related to school-work transitions using the educational categories of youth established in this chapter. By looking at various aspects of labour market activity and skill use, for example, the outcomes associated with different levels of education become clearer. The main message emerging is that for many young people, high school may not be enough.

## Notes for Chapter 2

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1. Organisation for Economic Co-operation and Development, *Lifelong Learning for All*, Paris: OECD, 1996.
2. Statistics Canada, *Educational Attainment and School Attendance*. Catalogue Number 93-328. Ottawa: Supply and Services Canada, 1993: 11.
3. Statistics Canada, 1993.
4. Less than 1% of youth aged 22 to 24 were still attending high school full time in 1995. As a group, these high school continuers are not included in the analysis of this publication. Because of the small numbers involved, estimates of the characteristics and activities of high school continuers have unacceptably high sampling variability.
5. Normal age at high school graduation varies by province.
6. Father's education could also have been used and gives a similar result. Data on mother's education, however, are more complete and are therefore used in this analysis.

## References for Chapter 2

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# Chapter 3

## Entering the Labour Market

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Richard Marquardt<sup>1</sup>

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### Examining the youth labour market of the 1990s

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Chapter 1 reviewed the variety of explanations (cyclical, structural and demographic) for some of the labour market difficulties young people have encountered in the 1990s. These explanations are not mutually exclusive. Each may be a factor contributing to the overall challenge facing youth in the 1990s, and the effect of each may vary by the region in which young people live, their socioeconomic background, their level of education, and their gender.

The 1995 SLF provides an opportunity to study the actual employment experiences of Canadians aged 22 to 24 from all regions (except the two territories) and socioeconomic categories, and in several levels of educational attainment. It is also able to distinguish between those who were primarily students and those who were primarily workers, a critical distinction when analysing the work experiences of youth. Chapter 2 described the educational experiences of this group of young people. In this chapter (and in Chapters 4 and 5), we take the different levels of educational attainment as our starting point and examine the experiences of each group in the labour market.

### Some concepts for the labour market analyses

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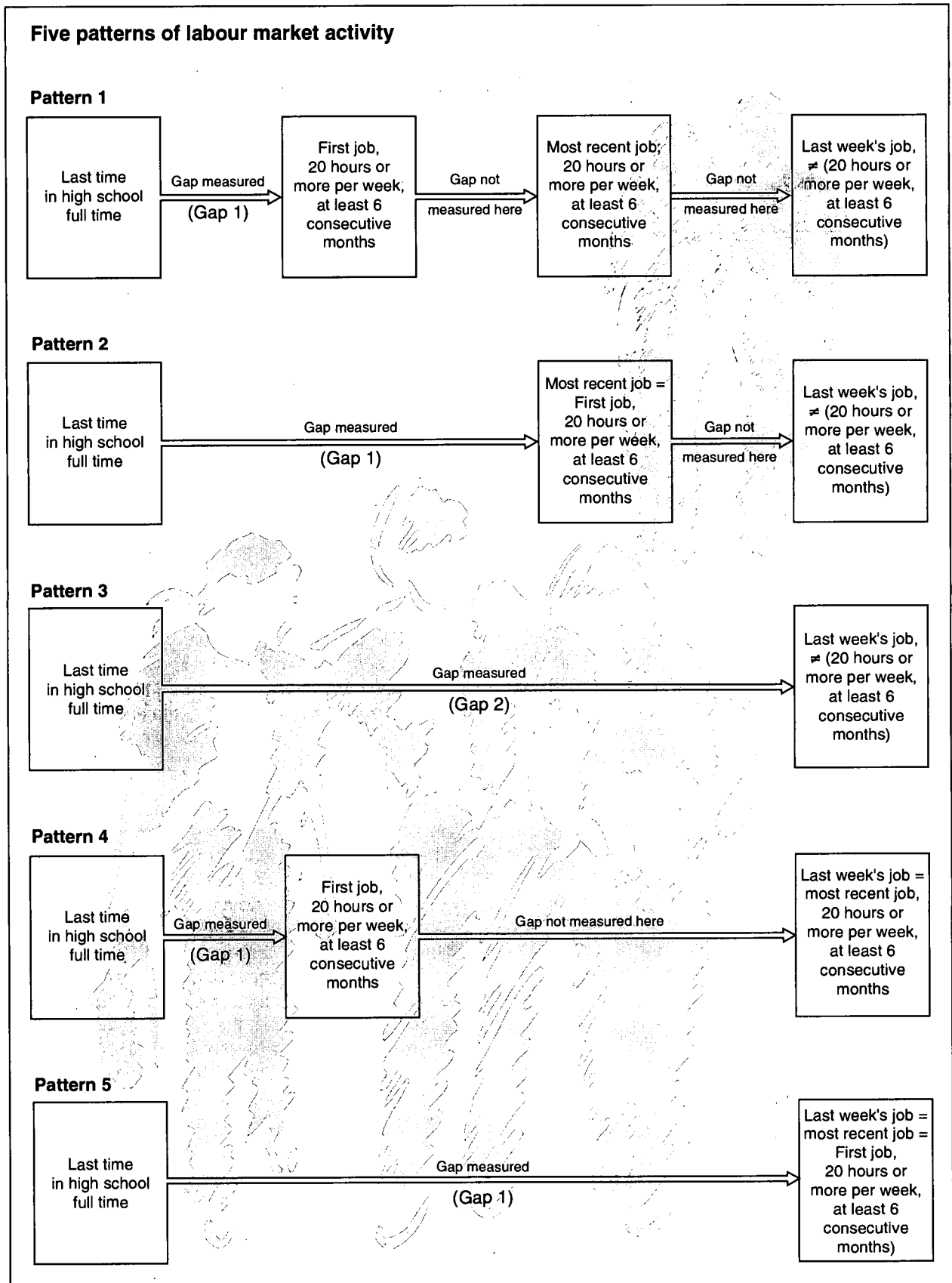
The 1995 SLF was designed to study the experiences of young Canadians as they left school and entered the labour market in the early and mid-1990s. Among the questions guiding the design of the questionnaire were these: In which industries and occupations did they find work? How did

these vary by educational attainment and gender? What skill levels did their jobs require? As the years passed, did they get jobs that required more skills? How much non-standard employment (part-time, temporary, self-employment and multiple jobs) was there among this group? Were young people with higher levels of education happier with their jobs? Did they earn more? Were they less likely to be unemployed? Did young people receive training, or support for education or training, from their employers?

Gathering detailed information on each job held by respondents since the end of high school was not practical, since it would be too much to expect accurate recall by those who held numerous jobs over a long period of time. The survey therefore concentrated on a maximum of three key jobs. The first two of these were called *reference jobs*, that is, jobs involving at least 20 hours of work per week for a period of at least six consecutive months. Respondents were asked detailed questions about their first reference job after leaving high school full time, as well as their most recent reference job. All respondents were also asked the same detailed questions about the job they held in the week before the interview. Respondents were therefore asked questions on up to three jobs, depending on their particular experience. Some might never have had a reference job. For some, the first and most recent reference job would be the same, and for others this would also have been the job they held in the week before the interview. The various possibilities are shown in Figure 3-1.

The survey interview also posed a set of questions about the experiences of youth between the time they were last in high school full time and their first reference job. This important period in the transitions of many young people was called the 'gap'. How long was this gap?

Figure 3-1



Those for whom it was longer than six months were asked a set of detailed questions about their experiences during the gap. Did they take any education or training? Did they have any non-reference jobs? Were they unemployed? If so, for how long?

## Organization of the labour market analyses

The analyses that specifically address labour market aspects of the SLF data span three chapters in this publication. This chapter begins by examining the experiences of young people during the gap between leaving high school full time and the first reference job.

Chapter 4 then directly examines experiences in the labour market. For the main components of this analysis, it concentrates on the experiences during the job held in the week before the interview. Unlike the reference jobs, the 'job last week' includes all full- and part-time jobs. It is also a snapshot of the cohort at one point in time, late in 1995, allowing valid comparisons among youth with different levels of educational attainment and between the group under study and the rest of the work force. The chapter examines the basic information on labour force participation rates, employment and unemployment.

Next to be examined are the industries and occupations of employment for youth, and the relationship between young people's education

**Table 3-1 Youth aged 22 to 24 by labour market pattern used in School Leavers Follow-up Survey**

	(Percent)					
	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Total
<b>Leavers</b>						
Men	19	9*	13*	37	21	100
Women	18*	19*	33	21*	9*	100
Total	19	13	20	31	17	100
<b>High school graduates</b>						
Men	14	6*	16	33	30	100
Women	18	14	16	30	22	100
Total	16	10	16	32	27	100
<b>Some postsecondary</b>						
Men	16	13*	12*	35	23	100
Women	18	17	20	31	14*	100
Total	17	15	16	33	19	100
<b>University graduates</b>						
Men	--	--	27	18	30	100
Women	11*	15*	30	21	23	100
Total	11	14	29	20	26	100
<b>Other postsecondary graduates</b>						
Men	13	8*	20	35	24	100
Women	15	13	14	35	23	100
Total	14	11	16	35	23	100
<b>Postsecondary students</b>						
Men	14	27	39	8*	13*	100
Women	11	22	45	12*	10*	100
Total	12	24	42	10	12	100
<b>All groups</b>						
Men	15	13	21	28	23	100
Women	15	16	25	26	18	100
Total	15	15	23	27	20	100

Totals may not add to 100% because of rounding.  
Source: School Leavers Follow-up Survey, 1995.

and the skill requirements of their jobs. The data available on reference jobs are used to examine the degree of mobility between the first and most recent reference jobs. What was the degree of movement between industries and occupations? Did young people tend to get jobs that required greater skills as time passed, and how did this vary by their education levels?

Chapter 5, *Quality of Youth Employment*, analyses a number of labour market topics of interest not covered in Chapters 3 or 4. These topics include non-standard employment, wages, combining education and work, and job satisfaction. Finally, Chapter 5 concludes with some reflections on the significance of the findings for our understanding of the youth labour market and of school-work transitions in the 1990s.

### Activities during the 'gap'

Table 3-1 presents the percentage of youth in each of the labour market patterns shown in Figure 3-1, by educational attainment and gender. By the time of the survey, those in patterns 1 and 4 had held two or more reference jobs since leaving full-time high school. Those in patterns 2 and 5 had held only one reference job during that time. Those in pattern 3 had never held a reference job.

Note also that those in patterns 1, 2 and 3 did not hold a reference job during the week before the survey, while those in patterns 4 and 5 did.

Fifty-three percent of all youth in this age group did not have a reference job during the week before the survey; 23% had never had a reference job. The incidence of never having had a reference job was highest among those who were students at the time of the survey (42%) and among women without a high school diploma (33%). For those who never had a reference job, the duration of the gap was the entire period from the time they left full-time high school to the week before the interview. For others, the gap is the period from leaving full-time high school to the time of the first reference job.

The length of the gap varied considerably by education level. Chart 3-1 shows the median duration of the gap for each of the groups.<sup>2</sup> High school graduates without further education for a degree, diploma, or certificate had the briefest gap, while university graduates had the longest. It might be expected that those who were still students would have the longest gap, but this was not the case, partly because they tended to be younger than the graduates; the median age of students was seven months younger than university graduates and four months younger than other postsecondary graduates. It could also suggest that those who were still students at the time of the survey had combined reference jobs and study, or taken time out from studies for a reference job to a greater extent than those who had already completed a university degree by the time of the survey.

CHART 3-1

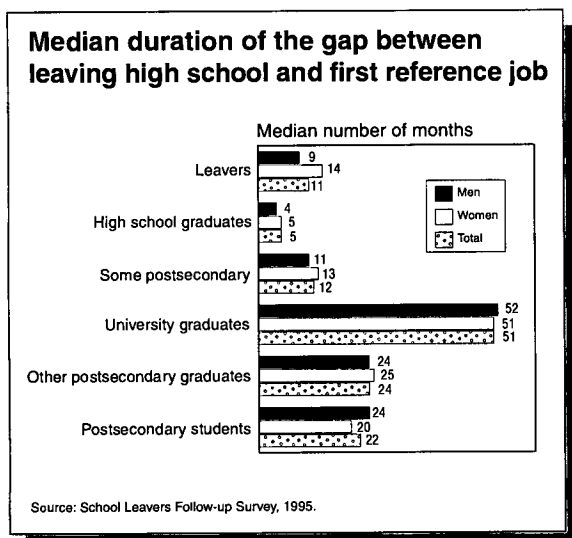


Table 3-2 shows the percentage of youth who already had a reference job at the time they left high school, as well as the percentage who got their first reference job less than six months after leaving full-time high school. There was a high degree of involvement in reference jobs in the period immediately after high school by all groups except those who had completed a university degree by the time of the survey. This adds depth to the finding of the 1991 SLS which found a high incidence of part-time work among high school students.

Working more than 20 hours per week while in high school was associated with a higher likelihood of early school leaving.<sup>3</sup> Results of the 1995 SLF indicate that there continued to be significant involvement in jobs of more than 20 hours per week after leaving high school, and that many



**Table 3-2 Youth aged 22 to 24 who had their first reference job on leaving high school, and who got their first reference job within six months of leaving high school**

	(Percent)						
	Leavers	High school graduates	Some postsecondary	University graduates	Other postsecondary graduates	Postsecondary students	All groups
<i>Had first reference job on leaving high school full time.</i>							
Men	13	22	16	--	15	19	17
Women	10	22	20	--	10	14	14
Total	12	22	18	8	12	16	15
<i>Got first reference job in less than six months of leaving high school full time.</i>							
Men	33	31	28	9	19	13	22
Women	31	28	23	9	19	11	19
Total	32	30	26	9	19	13	21
<i>Total</i>							
Men	46	53	44	18	34	32	39
Women	41	50	43	17	29	25	33
Total	44	52	44	17	31	29	36

Source: School Leavers Follow-up Survey, 1995.

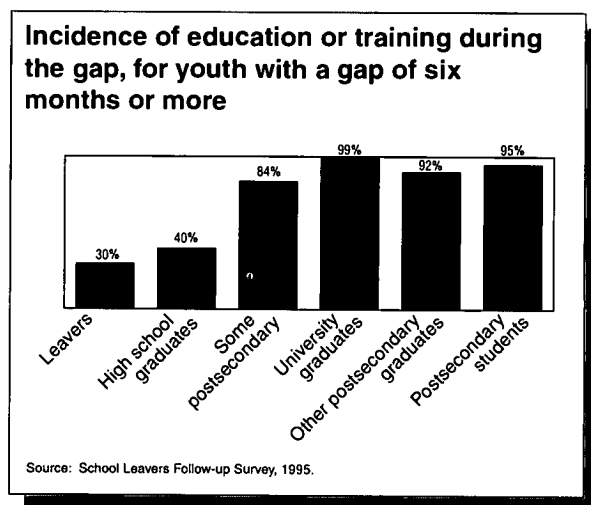
lasted more than six months. More than one-third (36%) of all youth aged 22 to 24 had a reference job on or within six months of leaving full-time high school. The incidence of this was highest for those who graduated from high school and did not continue their education. The incidence of having a reference job upon leaving high school was lowest for those who held a university degree by the time of the survey, suggesting a greater likelihood on their part of emphasizing studies over work.

*More than one-third (36%) of all youth aged 22 to 24 had a reference job on or within six months of leaving full-time high school. The incidence of this was highest for those who graduated from high school and did not continue their education.*

The survey asked for further information from those with a gap of six months or more, as it was important to understand their activities during this period. (Those for whom the gap was less than six months were not asked any further questions on their experiences during the gap.) As might be expected, most of those who had a postsecondary qualification, or who were postsecondary students at the time of the survey, had undertaken education or training during a gap of six

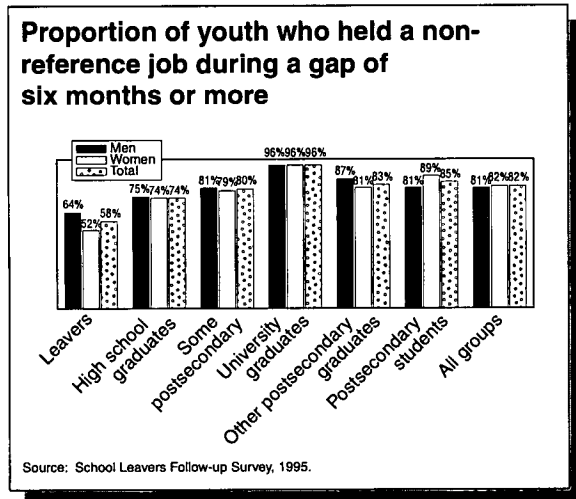
months or more. Similarly, about 84% of those with some postsecondary education by the time of the survey had undertaken education or training during a gap of six months or more. Among the leavers and high school graduates, the rates were lower but still significant. Over 40% of the high school graduates - those with no further education towards a certificate, degree, or diploma - had undertaken some other form of training if they experienced a gap of six months or more.

CHART 3-2



At the same time, most people in all groups also held jobs that did not meet the criteria for reference jobs when the gap was six months or more. In other words, many people had jobs that were either less than 20 hours per week, or that lasted less than six months. The incidence of holding such non-reference jobs during a gap of six months or more was lowest among the leavers, especially women.

CHART 3-3



Leavers also had the greatest incidence of unemployment during a gap of six months or more. About 73% of male leavers experienced times when they were without a job and were actively looking for work.

CHART 3-4

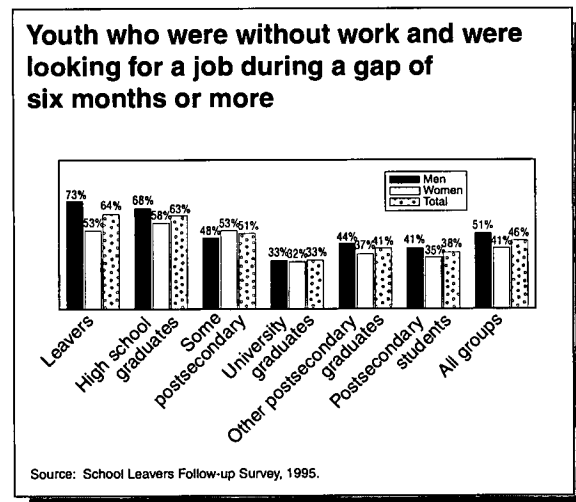


Table 3-3 provides a summary of experiences of employment, unemployment, and education or training during the gap, with the average amount of time spent by members of each group in each state or activity. The male leavers and high school graduates experienced considerably more unemployment during the gap than the other groups. Unemployment of female leavers is less than for the males but, as we will see below, the female leavers were much more likely than the males to leave the work force completely, primarily due to child care responsibilities.

It is interesting to compare the training experiences of leavers and high school graduates without postsecondary education. This group of high school graduates is defined by the fact that its members did not undertake any further education or training towards a degree, diploma, or certificate; the leavers are defined only by the fact that they did not complete a high school diploma (24% of them did take further education or training towards a degree, diploma, or certificate, primarily in the skilled trades). In spite of this, the high school graduates still experienced significantly more training than the leavers. Chart 3-2 shows that more of them undertook training, and Table 3-3 shows that the average amount of time spent in training during a gap of six months or more was considerably greater for high school graduates than it was for the leavers. Their training would presumably have included employer-based training programs, manpower training courses, and other non-credit courses. The difference underlines the importance of the high school diploma as a basis for further training, even for those who do not undertake further formal education.

*Analysis of the 'gap' indicates that the patterns documented in the 1980s appear to have continued into the 1990s: transitions from school to work are complex, there is no clear point of transition from school to work, and young people are combining school and work in many diverse ways.*

We have also noted that high school graduates were more likely to find a reference job on or within the first six months of leaving full-time high school, less likely to be unemployed when the gap exceeded six months, and among men, were unemployed for fewer months during a gap of six months or more. All of these are indicators that there were some advantages in having a high school diploma even for those who did not under-

**Table 3-3 Mean duration of activities during gap, by gender (for youth who had a gap of six months or more)**

	Leavers	(Number of months)				
		High school graduates	Some post-secondary	University graduates	Other post-secondary graduates	Postsecondary students
<b>Men</b>						
Mean duration of gap	38	37	35	56	41	45
Mean time spent in education or training	3	8	18	42	29	30
Mean time spent working in a job or business	18	34	27	23	28	18
Mean time unemployed & looking for work	18	13	8	4	8	7
<b>Women</b>						
Mean duration of gap	52	35	36	52	41	45
Mean time spent in education or training	8	14	17	44	29	40
Mean time spent working in a job or business	32	33	31	25	30	19
Mean time unemployed & looking for work	8	9	9	3	6	3
<b>Total</b>						
Mean duration of gap	43	36	35	53	43	45
Mean time spent in education or training	5	8	18	41	29	32
Mean time spent working in a job or business	25	34	29	24	29	18
Mean time unemployed & looking for work	14	11	8	4	7	5

Source: School Leavers Follow-up Survey, 1995.

take further education. However, high school graduates who pursued postsecondary education or training were substantially better off than either of these groups. In relative terms then, leavers and graduates with no further training were similar to one another.

In summary, the gap between leaving high school and gaining the first reference job involved a diverse set of experiences. About one-third of youth (36%) had their first reference job upon leaving full-time high school or within six months. Even among those who undertook further studies at some point after high school, large numbers had reference jobs within six months of leaving full-time high school. At the same time, large numbers of the leavers and high school graduates without further formal education undertook training of some kind during a gap of six months or more. And although they did not have work during this period that met the 'reference job' criteria, large proportions of youth were working in jobs of less than 20 hours per week, or in jobs that lasted less than six months. These observations support research findings from the 1980s that transitions from school to work had become quite complex, that there was no clear point of transition from school to work, and that young people combined work and studies in many diverse ways.<sup>4</sup> This pattern has continued into the 1990s.

### Notes for Chapter 3

1. The author wishes to acknowledge the assistance of François Lamontagne in the initial design of this chapter and for his advice throughout its preparation.
2. The median duration is the number of months that splits the group in half; approximately equal numbers experienced gaps that were shorter and longer than this. As shown in Table 3-1, many of the people included had never had a reference job by the time of the survey (Pattern 3); for these the gap was typically several years.
3. See Gilbert, Sid, Lynn Barr, Warren Clark, Matthew Blue and Deborah Sunter, *Leaving School—Results from a National Survey Comparing School Leavers and High School Graduates 18 to 20 Years of Age*. Human Resources Development Canada and Statistics Canada, Catalogue Number LM-294-07-93, September 1993, Chapter 6.
4. Harvey Krahn and Graham Lowe, *Young Workers in the Service Economy*. Working Paper 90-14. Ottawa: Economic Council of Canada, 1990.



# Chapter 4

## Labour Market Participation, Employment and Unemployment

Richard Marquardt<sup>1</sup>

### Labour market experiences in the week before the survey

This chapter examines in detail the experiences of young people in the labour market during the week before the survey. People who were working or who were unemployed and actively looking for work were considered to be in the labour force. Those unavailable for work because of full-time school attendance or because they were not actively looking for work were not part of the labour force.

About 84% of Canada's 22 to 24 year-olds were participating in the labour force at the time of the survey. More than one-half of the 16% of youth who were not in the job market were full-time postsecondary students. The rest were concentrated among female leavers and female high school graduates without further education or training.

Only 63% of women in the leavers group were labour force participants, compared with 91% of the male leavers. Unemployment rates were highest for high school leavers; over 30% of female leavers were unemployed. Taking the high unemployment rate and the low participation rate in combination, we find that only 44% of female leavers were employed. About 63% of female leavers had one or more children; almost 90% of female leavers who were not in the labour market and 53% of those who were unemployed were mothers, compared with only 22% of female leavers who were employed.

In general, unemployment rates were lower for groups with higher levels of educational attainment. There was one minor exception; women with some postsecondary education appeared to have a higher rate of unemployment than high school graduates.

**Table 4-1 Labour force status (in the week before the survey) of youth aged 22 to 24**

	(Percent)					
	Labour force participation rate			Unemployment rate		
	Men	Women	Total	Men	Women	Total
Leavers	91	63	81	17	30	21
High school graduates	92	77	85	14*	11*	13
Some postsecondary	96	84	90	13*	16*	15
University graduates	96	97	96	8*	9*	9*
Other postsecondary graduates	98	94	96	12*	9*	10
Postsecondary students	58	61	60	--	--	10*
Population 15 and over	73	57	65	10	9	10

Source: School leavers Follow-up Survey, 1995. For population 15 and over in 1995, Statistics Canada, *Labour Force Annual Averages*, 1995, Catalogue Number 71-220, 1996.

*Unemployment rates were lower for groups with higher levels of educational attainment.*

Concern is sometimes expressed that difficult labour market conditions are leading to widespread alienation of youth from work, and that many youth have given up trying to find work. We looked for evidence of this in the survey results. Overall, only about 3% of men and 11% of women were neither in the labour force, nor in school or training programs. Almost 10% of these women were not looking for work because of personal or family responsibilities (mostly young mothers caring for their own children). For both men and women, the other reasons varied, including other personal responsibilities, illness and disabilities. A negligible proportion (too small to report) were not looking for work because they 'believed no work was available', or because they were simply 'not interested in finding work'. This finding is consistent with other studies that have found that the work ethic is strong among Canadian youth, and that occupational aspirations are high, even among school leavers who currently work in jobs requiring lower skill levels.<sup>2</sup>

*The work ethic among youth seems strong. Only a negligible proportion were not looking for work because they 'believed no work was available', or because they were simply 'not interested in finding work'.*

## Employment experiences

### Successful job search methods

Young people who had jobs in the week before the survey were asked how they had found the job; only one method per respondent was recorded. Their responses, presented in Table 4-2, underline the importance of personal networks and direct contact with employers. Overall, 35% of the respondents had found their job through friends or relatives, and another 18% had done so by approaching an employer directly. Sending out a resumé had worked for 18%, and 11% had found their job by answering a newspaper advertisement. Only 10% had found their job through an employment agency or centre, including Human Resources Canada Centres (Canada

**Table 4-2 Methods used by youth aged 22 to 24 to find job held in the previous week**

	Leavers	High school graduates	Some postsecondary	University graduates	Other postsecondary graduates	Postsecondary students	All groups
	(Percent)						
Contacted employer directly	22	16	21	20	20	21	18
Answered an ad in a newspaper	10	11	11*	19	8	--	11
Placed an ad in the newspaper	--	--	--	--	--	--	--
Through employment agency/centre	8*	9*	8*	16	12	8*	10
Through friends	21	27	23	17	20	33	24
Through relatives	16	16	14	--	9	9	11
Referral from another employer	--	--	--	--	--	--	--
Sent out resume	14	15	15	19	20	18	18
Other	--	3*	4*	4*	7*	5*	5
Total	100	100	100	100	100	100	100

Source: School Leavers Follow-up Survey, 1995.

Employment Centres). There were no discernible patterns of gender difference, but there were some notable differences based on educational attainment. Those with higher levels of education were much less likely to have relied on relatives. Instead, they were more likely to have been successful through sending out their resumé, using an employment agency or centre, or by answering an ad in the newspaper— all methods that rely more on credentials than on personal connections.

There were no discernible patterns of gender difference, but there were some notable differences based on educational attainment. Those with higher levels of education were much less likely to have relied on relatives. Instead, they were more likely to have been successful through sending out their resumé, using an employment agency or centre, or by answering an ad in the newspaper— all methods that rely more on credentials than on personal connections.

## Industries of employment

For this section, industries of employment have been divided into five categories. The goods-producing industries include the primary sector (agriculture, fishing and trapping, forestry, mining, petroleum and natural gas), manufacturing, and construction. Distributive industries are transportation, communications, and wholesale trade. Business services include finance, insurance, real estate, and other business services. The consumer services are retail trade, accommodation and food, and other personal services. The public services, sometimes called non-commercial services or 'the broader public sector', include education, health and social services, and government services, including the public service and the military.

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*Consumer services industries were prime employers of students, providing 55% of all student jobs. Even excluding students, however, consumer services still provided nearly one-third (31%) of employment for youth aged 22 to 24.*

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Table 4-3 presents the data on employment by industry and compares it with the rates for the total population of employed Canadians.

Employment of young people in the goods-producing industries has been declining steadily over the past 15 years, and employment in the service industries has been growing in importance. The survey found that 22% of 22 to 24 year-olds were employed in the goods-producing industries, with the remainder in services and distribution industries. The consumer services industries predominated, accounting for 35% of all employment for this age group. The consumer services industries were prime employers of students, making up 55% of the jobs among postsecondary students. Even when those who were primarily students are removed from the calculations, however, consumer services still provided nearly one-third (31%) of employment for this age group. This proportion was slightly higher than for employed population as a whole (27%).

The industries in which youth were employed varied considerably by gender and by education level. Male school leavers had a much higher concentration in the goods-producing industries than the other groups. The differences arose from the high proportions of men who worked in the primary sector and in construction. Even among male school leavers, however, 27% worked in the consumer services industries. Among women, the rates were much higher. About 68% of female school leavers were working in consumer services industries; the rate was 49% among high school graduates and 21%\* among female university graduates, much higher than their male counterparts in each case.

University and other postsecondary graduates had higher concentrations in the 'upper tier' service industries—business services, education and health. This reflects the need for the skills and credentials that postsecondary programs provide to gain access to much of the work in these sectors.

## Occupations

To analyse the occupations of youth aged 22 to 24 in 1995 by educational status and gender, we arranged them within the National Occupational Classification (NOC) system.<sup>3</sup> The NOC system organizes occupations into four skill levels and ten skill types, as shown in Figure 4-1. The figure provides the overall distribution of the occupations of employment for all groups in the week before the survey.

**Table 4-3 Industry of employment, youth aged 22 to 24 and Canadian employed population**

	(Percent)								
	Leavers	High school graduates	Some post-secondary	University graduates	Other post-secondary graduates	Post-secondary students	Non-students <sup>a</sup>	All groups	Total Employment <sup>b</sup>
<b>Men</b>									
Goods production	48	35	33	25	34	--	36	32	38
Distribution	18*	18	17	--	15	--	16	14	16
Business services	--	--	--	32	13*	--	12*	11*	11
Consumer services	27	36	29	--	24	55*	28	31	22
Public services	--	--	--	22*	13*	22*	9*	11*	15
Total	100	100	100	100	100	100	100	100	100
<b>Women</b>									
Goods production	17*	14*	14*	15*	--	--	12	11	14
Distribution	--	--	8*	--	--	--	7	7*	7
Business services	--	14*	14*	--	20	--	16	15	14
Consumer services	68	49	42	21*	28	56	36	39	32
Public services	--	--	23	41	37	27	29	29	33
Total	100	100	100	100	100	100	100	100	100
<b>Total</b>									
Goods production	40	27	25	19	19	--	25	22	27
Distribution	15*	14	13	6*	10	--	12	11	12
Business services	5*	9	11	24	17	10*	14	13	12
Consumer services	37	41	34	19	26	55	31	35	27
Public services	2*	9	16	33	27	24	19	19	23
Total	100	100	100	100	100	100	100	100	100

a. The 'Non-students' category is a subtotal comprising the first five categories.

b. 'Total employment' refers to the total Canadian employed population.

Source: School Leavers Follow-up Survey, 1995. For total employment in 1995, Statistics Canada, *Labour Force Annual Averages*, 1995, Catalogue Number 71-220, 1996.

Sales and service occupations predominated, accounting for 33% of all jobs. The most frequent jobs within this category were at the intermediate skill level, particularly sales clerks and food and beverage servers. At the elemental skill level, cashiers, food counter attendants, and security guards were among the most common occupations. A smaller number were in more senior positions as sales or service supervisors or managers.

Occupations in business, finance, and administration were the next most frequent, at 20% of all

jobs. Most were working at the intermediate skill level, as office clerks, telephone operators, bank tellers, shippers and receivers, and related occupations. Those working at the technical skill level included secretaries, administrative assistants, and supervisors.

Occupations in trades, transport, and equipment operation accounted for 14% of all jobs. Carpenters, welders, motor vehicle mechanics, heavy-duty equipment mechanics, and other skilled trades were the most frequent occupations



at the technical level. At the intermediate skill level, the most frequent were truck drivers, delivery drivers, and heavy equipment operators.

These three categories accounted for about two-thirds of all jobs among youth aged 22 to 24. The remaining one-third were distributed over the other six occupational groups. The largest group apart from those above was at the professional level in education, particularly elementary and secondary school teachers and postsecondary teaching and research assistants.

*Sales and service occupations predominated, accounting for 33% of jobs among youth. Occupations in business, finance, and administration were the next most common, at 20%. Trades, transport, and equipment operation occupations accounted for 14% of all jobs. Together, these three categories accounted for about two-thirds of jobs among youth aged 22 to 24.*

FIGURE 4-1

**Occupations of employed youth aged 22 to 24, by major groups of the National Occupational Classification**

	ALL GROUPS									
	BUSINESS, FINANCE, & ADMINISTRATION					NATURAL & APPLIED SCIENCES				
	HEALTH					SOCIALSCIENCE, EDUCATION, GOVERNMENT, RELIGION				
	ART, CULTURE, RECREATION, SPORT					SALES & SERVICE				
	TRADES, TRANSPORT, & EQUIPMENT OPERATION					PRIMARY INDUSTRY OCCUPATIONS				
	PROCESSING, MANUFACTURING, & UTILITIES					TOTAL				
	01	02	03	04	05	06	07	08	09	
<b>MANAGEMENT OCCUPATIONS</b>	1%	--	--	--	--	4%	--	--	--	6%
<b>SKILL LEVEL A: PROFESSIONAL</b>	11	21	31	41	51					16%
<b>SKILL LEVEL B: TECHNICAL</b>	12	22	32	42	52	62	72/73	82	92	28%
<b>SKILL LEVEL C: INTER-MEDIATE</b>	14		34			64	74	84	94/95	37%
<b>SKILL LEVEL D: ELEMENTAL</b>						66	76	86	96	13%
<b>TOTAL</b>	20%	7%	5%	8%	4%	33%	14%	3%	6%	100%

The two digit codes in the upper left-hand corner of cells are NOC Major Group codes.  
 Source: School Leavers Follow-up Survey, 1995.

## The National Occupational Classification (NOC)

The NOC is an organizational framework of occupations in the Canadian economy developed by Human Resources Development Canada. Each major group within the system has a two-digit code, as shown in Figure 4-1. Within each of these major groups there are minor groups with unique three-digit code numbers. Within each minor group there are unit groups, each with a unique four-digit code. There are 522 occupational unit groups that embrace approximately 25,000 job titles. Each job reported by 1995 SLF respondents was assigned a four-digit NOC code.

*Skill Level* is defined generally as the amount and type of education and training required to enter and perform the duties of an occupation. The skill level categories are meant to be broad guidelines based on four commonly accepted entry routes for employment and reflect requirements most generally demanded by employers.

Each minor and unit group is assigned to one of the skill levels. Management occupations are not assigned to a skill level category because factors other than education and training (e.g., previous experience, capital) are often more significant determinants for employment.

The classification describes the educational and training requirements for *occupations*. However, the education and experience of particular job incumbents may not correspond exactly to the level described. Persons may be overqualified for their work or they may work in occupations for which the entry requirements have changed after they became employed.

The skill level categories and requirements are defined as follows:

- |                             |  |
|-----------------------------|--|
| Skill Level A: Professional | <ul style="list-style-type: none"><li>• University degree (bachelor's, master's, or doctorate)</li></ul>   |
| Skill Level B: Technical    | <ul style="list-style-type: none"><li>• Two to three years of postsecondary education at community college, institute of technology or CEGEP, or</li><li>• Two to four years of apprenticeship training, or</li><li>• Three to four years of secondary school and more than two years of on-the-job training, training courses, or specific work experience.</li><li>• Occupations with supervisory responsibilities are also assigned to skill level B.</li><li>• Occupations with significant health and safety responsibilities (e.g., fire fighters, police officers, and registered nursing assistants) are also assigned to skill level B.</li></ul> |
| Skill Level C: Intermediate | <ul style="list-style-type: none"><li>• One to four years of secondary school education.</li><li>• Up to two years of on-the-job training, training courses or specific work experience.</li></ul>   |
| Skill Level D: Elemental    | <ul style="list-style-type: none"><li>• Up to two years of secondary school and short work demonstration or on-the-job training.</li></ul>   |

Distinct patterns are evident when we examine the distribution of occupations by educational status and gender. Four broad occupational categories emerge:

- 1) blue collar;
- 2) clerical, sales and service;
- 3) professional and managerial; and
- 4) other skilled and technical occupations.

Among the leavers, there were pronounced gender tracks. About 63% of the men worked in blue collar occupations, while three-quarters of the women worked in clerical, sales, or service jobs, mainly at the intermediate and elemental levels. Almost 25% of the male leavers were working in skilled trades and other blue collar occupations classed at Skill Level B, the technical level. Even among male leavers who reported no further education or training since leaving high

school, 22% were working in skilled blue collar occupations. Only a small (unreportable) proportion of female leavers worked in blue collar occupations, and these were primarily jobs in which few if any males were present (such as seamstresses and food processing machine operators). About 26% of the men worked in clerical, sales and service occupations; typical jobs were cooks, kitchen helpers, grocery clerks, as well as sales and service supervisors.

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*About 63% of male school leavers worked in blue collar occupations, while three-quarters of female leavers worked in clerical, sales, or service jobs, mainly at the intermediate and elemental skill levels. In contrast, nearly one-half of university graduates, both male and female, were working in professional or managerial occupations.*

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### **Occupational categories**

*Blue collar* includes all occupations at the technical, intermediate and elemental levels in trades, transport and equipment operation, as well as occupations specific to primary industry and to processing, manufacturing and utilities (Major Groups 72/73, 74, 76, 82, 84, 86, 92, 94, and 96 in the National Occupational Classification (NOC) system).

*Clerical, sales, and service* include all occupations in the sales and service category, including the management level, as well as occupations at the intermediate level in business, finance and administration, and occupations at the intermediate level in health (Major Groups 14, 34, 06, 62, 64, and 66). It is appropriate to include the higher levels of the sales and service occupations because, although some require a postsecondary diploma or certificate, access to most of the jobs actually held at these levels is possible with experience at lower levels and/or short training courses or training provided by an employer.

*Professional and managerial* occupations include all those classified at Skill Level A (Major Groups 11, 21, 31, 41, and 51) as well as all management occupations except those in sales and service.

*Other skilled and technical* occupations are the balance of occupations at Skill Level B (Major Groups 12, 22, 32, 42, and 52).

Similar patterns appeared among the high school graduates and those with some postsecondary education. They worked in segments of the labour market where there were strong gender divisions. Over 70% of the women in all three groups were working in clerical, sales, and service occupations. Large numbers of the male high school graduates also worked in clerical, sales, and service occupations, but they predominated in the blue collar jobs.

The patterns were quite different among those with a postsecondary degree, diploma, or certificate. Nearly one-half of university graduates, both male and female, were working in professional or managerial occupations. Here too, though, there were distinct gender patterns. Men with university degrees were much more likely than women to be working in professional occupations in the natural and applied sciences (which include engineering), as well as in business, finance and administration. Female university graduates were more likely to be teachers, especially in elementary and secondary school. Large proportions of both male and female university graduates also worked in clerical, sales and service occupations.

Among other postsecondary graduates, over one-third of the men worked in blue collar jobs, primarily in skilled trades. Another 31% worked in clerical, sales and service occupations, primarily at the intermediate and elemental levels. Almost one-half of the women worked in clerical, sales and service occupations, also mainly at the intermediate and elemental levels. Over one-half of the women who had completed a non-university postsecondary program worked in professional, managerial and technical occupations, however, particularly in nursing and teaching, as well as in skilled administrative and business occupations.<sup>4</sup> About 35% of the men had jobs at these levels, notably in natural and applied sciences.

Postsecondary students of both genders were heavily concentrated in clerical, sales and service jobs typical of the student labour market—cashiers, sales clerks and general office clerks. Some had professional or managerial jobs, mostly as teaching or research assistants.

**Table 4-4 Occupations of youth aged 22 to 24 without a postsecondary degree, diploma or certificate**

	(Percent)								
	Leavers			High School graduates			Some postsecondary		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Blue collar	63	--	51	48	8*	33	38	--	25
Clerical, sales, service	26	76	39	41	71	55	42	71	55
Professional, managerial	--	--	--	--	--	4*	--	--	8
Other technical & skilled	--	--	--	--	--	8*	--	12*	11
Total	100	100	100	100	100	100	100	100	100

Totals may not add to 100% because of rounding.  
Source: School Leavers Follow-up Survey, 1995.

### Relationship between job and education

Significant numbers of youth worked in jobs described in the NOC system as requiring less education than they had completed. We used the data on occupations from the survey to estimate the extent of this phenomenon for four groups: the high school graduates, those with some postsecondary education, university graduates, and other postsecondary graduates. The results are presented in Chart 4-1.<sup>5</sup>

About 23% of the men without further postsecondary education were working in jobs at Skill Level D—for example, as security guards, janitors, and kitchen helpers. A further 22% were working in Skill Level C jobs that did not require a high school diploma—jobs such as truck drivers, warehousemen, and mechanical assemblers. In total, 45% of the male high school graduates without

further education were working in jobs that did not require a high school diploma. About 13% of the female high school graduates without further postsecondary education were working in jobs at Skill Level D—for example, cashiers, kitchen helpers, and light duty cleaners. A further 18% of female high school graduates were working in Skill Level C jobs that did not require a high school diploma—jobs such as housekeepers and estheticians. The overall rate of 31% was considerably lower than for men of this group, primarily because of the higher percentage of women working in clerical jobs, where a high school diploma is usually required.

Men with postsecondary education were much more likely than those without further education to be working in jobs that usually or always require a high school diploma. In addition, a larger proportion were working in jobs at Skill Level B, especially in sales and service occupations.

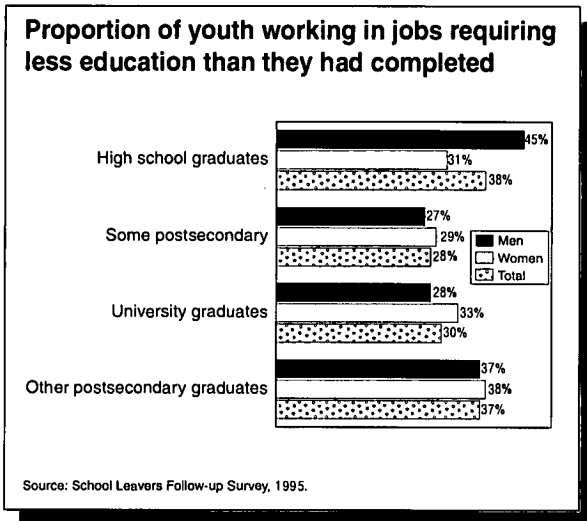
**Table 4-5 Occupations of youth aged 22 to 24 with postsecondary education or training**

	(Percent)								
	Leavers			High School graduates			Some postsecondary		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Blue collar	--	--	6*	35	--	16	--	--	9*
Clerical, sales, service	30	34*	33	31	47	41	55	72	64
Professional, managerial	48	49*	46	19	26	21	17*	15*	16
Other technical & skilled	--	--	14	15*	--	23	--	--	11*
Total	100	100	100	100	100	100	100	100	100

Totals may not add to 100% because of rounding.  
Source: School Leavers Follow-up Survey, 1995.

There was little difference between the women of the two groups, however, as their general patterns of employment were similar.

CHART 4-1



Among male university graduates, 28% were working at jobs in Skill Levels C and D. These jobs were primarily in clerical, sales, and service occupations, for example, stock clerks, sales clerks, waiters, and security guards. Female university graduates showed a similar pattern; about 33% were working at jobs in Skill Levels C and D, especially in clerical and sales and service jobs. Typical jobs at this level were general office clerks, receptionists and switchboard operators, sales clerks, waitresses, and cashiers.

Of the group with other postsecondary qualifications, about 36% of the men and 38% of the women were employed at Skill Levels C or D. The women at this level were concentrated in clerical or sales and service jobs, while the men were more dispersed across sales and service, clerical, and blue collar jobs.

It is important to interpret these findings with caution, for a number of reasons. First, completion of secondary school is an important objective for all young people. Its purpose should not be linked exclusively to qualifications for the labour market. A good secondary education provides knowledge and skills relevant to all aspects of life. Moreover, a high school diploma is an important qualification for postsecondary studies, even if these are not taken up immediately after leaving high school.

Therefore we should not assume that those with a high school diploma working in jobs at Skill Level D are 'overqualified' or even 'mismatched', although it may often be true that the skills they have to offer are not used to good advantage in these jobs. Jobs at Skill Level C that do not require a high school diploma—for example, truck drivers and estheticians—often do require special training and licensing, and the skills learned in high school can be an advantage in this further training. Finally, when the labour market is slack, as it has been throughout the 1990s, many employers use the high school diploma as a selection criterion even when it may not be necessary for the job.

To some extent, these findings reflect the shift in demand in the labour market towards the two opposite poles of educational achievement. For the 1990s, the Human Resources Development Canada has predicted that the two areas of greatest job growth will be those demanding more than 16 years of education and those requiring less than 12. The growth projected for jobs demanding just a high school diploma—no more, no less—is expected to be negligible.<sup>6</sup>

The findings also indicate that a postsecondary qualification is no guarantee of access to an occupation at Skill Level A or B, at least for youth in this age group. Other studies have shown that the extent to which postsecondary graduates may be working at lower skill levels varies a great deal by field of study, a factor not covered by this survey, and that it tends to decline in the five years after graduation. In other words, large numbers of young workers with postsecondary qualifications experience delays in finding jobs at Skill Levels A and B, but to date most do eventually succeed in doing so.<sup>7</sup>

Since those in this age group are still relatively young and inexperienced for employment for which they may be qualified, it is not valid to conclude that they will continue to have difficulty finding work that reflects their level of education in the future. The survey was conducted during a period of 'jobless recovery' when young workers had great difficulty finding work of any kind. Their experience in the future will depend not only on their educational achievement but also on other training and experience they gain after leaving school as well as the level of demand in the labour market.

**Table 4-6 Industry of employment, first and most recent reference jobs**

	Leavers	High school graduates	Some postsecondary	(Percent) University graduates	Other postsecondary graduates	Postsecondary students	All groups
<b>Men aged 22 to 24</b>							
<i>Goods production</i>							
First reference job	45	33	30	27*	29	16*	31
Most recent reference job	50	36	30	26*	32	20*	34
<i>Distribution</i>							
First reference job	14*	12*	10*	--	10*	--	11
Most recent reference job	17*	16*	19*	--	14*	--	14
<i>Business services</i>							
First reference job	--	--	--	25*	9*	--	8
Most recent reference job	--	--	--	29*	12*	--	9
<i>Consumer services</i>							
First reference job	32	46	46	27*	45	61	44
Most recent reference job	26	40	33	19*	32	59	36
<i>Public services</i>							
First reference job	--	--	--	--	8*	--	6
Most recent reference job	--	--	11*	--	10*	--	7
<b>Women aged 22 to 24</b>							
<i>Goods production</i>							
First reference job	15*	6*	--	--	7*	--	7
Most recent reference job	--	12*	10*	13*	7*	8	9
<i>Distribution</i>							
First reference job	--	--	--	--	7*	--	6
Most recent reference job	--	6*	--	--	7*	--	7
<i>Business services</i>							
First reference job	--	--	--	19*	15	--	11
Most recent reference job	--	16*	--	18*	19	--	15
<i>Consumer services</i>							
First reference job	70	68	69	39	48	71	58
Most recent reference job	62	55	49	25	34	60	45
<i>Public services</i>							
First reference job	--	14*	13*	27	24	12*	18
Most recent reference job	--	12*	21*	37	33	14*	24
<b>Total youth aged 22 to 24</b>							
<i>Goods production</i>							
First reference job	36	21	20	17*	15	11	20
Most recent reference job	38	26*	21	19*	17	14	22
<i>Distribution</i>							
First reference job	12*	9	7*	8*	8	7*	9
Most recent reference job	12*	10	7*	8*	8	7*	9
<i>Business services</i>							
First reference job	4*	6*	68*	21	12	8*	9
Most recent reference job	4*	6*	71*	22	13	8*	10
<i>Consumer services</i>							
First reference job	43	55	56	34	46	66	51
Most recent reference job	45	58	59	36	49	68	53
<i>Public services</i>							
First reference job	--	8	10	21	18	8*	12
Most recent reference job	--	9	10	22	19	8*	12

Source: School Leavers Follow-up Survey, 1995.

**Table 4-7 Occupation of employment, first and most recent reference job**

	Leavers	High school graduates	Some postsecondary	(Percent) University graduates	Other postsecondary graduates	Postsecondary students	All groups
<b>Men aged 22 to 24</b>							
<i>Blue collar</i>							
First reference job	59	43	36	--	31	19*	37
Most recent reference job	63	46	41	--	34	25	40
<i>Clerical</i>							
First reference job	--	9	--	--	--	--	7*
Most recent reference job	--	8*	8*	--	--	--	7*
<i>Sales &amp; service</i>							
First reference job	27	41	44	27*	41	59	41
Most recent reference job	20	35	35	27*	29	52	33
<i>Professional, managerial</i>							
First reference job	--	--	--	40	10*	--	9*
Most recent reference job	--	--	--	42	14*	--	10
<i>Other technical &amp; skilled</i>							
First reference job	--	--	--	--	10*	--	7*
Most recent reference job	--	--	--	--	16*	--	10*
<b>Women aged 22 to 24</b>							
<i>Blue collar</i>							
First reference job	11*	4*	--	--	--	--	4*
Most recent reference job	--	8*	--	--	--	--	5*
<i>Clerical</i>							
First reference job	--	19	13*	15*	16	16*	15
Most recent reference job	8*	24	22	17*	16	19*	18
<i>Sales &amp; service</i>							
First reference job	78	63	70	38*	49	63	58
Most recent reference job	67	50	54	25*	37	53	45
<i>Professional, managerial</i>							
First reference job	--	--	--	29*	14	--	10*
Most recent reference job	--	--	--	41	22	--	16
<i>Other technical &amp; skilled</i>							
First reference job	--	11*	10*	14*	18	16*	14*
Most recent reference job	--	12*	11*	12*	23	21*	17*
<b>Total youth aged 22 to 24</b>							
<i>Blue collar</i>							
First reference job	45	26	22	9*	14	11	21
Most recent reference job	48	31	26	8*	15	15	24
<i>Clerical</i>							
First reference job	4*	14	10*	14*	16	13	12
Most recent reference job	2*	15	16	16*	17	13	15
<i>Sales &amp; service</i>							
First reference job	42	50	56	34	43	61	48
Most recent reference job	34	43	42	26	30	52	38
<i>Professional, managerial</i>							
First reference job	--	--	4*	30	12	5*	8
Most recent reference job	--	2*	6*	36	17	5*	10
<i>Other technical &amp; skilled</i>							
First reference job	7*	8*	8*	12*	15	11*	11
Most recent reference job	8*	9*	9*	14*	21	14	13

Source: School Leavers Follow-up Survey, 1995.

**Table 4-8 Employment by occupational skill level (NOC), first and most recent reference jobs**

		(Percent)					
	Leavers	High school graduates	Some postsecondary	University graduates	Other postsecondary graduates	Postsecondary students	All groups
<b>Men aged 22 to 24</b>							
<i>Managerial</i>							
First reference job	--	9*	--	--	--	--	7
Most recent reference job	--	9*	--	--	7*	--	8
<i>A. Professional</i>							
First reference job	--	--	--	34	--	--	7
Most recent reference job	--	--	--	37	13	--	8
<i>B. Technical</i>							
First reference job	40	27	32	--	31	18	29
Most recent reference job	42	28	35	24*	39	19	32
<i>C. Intermediate</i>							
First reference job	35	40	32	28*	38	39	36
Most recent reference job	40	40	33	21*	33	41	36
<i>D. Elemental</i>							
First reference job	20	23	25	--	16	25	21
Most recent reference job	13*	21	17*	--	9	24	16
<b>Women aged 22 to 24</b>							
<i>Managerial</i>							
First reference job	--	--	--	--	--	--	6
Most recent reference job	--	--	--	--	--	--	7
<i>A. Professional</i>							
First reference job	--	--	--	25*	13	--	9
Most recent reference job	--	--	--	31	20	--	12
<i>B. Technical</i>							
First reference job	19*	17	18*	19*	25	17*	20
Most recent reference job	22*	22	18*	16*	29	25	23
<i>C. Intermediate</i>							
First reference job	41	53	48	41	39	47	44
Most recent reference job	48	53	55	36	36	47	44
<i>D. Elemental</i>							
First reference job	32*	23	22	9*	18	27	21
Most recent reference job	19*	13*	16*	--	9*	21*	13
<b>Total youth aged 22 to 24</b>							
<i>Managerial</i>							
First reference job	--	7*	7*	7*	5*	9*	6
Most recent reference job	--	9*	7*	10*	6*	6*	7
<i>A. Professional</i>							
First reference job	--	--	4*	29	12	5*	8
Most recent reference job	--	2*	6*	33	17	5*	10
<i>B. Technical</i>							
First reference job	34	23	26	17*	27	18	25
Most recent reference job	36	25	27	20	33	22	28
<i>C. Intermediate</i>							
First reference job	37	46	39	36	39	43	40
Most recent reference job	42	46	43	31	36	44	40
<i>D. Elemental</i>							
First reference job	24	23	24	10*	17	26	21
Most recent reference job	15	18	17	6*	8	22	14

Source: School Leavers Follow-up Survey, 1995.



## Mobility in the labour market

We can use the data gathered in the 1995 SLF to assess the degree of mobility of young workers in the labour market between their first and most recent reference jobs. As time passed after their departure from full-time high school, did they tend to move from one industry to another? Did they tend to move from jobs that required lower skill levels to more highly skilled jobs?

Before examining these questions, it is important to highlight a key finding. Only 42% of all young people in this age group had held two or more reference jobs by the time of the survey. About 35% had held a single reference job, and 23% had never had a reference job. It is impossible, therefore, to show any movement at all for over half of the group under study. The analysis here must of course omit those who had never had a reference job. For those who had only held one reference job, we have used that one job as both the first and the most recent reference job.

It is also important to keep in mind that, as noted in Chapter 3, a large percentage of the first reference jobs were already held at the time of leaving high school. Moreover, 20% of the age group were full-time students at the time of the survey. Taken as a whole, the group under study was still very much in the process of transition. Therefore, we cannot draw any firm conclusions about the longer-term success or failure of their transitions from data on movement from the first to most recent reference job.

We can, nevertheless, make out some distinct patterns of movement in the labour market between the first and most recent reference jobs. Looking first at industries (Table 4-6), there was movement out of jobs in the consumer services industries among all groups, even among postsecondary students. With a few minor exceptions, the presence of young people in all groups grew in each of the other sectors.

A complementary pattern appears in the findings on occupational categories (Table 4-7). Here we find a movement out of sales and service occupations among every group (except for male university graduates where the proportion remained at 27%\*). Again, with a few minor exceptions, the percentage of youth in each of the other occupational groups increased. Here we have separated clerical occupations from sales and service to show that there was net movement into clerical occupations, especially by women.

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*Many first reference jobs were really still 'student' jobs. Over time, young people who gained the appropriate skills and experience tended to move out of these 'student' jobs and into other sectors. There was also evidence of some movement from lower to higher levels of skill, especially among youth with postsecondary qualifications. Nevertheless, at this early stage in the transition process, there was still a high incidence of well-educated youth working at relatively low skill levels in their most recent reference job.*

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We have seen above that the consumer services industries are a prime employer of students. The findings suggest that many of the first reference jobs are really still 'student' jobs, and that young people who gain the appropriate skills and experience tend to move away from them to other sectors over time.

There was also evidence of a gradual movement from lower to higher levels of skill, although this was rather modest (Table 4-8). It was most evident among those with postsecondary qualifications. Nevertheless, at this early stage in the transition process, there was a high incidence of well-educated youth working at the elemental and particularly the intermediate skill levels in their most recent reference job.

## Notes for Chapter 4

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1. The author wishes to acknowledge the assistance of François Lamontagne in the initial design of this chapter and for his advice throughout its preparation.
2. See, for example, Julian Tanner, Harvey Krahn, and Timothy Hartnagel. *Fractured Transitions from School to Work: Revisiting the Dropout Problem*. Toronto: Oxford University press, 1995, 136-139.
3. See Human Resources Development Canada, *National Occupational Classification*. Ottawa: Canada Communications Group, 1993.
4. The combined estimate for professional, managerial and technical occupations was over 50%, even though the estimate for 'other technical & skilled' jobs is not shown in Table 4-5.

5. We began by assigning each job reported to its appropriate level within the NOC system. We supplemented this data by reviewing the four-digit occupational codes for jobs at Skill Level C, the intermediate level, to identify those occupations that did not require a high school diploma. We assumed for our analysis that Skill Level B was *not* necessarily below the education level of university graduates because some jobs might be considered entry-level positions or appropriate levels for graduates in certain fields. For example, engineers might have been working as technical sales representatives in areas that demanded their expertise.
6. See *Improving Social Security in Canada: A Discussion Paper*. Ottawa: Human Resources Development Canada, 1994, p. 16.
7. See the various reports on the National Graduates Surveys and Follow-up of Graduates Surveys, Human Resources Development Canada and Statistics Canada. The latest of these, "The Class of '90 Revisited," is available through the Internet at <http://www.hrdc-drhc.gc.ca>.

# Chapter 5

## Quality of Youth Employment

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*Richard Marquardt*<sup>1</sup>

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In this chapter, we examine several other topics related to youth labour market activity not covered in Chapters 3 or 4. These topics include non-standard employment, wages, combining education and work, and job satisfaction. In addition, this chapter summarizes and draws some conclusions from the labour market analyses presented in Chapters 3, 4 and 5.

### Non-standard employment

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A standard job is a full-time (30 or more hours per week), permanent position with an employer. Non-standard forms of employment include part-time and temporary jobs, own-account self-employment (without employees), and multiple jobs. Part-time employment among all Canadian youth (aged 15 to 24) increased significantly in the 1980s and 1990s, partly because of increased participation in education. Still, between 1989 and 1995, the ratio of part-time to total youth employment increased from 34% to 45%. The percentage for whom this was involuntary increased from 18% to 27%.<sup>2</sup>

The 1995 SLF asked for details about the *main job* held by each respondent in the previous week. (The main job was the one at which the respondent usually worked the most hours per week.) In 1995, one in four 22 to 24 year-olds with jobs were employed part-time in their main job—30% of women and 20% of men. Excluding students, however, only 15% were in part-time jobs—21% of women and 10% of men. As shown in Table 5-1, the rate of part-time employment is considerably higher for students compared to other youth. The rates for young people who were not students were comparable to those for workers aged 25 and older in Labour Force Survey data for 1995; the non-student men in this age

group were somewhat more likely than older males to be employed part time, while non-student women were somewhat less likely to be employed part time than women over 25.

Attendance at school or training programs was the largest single reason for part-time employment for both men and women. Women were more likely than men to be working part time because of personal or family responsibilities. About three in ten young people working part time (32% of women and 27% of men) were doing so because they could not find full-time work. Among non-students, involuntary part-time work represented a much higher proportion of total part-time work—44% for women and 41% for men. Overall, women experienced much more involuntary part-time employment than men. Among all women aged 22 to 24 who had jobs, and who were not primarily students, about one in ten were working part time because they could not find full-time jobs; for men, this rate was much lower.

Temporary employment—jobs for which there was a definite termination date—accounted for over 18% of all employment, ranging from 13% among leavers and high school graduates to over 20% among those with further education. Gender differences were less pronounced than for part-time employment.

Self-employment accounted for less than 10% of all jobs. Its incidence was highest among male leavers (11%) and among men with some post-secondary education (12%). For men in these groups, self-employment was concentrated in technical and intermediate blue collar occupations, such as truck drivers and craftspeople. Among males with postsecondary qualifications, self-employment was spread across professional and technical occupations, such as financial

**Table 5-1 Prevalence of part-time employment, youth aged 22 to 24**

	Men	(Percent)	Total
		Women	
Leavers	7*	24*	11
High school graduates	9*	19*	13
Some postsecondary	15*	24	19
University graduates	--	24*	18
Other postsecondary graduates	--	18	15
Postsecondary students	79	78	78
Non-students <sup>a</sup>	10	21	15
All groups	20	30	25
Total work force	11	28	19
Total work force aged 25+	6	24	10

a. The 'Non-students' category is a subtotal comprising the first five categories.

Source: School Leavers Follow up Survey, 1995. For total work force and total work force aged 25 and over in 1995, Statistics Canada, *Labour Force Annual Averages*, 1995, Catalogue Number 71-220, 1996.

**Table 5-2 Reasons for part-time work, youth aged 22 to 24**

	Men	(Percent)	Total
		Women	
Going to school, training	55	42	48
Could only find part-time work	27	32	29
Full-time work was less than 30 hrs per week	9*	11*	10
Personal/family responsibilities	--	6*	4*
Other reasons	--	9*	9*
Total	100	100	100

Source: School Leavers Follow-up Survey, 1995.

**Table 5-3 Involuntary part-time employment as a percentage of total part-time employment, youth aged 22 to 24**

	Men	(Percent)	Total
		Women	
Leavers	--	--	41
High school graduates	--	39*	36
Some postsecondary	--	27*	25
University graduates	--	43*	47
Other postsecondary graduates	--	57	57
Postsecondary students	--	14*	15
Non-students <sup>a</sup>	41	44	43
All groups	27*	32	29
Total work force	33	31	32
Total work force aged 15 to 24	25	28	27
Total work force aged 25+	42	33	35

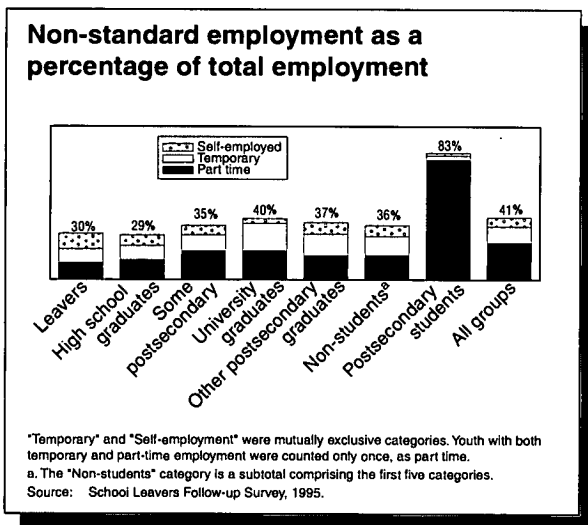
a. The 'Non-students' category is a subtotal comprising the first five categories.

Source: School Leavers Follow up Survey, 1995. For total work force and total work force aged 25 and over in 1995, Statistics Canada, *Labour Force Annual Averages*, 1995, Catalogue Number 71-220, 1996.

analysts and computer programmers, skilled trades, and retail and wholesale sales occupations. Among women, self-employment was also highest among the leavers, typically in sales and service occupations. Among women with postsecondary qualifications, over one-half of self-employment was in retail trade.

When temporary and self-employment are added to part-time-employment, the percentage of non-standard employment to total employment is 41% for all groups. When students are excluded, the percentage is 34%. This compares to a total of 31% for the work force as a whole during 1995.<sup>3</sup>

CHART 5-1



Many of these young workers also held more than one job. Multiple job holding (13%) was much more common among youth than in the work force as a whole (5%). The rates were especially high among women with postsecondary qualifications. For example, about 19%\* of female university graduates held multiple jobs. Moreover, the main job of female university graduates with multiple jobs tended to be at a much lower skill level than the main job of their male counterparts. About 80% of the male university graduates had their main job at the managerial, professional or technical level. Only 20% of the females had jobs at this level; they typically worked as sales clerks or cashiers in their main job. Among those with other postsecondary qualifications, women were much more likely to have multiple jobs but gender disparity was not so evident in the type of job. About 50% of both men and women had their main job at the managerial, professional or technical level. Many of the women had their main job in health-related occupations, such as nurses, while the men tended to have their main job in one of the skilled trades.

*Multiple job holding (13%) was much more common among youth than in the work force as a whole (5%).*

## Wages

The SLF asked respondents about their wages, in their main job only, during the week before the survey. The data on wages do not include income from additional jobs by multiple jobholders. (Nor do we show here the effect of social transfers on

Table 5-4 Proportion of employed youth aged 22 to 24 holding more than one job

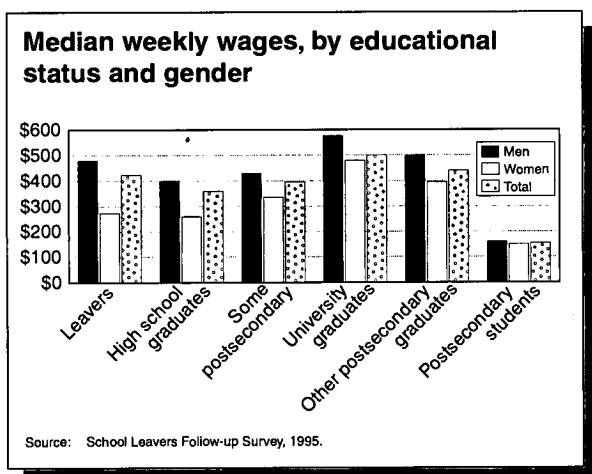
	Men	(Percent) Women	Total
Leavers	7*	--	8
High school graduates	5*	15*	9
Some postsecondary	15*	14*	15
University graduates	--	19*	17
Other postsecondary graduates	10*	18	15
Postsecondary students	--	14*	12
All groups	10	15	13
Total work force	4	5	5

Source: School Leavers Follow up Survey, 1995. For total work force and total work force aged 25 and over in 1995, Statistics Canada, *Labour Force Annual Averages*, 1995, Catalogue Number 71-220, 1996.

total income.) Among non-students, male university graduates had the highest median weekly wage (\$577), while the lowest (\$260) was earned by female leavers. Women's wages were significantly lower than men's in all groups except students. The lower wages for women reflect, in part, their higher rates of part-time employment. When we compare the wages of full-time earners only, the gap between men's and women's earnings closes marginally for all groups except students, where male earnings jump from near equality to 36% higher than females.

Since multiple job holding is higher among women and among those with higher levels of education, we can infer that adding wages from additional jobs would tend to increase the difference in total income among educational groups and decrease the difference between men and women.

CHART 5-2



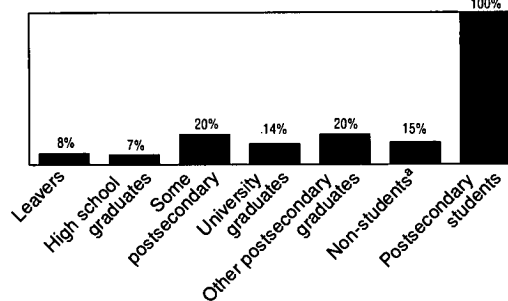
## Combining Education and Work

Respondents were asked if they had taken any education or training from a school, college, or university while they had the job they held in the week before the survey. To some extent, the results reflect the way we have defined the groups. Of course, 100% of the full-time students answered yes to this question. A very low percentage of the high school graduates answered yes, since they are defined as a group that has not undertaken further education for a certificate, diploma, or degree beyond high school; the education or training they reported here was presumably not for credit. The results for the other

groups tell us something of the involvement in formal education by those who were not postsecondary students at the time of the survey. Female leavers and university graduates had lower levels of this type of educational participation than did their male counterparts, likely because of family responsibilities.

CHART 5-3

### Education or training from a school, university or college during the job held in the week before the survey

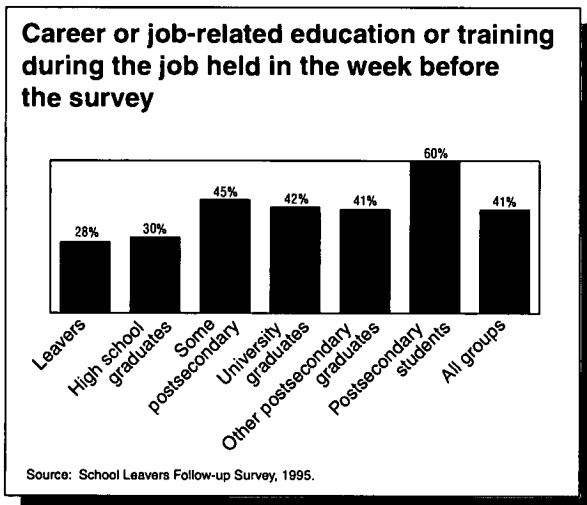


a. The "Non-students" category is a subtotal comprising the first five categories.  
Source: School Leavers Follow-up Survey, 1995.

Those with some postsecondary education were more likely than other groups to be involved in formal education, suggesting a high incidence of combining work and studies in that group. Those who had already received a postsecondary qualification were not far behind, however. In contrast, leavers and youth with no more than a high school diploma had a much lower incidence of involvement in formal education.

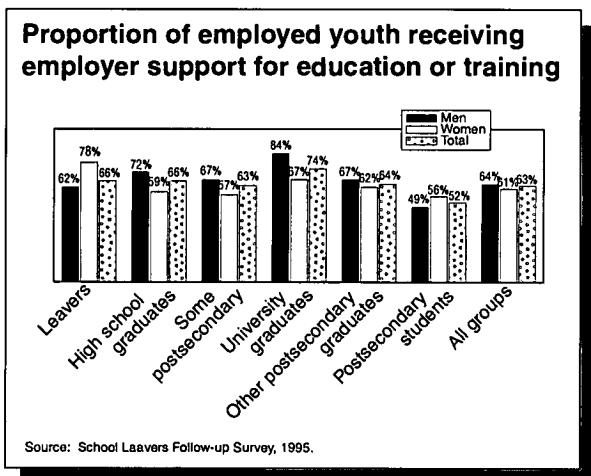
Respondents were also asked if they had taken any career or job-related education or training (such as programs, courses, workshops, seminars, and tutorials) while they had the job held in the week before the survey. Overall, 41% of young people with jobs had taken such training. The rate was lowest for high school leavers (28%) and highest for postsecondary students (60%). The results support the findings of other studies that most job-related training by young Canadians is undertaken by those who already have higher levels of education. There do not appear to be major gender differences here, but the question did not distinguish between different types and durations of training programs. Other studies have found that young men are more likely than young women to receive job-related training.<sup>4</sup>

CHART 5-4



There is a suggestion of this gender bias in the level of employer support for the education and training of young workers. Those who had undertaken education or training were asked if their employer had paid for, provided transportation, given time off, or given any other support towards this education or training while in the job they held in the week before the survey. With this broad definition, results indicated a high incidence of employer support. Male university graduates had the highest level (84%), much higher than their female counterparts (67%). Among all groups except leavers and full-time students, men received more support from employers for their education and training than women.

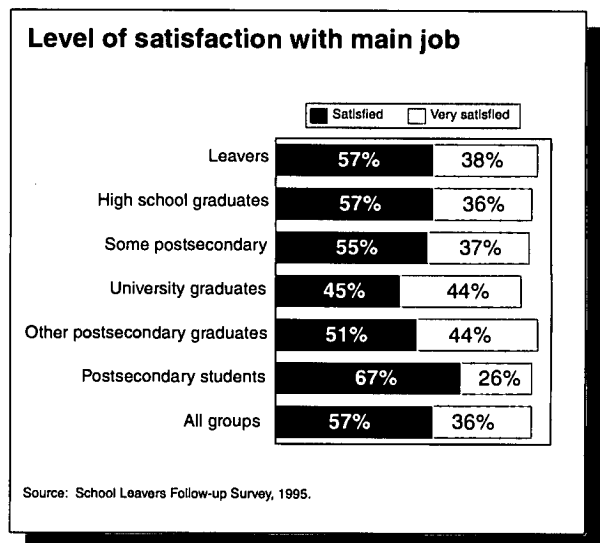
CHART 5-5



## Job satisfaction

Respondents were asked how satisfied they were with their main job in the week before the survey. In all groups, the rate of satisfaction was very high. About nine in ten employed youth reported being either satisfied (57%) or very satisfied (36%). Those with postsecondary qualifications were more likely to describe themselves as 'very satisfied', but the university graduates were also least likely to be satisfied.

CHART 5-6



This finding is remarkable when we consider the proportions of youth working in jobs requiring less education than they had and the degree of involuntary part-time employment noted earlier. 'Satisfaction' may reflect a feeling that one has made a satisfactory accommodation with the labour market, all things considered, rather than a strong appreciation for one's work. The picture becomes a little clearer when youth are asked for details on the most and least satisfying aspects of their work.

*About nine in ten employed youth reported being either satisfied (57%) or very satisfied (36%) with their main job in the week before the survey. Intrinsic rewards of the work (i.e., type of work, work demands) were the most important source of satisfaction for every group.*

Respondents were asked to indicate the single most satisfying and the single least satisfying aspects of their work. Intrinsic rewards of the work (i.e., type of work, work demands) were the most important source of satisfaction for every group. Appreciation of the intrinsic rewards was highest among those with postsecondary qualifications, reflecting their greater access to more highly skilled work, but in all of the other groups it far surpassed every other possible source of satisfaction. Appreciation for the extrinsic rewards (as represented by wages) was highest among postsecondary students, reflecting the more instrumental view students had of their jobs.

Intrinsic features of the work were also the greatest source of dissatisfaction for all groups. Hours of work were second as a source of dissatisfaction, ranking ahead of wages in every group. (Unfortunately, we cannot distinguish among those for whom hours were too few, too many, or scheduled at undesirable times.) Overall, 18% of those with jobs said their work had no dissatisfying aspects at all.

The findings show that Canadian youth place a high value on the intrinsic rewards of the work they do, and find them a source of satisfaction when they are positive and of dissatisfaction when

**Table 5-5 Most satisfying aspects of main job held in the week before the survey**

	(Percent)						
	Leavers	High school graduates	Some postsecondary	University graduates	Other postsecondary graduates	Postsecondary students	All groups
Type of work, work demands	50	48	51	63	58	47	51
Wages, earnings	21	19	19	3*	15	25	19
Other aspects	29	33	30	34	27	28	30

Source: School Leavers Follow-up Survey, 1995.

**Table 5-6 Least satisfying aspects of main job held in the week before the survey**

	(Percent)						
	Leavers	High school graduates	Some postsecondary	University graduates	Other postsecondary graduates	Postsecondary students	All groups
Type of work, work demands	34	32	39	38	35	39	37
Wages, earnings	12*	6*	10*	13*	10	6*	9
Hours of work	15*	25	17	18	20	20	20
No dissatisfying aspects	20	18	14	12	15	15	18

Source: School Leavers Follow-up Survey, 1995.

**Table 5-7 Level of satisfaction with overall financial situation, youth aged 22 to 24**

	(Percent)						
	Leavers	High school graduates	Some postsecondary	University graduates	Other postsecondary graduates	Postsecondary students	All groups
Very satisfied	3*	5*	--	--	8	--	6*
Satisfied	50	57	49	59	52	49	52
Dissatisfied	34	25	33	26	31	36	31
Very dissatisfied	12	12	--	--	9	--	10

Source: School Leavers Follow-up Survey, 1995.



they are not. Wages were less important as a source of satisfaction and dissatisfaction, but this does not signify that Canadian youth were satisfied with their overall financial situation. About four in ten youth aged 22 to 24, including those without jobs, reported being dissatisfied with their financial situation.

## Reflections on the labour market analyses

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Does this overview of experiences in the labour market give us grounds for serious concern about the prospects for the present generation of Canadian youth? The answer appears to be this: yes, there are problems in a number of areas, but the outlook of young people themselves remains remarkably positive.

Unemployment remains a persistent problem for large numbers of youth, especially those without postsecondary qualifications. Young women without a degree, diploma or certificate have particular difficulty finding work, partly because the blue collar sector remains largely male-dominated. This fact may provide some explanation for the higher rates of high school completion and postsecondary education on the part of young women.

A large percentage of youth who were no longer students were in jobs that required less education than they had completed. This situation bears watching. We have been hearing for over a decade of the growing disjuncture between the aspirations of youth and their educational achievement on the one hand, and the real opportunities available in the labour market on the other.<sup>5</sup> Demand is becoming polarized into jobs that require either a postsecondary qualification or something less than a high school diploma. The youth surveyed were still relatively young, however, so we should not conclude that this problem will continue as they get older. Still, continual monitoring of the employment conditions of youth in this age group will remain important.

Underemployment in the form of involuntary part-time work is also a problem for youth, especially young women. Presumably this was a factor for many of the 16% of employed young women who held more than one job at the time of the survey.

Compared to the labour force as a whole, the incidence of multiple jobs and temporary jobs was much more common among youth, including those with postsecondary qualifications. This is consistent with the shift towards non-standard work among youth that has taken place in recent years.

Over 40% of youth in this age group were dissatisfied with their financial situation. This reflects a fact noted in Chapter 1: the earnings of young workers have fallen steadily since the early 1980s relative to those aged 25 and over. This trend has occurred within all education levels, all major industrial groups and all major occupational groups.<sup>6</sup> It is a cause for concern to the extent that it delays the ability of young people to establish themselves independently as adults in society. Income insecurity due to unemployment adds to this problem.

It is remarkable under these circumstances that young people should express such a high level of satisfaction with their work. As noted, there was also a very low rate of 'discouraged workers' in this age group—people who had given up looking for work because they believed no jobs were available. The question remaining is whether these positive attitudes will endure as these young people continue on through their twenties.

## Notes for Chapter 5

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1. The author wishes to acknowledge the assistance of François Lamontagne in the initial design of this chapter and for his advice throughout its preparation.
2. Statistics Canada, *Historical Labour Force Statistics, 1995*. Catalogue 71-201, February 1996.
3. Gordon Betcherman and Graham Lowe, *The Future of Work in Canada*. Ottawa: Canadian Policy Research Networks, p. 27.
4. See Graham Lowe and Harvey Krahn. "Job Related Education and Training Among Young Workers." *Canadian Public Policy XXI* (3), September 1995, 362-378.

5. See, for example, Harvey Krahn and Graham Lowe, *Young Workers in the Service Economy*. Working Paper 90-14. Ottawa: Economic Council of Canada, 1990, as well as David Livingstone, "Lifelong Education and Chronic Underemployment: Exploring the Contradiction," in *Transitions: Schooling and Employment in Canada*. Eds. Paul Anisef and Paul Axelrod. Toronto: Thompson Educational Publishing, 1993.
6. Gordon Betcherman and René Morissette. "Recent Youth Labour Market Experiences in Canada." Analytical Studies Branch, Research Series Paper No. 63. Ottawa: Statistics Canada, 1994.

# Chapter 6

## Skill Use Among Youth

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*Sid Gilbert and Jeff Frank*

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### Introduction

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As already noted, the occupational and industrial structure of the Canadian economy as well as the nature of work itself are changing. High unemployment and having work requiring less education than completed are notable features of the youth labour market, as the jobs being created become more polarized according to educational and skill requirements.

This chapter first briefly reviews the broad economic context and the general importance of skills. Second, with data from the 1995 SLF, the chapter examines skill use among youth, as well as self-assessments by youth of their skill abilities. Finally, the connections between skills, education, social background characteristics and work are discussed. In this manner, we describe the extent to which generic skills were used by youth aged 22 to 24 in 1995 and link these skills with key education, background and work dimensions.

### The Global Context

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A recent issue of *The Economist* noted that "The new jobs in tomorrow's industries, in manufacturing and services alike, will... require workers that are literate, numerate, adaptable, and trainable—in a word, educated." The same article suggests there is a growing international consensus that "...education is the key to getting rich—for countries as well as for individuals."<sup>1</sup>

World competition and advancing technology have contributed to an increase in the importance of knowledge and skills and their application in the work place. In developed countries including

Canada, the transition to a service economy dominated by knowledge and information means that many jobs now require advanced education and higher-order skills. People without higher level skills risk being left behind in terms of the labour market.

As firms and labour markets change, some jobs become obsolete and new ones are created... In a flexible economy that is well positioned to take advantage of change, people will need to change jobs—perhaps many times. Hence workers need to acquire new skills and qualifications. As the skill required for certain jobs increases, the pressure on poorly trained workers likewise increases. Whereas occupational change opens up new opportunities for literate and skilled individuals, this is not true for those who lack the appropriate skills, many of whom are at risk of long-term unemployment.<sup>2</sup>

### Skills Are Key to Successful Work and Life Outcomes

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The difficulty many young people face in finding a job, particularly for those with little education, may contribute to the high educational attainment levels outlined in Chapter 2. Youth generally seem to understand the economic situation. According to a report of a recent series of focus groups on employment issues among postsecondary graduates, "the prospect of earning a decent wage as a result of postsecondary education was often the impetus behind their particular field of study."<sup>3</sup>

However, young people also seem to know that education is not enough. As one youth commented, "Even with an education, it doesn't guarantee a job when you graduate."<sup>4</sup> An adult who works with youth noted,

(Youth) are not getting the jobs, they are not getting the skill level to be able to compete with older people who are competing with them for entry level jobs and they are the ones right now who are really, really at risk of never entering the labour market successfully.<sup>5</sup>

In addition to education, or as part of that education, skills are expected to be important in finding employment and staying employed. There is considerable agreement that several kinds of generic skills are fundamentally important for employment and for effective citizenship. These include: basic skills such as literacy and numeracy; oral and written communication skills; thinking skills such as creativity, critical thinking and problem-solving; and interpersonal, learning and team work skills. Employability skills represent a specific application of generic skills in the workplace. The generic skills that are useful in the workforce are also useful in other areas of life—the family, interpersonal relationships, voluntary, leisure and recreational activities.

There is some debate as to whether the so-called 'hard skills' (technical competencies) are more important than the 'soft skills' (attitudes and interpersonal aspects). A substantial amount of commentary suggests that employers are looking for graduates with soft skills such as the right attitude, communication and interpersonal skills, adaptability and flexibility, and the ability to work in teams.<sup>6</sup> In a highly competitive labour market, however, some employers may insist that job applicants first have the necessary technical skills. Still, there is little doubt that basic attitudes, communication and interpersonal skills are very important.

Despite the recognition of the importance of education and skills, it is still not as simple as getting as much education as possible or as many skills as possible. Structural changes in the economy have resulted in changes in the kinds of skills required in the labour market. Unfortunately, the skills that young workers acquire through education or training do not necessarily match. Moreover, it is possible to have two kinds of mismatches at the same time: too many highly skilled individuals competing for low-skill jobs (resulting in unemployment

and overqualification) and too many low-skill individuals competing for high-skill jobs (underskilling or a skills deficit). In this chapter, we investigate the skills that youth reported to be using, as well as the generic skill abilities that young people themselves believed they had to offer.

## Measuring skill use and ability

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It is costly and difficult to administer direct tests to measure the skills people have. Consequently, researchers try to use substitute skill measures that are valid and reliable, as well as relatively inexpensive. The 1995 SLF contained two kinds of survey questions about skills:

- 1) measures of frequency of skill use and
- 2) respondents' own self-ratings of their ability in various skill areas.

It is important that readers do not interpret these measures as direct indicators of skill proficiency. Instead, the frequency of skill use and self-assessment measures contained in the SLF are useful as independent indicators of how often skills were employed and how youth rated their own ability to perform certain generic activities.<sup>7</sup>

Respondents were asked about basic skill activities in the 12 months before the survey, whether at work, at school or in personal life generally. Consequently, these questions measured overall skill use. A key assumption was that if an activity was performed frequently, it was more likely to represent a demonstrable skill than unobserved use (i.e., skills that are used are skills that are not lost). It is possible, however, for people to have a skill and not use it because of the nature of their work, schooling or personal circumstances.

The categories of skills examined included reading, writing, numeracy, communication, learning and team work skills. For each skill set, four questions were asked. Each of these questions had five response categories, ranging from never (least frequent) to more than three times a week (most frequent).

In addition, respondents were asked to rate their ability to do these activities; they were asked to rate their reading, writing, numeracy and other skills on a scale from one to ten (from very basic to very advanced). As mentioned above, reading or writing *ability* is different than *frequency* of reading or writing, although they may be somewhat related.

## Among youth in general, many skills appeared to be used only rarely

With the reference period being the 12 months before the survey, nearly one in five youth aged 22 to 24 reported never reading books or reading them less than once a month. Similarly, substantial proportions of young people never or seldom read

manuals (36%) or used written materials to come up with new ideas (29%). Writing activities were even less frequent: one in four never or infrequently wrote several paragraphs at a time, nearly one-half rarely wrote more than two pages, six in ten never or seldom changed their level of writing to suit different audiences, and four in ten never or infrequently revised material they had written.

### SLF skill-use questions

The skill-use questions on the 1995 SLF measured how often young people performed various specific activities during the 12 months before the survey. Measured in this way, the levels of skill use reported by youth were quite low. These might even be considered surprisingly low, especially since the skill use could have taken place at work, in school or as part of personal life. However, care should be taken not to interpret these results as absolute measures of skill use among youth. Instead, they are more useful for examining the relative difference in skill use among various categories of young people. (See note 7 at the end of this chapter.)

#### Reading:

- How often did you read books?
- How often did you read instruction manuals?
- How often did you use more than one book or other written material to gather information that you wanted?
- How often did you use books or other written material to create ideas?

#### Writing:

- How often did you write several paragraphs, totalling one or two pages, such as when writing a short letter?
- How often did you write more than two pages, such as when writing a report, a manual, a story or an article?
- How often did you change your level of writing to suit different audiences?
- How often did you make at least one revision to your written work before producing a final version?

#### Numeracy:

- How often did you take measurements?
- How often did you calculate percentages or averages?
- How often did you use data presented in numerical tables, graphs or charts?
- How often did you use complex mathematical techniques?

#### Verbal communication:

- How often did you lead group discussions or meetings?
- How often did you teach people how to perform tasks?
- How often did you make informal presentations or speeches?
- How often did you make formal presentations or speeches?

#### Learning:

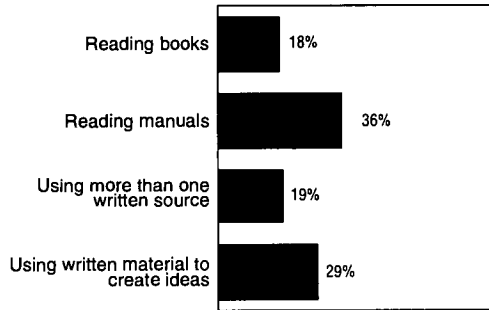
- How often did the results of something you had done cause you to change the way you did it the next time?
- How often did you put yourself in situations that required you to obtain new skills?
- How often did you identify weaknesses in the skills that you had and then take steps to improve these skills?
- How often did you master one level of a new skill and then go on to learn the next level?

#### Group or team work:

- How often did you participate in a team or group?
- How often did you chose to undertake tasks as a member of a team or group?
- How often did you create groups or teams in order to undertake tasks?
- How often did you make an important contribution to the achievement of team or group goals?

CHART 6-1

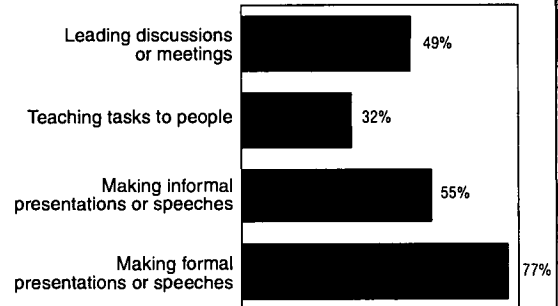
**Proportion of youth aged 22 to 24 reporting never or seldom doing these reading activities<sup>a</sup>**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

CHART 6-4

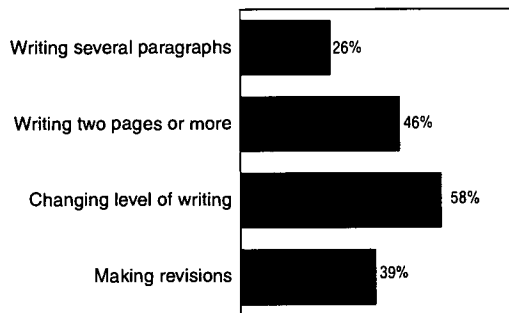
**Proportion of youth aged 22 to 24 reporting never or seldom doing these verbal communication activities<sup>a</sup>**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

CHART 6-2

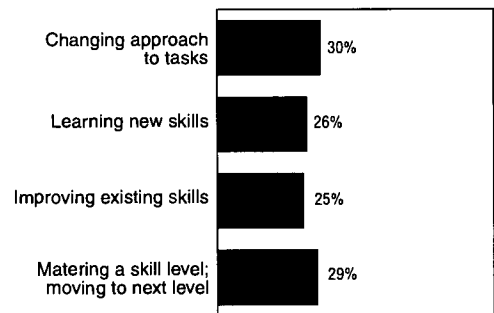
**Proportion of youth aged 22 to 24 reporting never or seldom doing these writing activities<sup>a</sup>**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

CHART 6-5

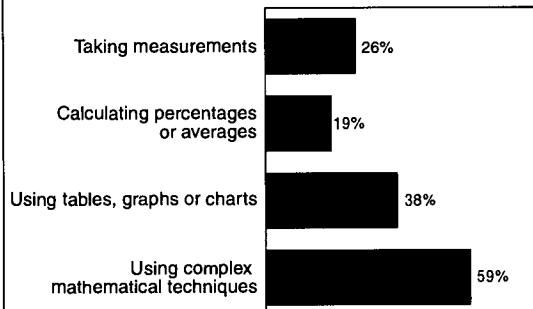
**Proportion of youth aged 22 to 24 reporting never or seldom doing these learning activities<sup>a</sup>**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

CHART 6-3

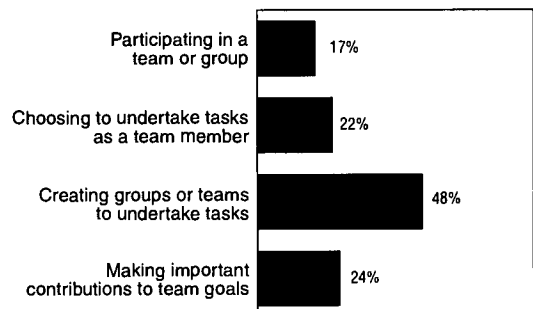
**Proportion of youth aged 22 to 24 reporting never or seldom doing these numeracy activities<sup>a</sup>**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

CHART 6-6

**Proportion of youth aged 22 to 24 reporting never or seldom doing these team work activities<sup>a</sup>**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

For numeracy skill use, large proportions of young people did take measurements, and calculated percentages or averages on a regular basis. However, four in ten reported that they never or rarely used charts, tables or graphs, and six in ten never or seldom used complex mathematics.

Verbal communication activities also appeared to be infrequently undertaken: one-half of these young people never or rarely led discussions, over one-half never or seldom made informal presentations, and more than three-quarters never or rarely gave formal presentations or speeches.

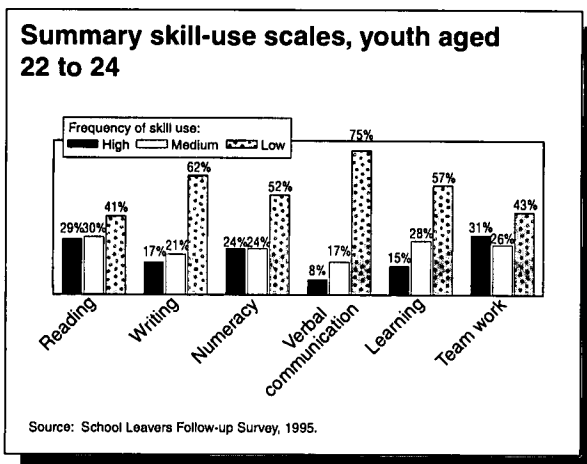
The learning skills of youth, based on four separate questions, appeared to be used slightly more often than the skill-use categories mentioned above. Youth were also more likely to report participation in group or team work activities but did not often create groups in order to undertake tasks.

## Youth viewed their own abilities more favourably

How did young people rate their own abilities in the various skill areas?<sup>a</sup> Considerable proportions of youth considered their numeracy (37%), writing (25%), reading (19%) and verbal (19%) skill abilities to be only at a basic level. On the other hand, learning and team work skills were considered to be more highly developed. This pattern of self-assessments was consistent with that found in the skill-use measures, reinforcing the notion that writing and verbal communication skills were least likely to be well developed.

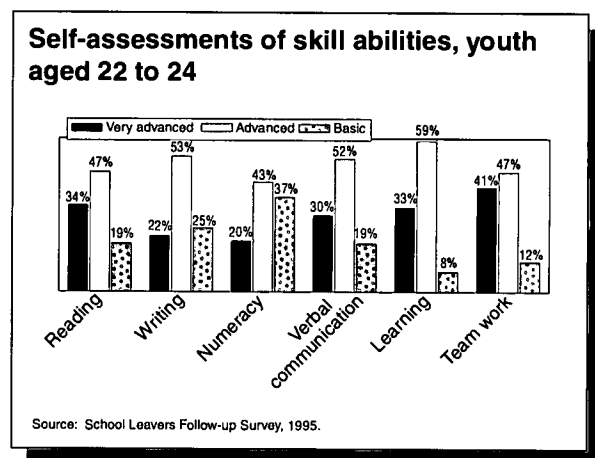
*Skill-use measures as well as self-assessments indicated that writing and verbal communication skills were least used among youth aged 22 to 24. Learning and teamwork skills were used more often.*

CHART 6-7



Summary scales or indices were created for each skill set and divided into three categories: high, medium and low frequency of use. Verbal communication and writing were the categories where skills were used least often. In particular, 75% of these young people exhibited low verbal communication skill use and 62% reported low writing skill use. This finding is especially noteworthy in light of the fact that communication skills are a key employability skill.

CHART 6-8



However, youth were more likely to consider their skill abilities to be very advanced, in comparison with the frequency of skill-use measures (except for numeracy). Similarly, smaller proportions of youth rated their skills as basic relative to the frequency of skill-use measures. As previously indicated, however, skill use and self-assessed ability are two different things.

In order to pursue this further, we directly examined the degree of correspondence between the summary use scales and the self-ratings of skill ability. The skill areas with the largest gaps

(writing, verbal communications and learning) were then investigated.

Youth who rated themselves as having basic skill levels also tended to report low skill use. For example, 82% of youth who rated their writing skills as basic and 91% of those reporting basic verbal communication skills also exhibited infrequent skill use in these areas. However, substantial proportions of youth who rated themselves as having advanced or very advanced writing (45%) and verbal communication skills (63%) also exhibited infrequent skill use.

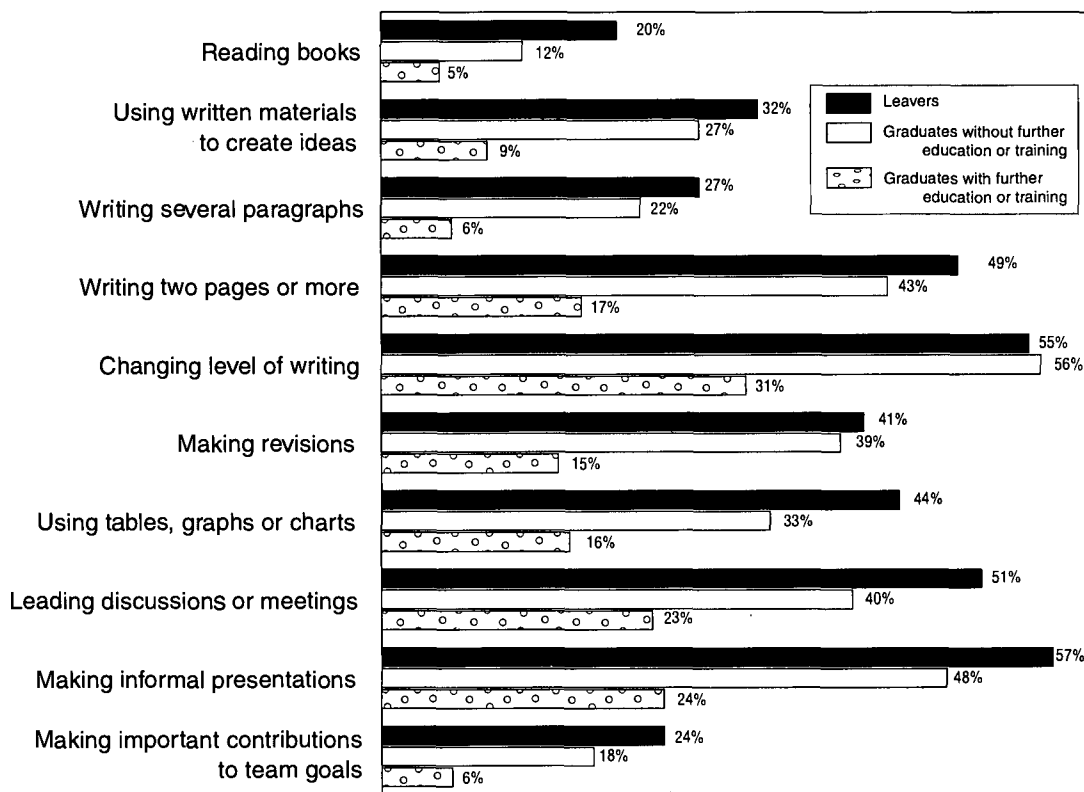
In other words, many young people who did not use particular skills nevertheless felt they had strong abilities. Youth who infrequently used learn-

ing skills, for example, still rated themselves as having advanced (59%) or very advanced (31%) learning abilities. In short, youth tended to evaluate their own abilities more highly than their reported levels of skill use would indicate.

Some young people may have been over-estimating their abilities. But it is also possible that they may have had these basic skills but were not using them at school, at work or in their daily lives. This is consistent with the high levels of youth working in jobs requiring less education than they had completed, as documented in Chapter 4. At age 22 to 24, many young people may not yet have had work that required them to use their abilities to the fullest.

CHART 6-9

**Proportion of youth aged 22 to 24 reporting never or seldom doing these activities,<sup>a</sup> by high school status**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.



## Low education, low skill use

High school leavers had lower levels of skill use than high school graduates, and demonstrated much less skill use than high school graduates with further education or training. Nearly one-half of leavers rarely wrote more than two pages, and over 50% did not adjust their writing, lead group discussions or make informal presentations. Once again, we note the similarity between leavers and graduates without postsecondary training, this time in terms of skill-use profiles. It would appear that relatively low educational attainment, whether high school leaving or graduation with no further education or training, was associated with lower levels of skill use.

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*Low educational attainment, whether high school leaving or graduation with no further education or training, was associated with low levels of skill use.*

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Educational attainment levels can be further sub-divided into the more detailed categories of youth outlined in Chapter 2. Examining skill use by these education levels, several interesting patterns emerge. First, infrequent skill use was quite common among high school leavers, ranging from 55% for team work to 88% for verbal communication. The leavers who received further education after high school exhibited lower levels of non-use than other leavers in all skill areas. For some skill categories (writing, numeracy and team work) these differences were substantial.

As might be expected, high school graduates had higher levels of skill use than school leavers. Even among high school graduates as a whole, however, skills (as measured by the questions asked) appeared to be infrequently used: the proportion never or seldom using skills ranged from 37% for reading to 73% for verbal communication skills. For graduates without postsecondary training, skill-use patterns more closely resembled those of leavers than of graduates with further education or training. This supports the suggestion made in Chapter 2 that the key issue may not be leaving before high school completion but having relatively low education (or skills) in an increasingly highly educated society.

High school graduates who had pursued some form of postsecondary education or training toward a degree, diploma or certificate were somewhat less likely to demonstrate low skill use. Still, substantial proportions of this group infrequently used certain categories of skills. For example, 53% infrequently used writing and learning skills, and 71% seldom used verbal communication skills.

Among high school graduates with postsecondary education, skill use was highest among university graduates and postsecondary students. High school graduates with only some postsecondary education as well as non-university postsecondary graduates exhibited relatively infrequent skill use. For example, 75% of those with some postsecondary education seldom employed verbal communication skills and 65% seldom used writing skills.

**Table 6-1 Proportion of youth reporting never or seldom using skills**

	(Percent)					
	Reading	Writing	Numeracy	Verbal communication	Learning	Group or team work
<b>High school leavers:</b>	58	82	58	88	64	55
Without further education or training	61	87	62	88	65	58
With further education or training	47	67	45	86	61	43
<b>High school graduates:</b>	37	58	51	73	55	41
Without further education or training	56	77	58	80	61	48
With further education or training	33	53	49	71	53	39
Some postsecondary	41	65	51	75	58	43
University graduates	24	37	47	61	53	31
Other postsecondary graduates	42	63	49	74	54	39
Postsecondary students	21	41	47	70	50	40

Source: School Leavers Follow-up Survey, 1995.

The activities measured included those one might expect to occur on a routine basis in an educational setting, in many employment situations, or in other aspects of life. Nevertheless, the questions may have been too specific to give an accurate reading of the absolute levels of skill use among youth and should not be interpreted as such. What we can tell from these data, however, are the relative differences between various categories of young people. Clearly, university graduates and postsecondary students were most likely to report using the types of skills measured by the 1995 SLF.

### Skill self-assessments better distinguished between high school leavers and graduates

The patterns of self-ratings of skill ability across categories of young people were generally similar to those found for frequency of skill use. There were, however, some noticeable differences. First, the self-assessments of ability were more positive than the frequency of skill-use scales would indicate. Also, high school graduates without further education or training no longer resembled the high school leavers, as they did when skill use was examined. Compared to school leavers, smaller proportions of high school graduates without postsecondary education viewed their abilities as being at a basic level. Finally, self-assessments better distinguished between university graduates and postsecondary students, with university graduates least likely to view their own skill abilities as

basic. In short, the self-assessments of skill ability differentiated categories of youth more than did the skill-use scales.

In interpreting this finding, it may be that youth believed their abilities to be more important to their educational attainment or progress than how much they used their skills. On the other hand, young people may have defined their own abilities according to the level of education they had achieved. Another possibility is that youth, including those with further education or training beyond high school, may have been working in jobs at the time of the survey that did not require high skill levels. This would be consistent with the incidence of youth working in jobs that did not require the level of education they had completed, as described in Chapter 4. It is also possible that some young people may have overestimated their own skill abilities.

### Social distribution of skill use

How did skill-use patterns and self-ratings of ability vary by background characteristics such as gender, socio-economic status and family structure?

Young men and women had similar patterns of skill use in the areas of reading, writing, verbal communication and learning. The use of numeracy and team work skills, however, varied according to gender. Sixty-three percent of young women compared with 41% of young men reported low use of numeracy skills. Similarly, 48% of young women compared with 38% of young men were low on frequency of team work activities.

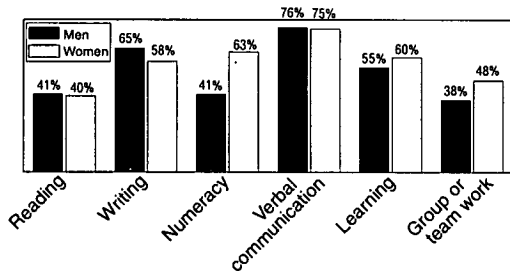
**Table 6-2 Proportion of youth reporting only basic skill abilities**

	(Percent)					
	Reading	Writing	Numeracy	Verbal communication	Learning	Group or team work
<b>High school leavers:</b>	45	50	47	32	19	19
Without further education or training	47	53	49	35	19	21
With further education or training	37	40	41	22	19	15
<b>High school graduates:</b>	14	21	36	16	6	11
Without further education or training	24	36	43	26	14	16
With further education or training	12	18	34	14	4	10
Some postsecondary	18	22	38	19	7	13
University graduates	4	7	27	7	2	5
Other postsecondary graduates	16	22	32	14	4	9
Postsecondary students	7	14	37	14	4	12

Source: School Leavers Follow-up Survey, 1995.

CHART 6-10

**Proportion of youth aged 22 to 24 reporting low skill use,<sup>a</sup> by gender**



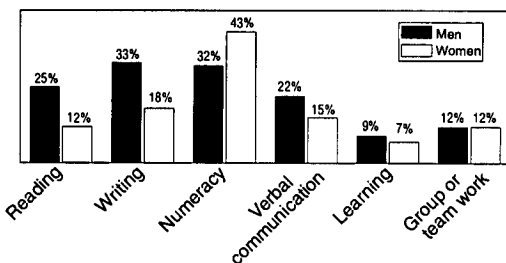
a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

Young men and women did feel differently about their own abilities in reading, writing, numeracy and verbal communication. For example, about twice as many men as women rated their reading and writing skills as basic. More men than women rated their verbal communication skills as basic. On the other hand, and similar to the use dimension, more women (43%) than men (32%) rated their numeracy skills or abilities as basic. Men and women were similar regarding their self-ratings of learning and team work skills or abilities.

Except in the area of numeracy, young women tended to rate their own skills more highly than (or about the same as) their male counterparts. This stands in contrast to the measures of skill use which indicate that young men and women had similar patterns of skill use (except again in the area of numeracy and to a lesser extent team work).

CHART 6-11

**Proportion of youth aged 22 to 24 with low self-assessments of skill ability, by gender**



Source: School Leavers Follow-up Survey, 1995.

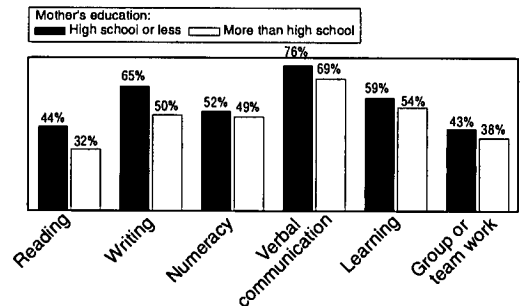
**Low skill use appears more common among youth with less advantaged backgrounds**

Mother's education (used as an approximate indicator of socio-economic status) was related to all of the skill-use scales and to all of the skill ability self-ratings, except for numeracy and team work. As we will see, however, this was mainly because youth with less educated mothers tended to be less educated themselves, and were less likely to be working or to be postsecondary students.

Young people whose mothers had a high school education or less tended to exhibit lower skill use and lower self-assessments of skill ability, compared to those whose mothers had more than a high school education. For example, 65% of the youth with less educated mothers compared with 50% of those with more highly educated mothers reported low use of writing skills. Similarly, youth with less educated mothers (35%) were over twice as likely as those with more highly educated mothers (16%) to demonstrate low use of numeracy skills.

CHART 6-12

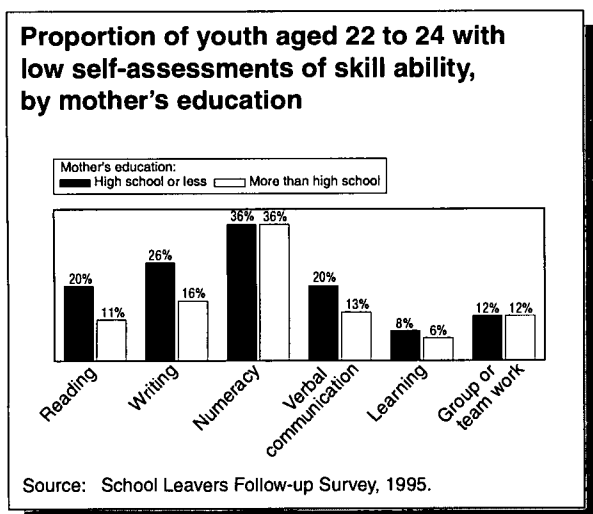
**Proportion of youth aged 22 to 24 reporting low skill use,<sup>a</sup> by mother's education**



a. In the 12 months before the survey.  
Source: School Leavers Follow-up Survey, 1995.

Regardless of their mother's education, however, just over one-third (36%) of youth assessed their numeracy skills as being at a basic level only. Except in the areas of numeracy and teamwork, youth with less educated mothers tended to report lower self-assessed skill levels than youth whose mothers had more than a high school education.

CHART 6-13



Coming from a single-parent family background was not related to skill use or to young people's assessments of their abilities, except for very modest relationships concerning writing and numeracy skills.

The relationship between skill use among youth and their socio-economic status (as measured by mother's education; using father's education showed the same pattern) suggests that skills were socially distributed. All families may not have the same degree of access to social, cultural and intellectual resources. Youth from more modest backgrounds demonstrated lower levels of skill use, but this was not necessarily because of a lack of talent or ability. More probably, the type of work and any learning or daily life activities in which less advantaged youth were engaged were less likely to involve the kinds of skills measured by the 1995 SLF.

### Skill use most common among youth who were working or studying

Employed young men and women generally had slightly higher skill use and self-assessed skill ability than those who were unemployed or not in the labour force. Exceptions to this basic pattern were evident for reading and writing skills, especially among men where those not in the labour force had higher use and self-assessments than those who were working. These people tended to be students.

Many young people who were not in the labour force were postsecondary students. As indicated in Tables 6-1 and 6-2, postsecondary students were among those least likely to demonstrate low skill use and low self-assessments of skill ability. Clearly, postsecondary learning often involves using the kinds of skills measured by the 1995 SLF.

As a result, when students are excluded from the examination of skill use by labour force status, the gap between employed youth and those who were unemployed or not in the labour force widens considerably. Thus, working or being a student increases the likelihood of using various skills and of having a relatively high assessment of one's own abilities.

This suggests that youth who were neither working nor studying may become further disadvantaged as they lack the opportunity to use their skills or to develop new ones. Getting out of this cycle would appear to be one of the greatest challenges for youth with relatively low skill use. As the evidence in this chapter demonstrates, young people with low skill use and low self-assessments of skill ability also tend to be those with less education.

### Results of a multivariate analysis: Skills related to education level, working and being a student

To sort out some of the complex relationships outlined above, we conducted a more sophisticated analysis using a technique known as logistic regression. This technique allows us to examine the relative importance of various factors in determining particular outcomes—in this case, the incidence of low skill use and of low self-assessments of skill abilities. Using logistic regression is more powerful than simply looking at each variable individually because, in examining the importance of a particular factor, it holds constant other variables that are also being considered. The factors included in our model were gender, low education, family structure, and socio-economic, employment and postsecondary student status.

A separate analysis was conducted both for skill use and for skill self-assessments in each of the six skill categories. The results of all 12 analyses are summarized in Table 6-3. Conducting logistic regression analysis produces a useful measure

known as an 'odds ratio' for each explanatory variable being considered. An odds ratio of one (1.0) indicates that the factor in question is not important in predicting low skill use or low skill self-assessment. An odds ratio of 2.0, on the other hand, indicates that people with a given characteristic are twice as likely as others to demonstrate low skill use (all other things being equal).

In looking at the use of reading skills by gender, for example, we see that being male gives an odds ratio of 1.0 (top-left cell in Table 6-3). A value of or close to 1.0 indicates that gender is not an important consideration in determining who will demonstrate low use of reading skills. On the other hand, the odds ratio for men vis-à-vis self-assessments of reading skills was 2.2. In other words, men were more than twice as likely as women to give their own reading skills a low rating, holding other factors constant.

In terms of skill use, gender did not play an important role, except in the areas of numeracy and teamwork. In these two skill categories, men were somewhat less likely than women to demon-

strate low skill use. On the other hand, men were considerably more likely to give their own skill abilities a low rating in reading, writing and verbal communication. Only in the area of numeracy were men far less likely than women to rate their own abilities as being at just a basic level.

The factors that remain extremely important are education, employment and student status. These factors were most consistently related to the indicators of low skill use and low skill self-assessments. Having relatively less education tended to be accompanied by low skill use and low self-assessed skill abilities. At the same time, having a job or being a postsecondary student were characteristics that reduced one's likelihood of demonstrating low skill use or abilities.

Remember that these findings take into account and control for the other variables in the model. So, for example, differences in education, family structure, socio-economic, employment and student status are taken into account in the above examination of the importance of gender on skill use and self-assessed skill ability.

**Table 6-3 Odds ratios for low skill use and low self-assessments of skill abilities**

	Gender (Male)	Low education (School leaver)	Family structure (Single-parent family)	Socio-economic status (Mother had low education)	Employment status (Employed)	Student status (Postsecondary student)
<b>Low skill use in:</b>						
Reading	1.0	<b>1.9</b>	1.0	<b>1.3</b>	1.1	<b>0.4</b>
Writing	<b>1.3</b>	<b>2.7</b>	1.1	<b>1.4</b>	1.1	<b>0.4</b>
Numeracy	<b>0.4</b>	<b>1.4</b>	1.0	1.0	<b>0.7</b>	<b>0.8</b>
Verbal communication	1.0	<b>2.3</b>	<b>1.2</b>	<b>1.2</b>	<b>0.6</b>	<b>0.8</b>
Learning	<b>0.8</b>	<b>1.4</b>	<b>0.9</b>	1.1	<b>0.8</b>	<b>0.7</b>
Group or team work	<b>0.7</b>	<b>1.7</b>	<b>1.1</b>	1.1	<b>0.6</b>	<b>0.8</b>
<b>Low self-assessment in:</b>						
Reading	<b>2.2</b>	<b>3.6</b>	1.0	1.1	<b>0.9</b>	<b>0.4</b>
Writing	<b>2.2</b>	<b>2.8</b>	<b>1.3</b>	1.1	<b>0.8</b>	<b>0.5</b>
Numeracy	<b>0.6</b>	<b>1.7</b>	<b>1.1</b>	0.9	<b>0.8</b>	1.0
Verbal communication	<b>1.7</b>	<b>1.9</b>	<b>1.2</b>	<b>1.3</b>	<b>0.6</b>	<b>0.7</b>
Learning	<b>1.4</b>	<b>2.7</b>	1.0	1.0	<b>0.5</b>	<b>0.4</b>
Group or team work	1.0	<b>1.7</b>	1.1	0.9	<b>0.6</b>	1.0

Values in **bold and italics** are statistically significant.

Illustrative examples:

An odds ratio of or close to 1.0 indicates that the characteristic was not associated with the skill indicator (after taking the other factors into account).

An odds ratio of 2.0 indicates that individuals with the characteristic were twice as likely to have demonstrated low skill use, or to have reported a low self-assessment of a given skill ability.

An odds ratio of 0.5 indicates that individuals with the characteristic were half as likely to have demonstrated low skill use or to have reported a low self-assessment of a given skill ability.

Source: School Leavers Follow-up Survey, 1995.

Having controlled for other intervening factors, it is interesting to note that the differences previously described for youth coming from less advantaged families (those from low socio-economic status backgrounds or from single-parent families) largely disappear. The odds ratios for these characteristics indicate that there are only very modest relationships between family structure, socio-economic status and the indicators of low skill use and low self-assessed ability in the six skill categories.

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*When other intervening factors are taken into account, there are only very modest relationships between family structure, socio-economic status and the indicators of low skill use and low self-assessed ability.*

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Being a school leaver was associated with low skill use and with low self-assessment of skill ability for each of the skill categories (after controlling for gender, family structure, socio-economic, employment and student status). This was most evident in the use and self-assessments of writing, reading and verbal communication skills, as well as in the self-assessment of learning skills.

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*Having a relatively low level of education was associated with low skill use and low self-assessments of skill abilities. At the same time, having a job or being a post-secondary student were characteristics that reduced one's likelihood of indicating low skill use or abilities.*

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**Table 6-4 Odds ratios for low skill use and low self-assessments of skill abilities (low education broadly defined)**

	Gender (Male)	Low education (School leavers and high school graduates with no further education or training)	Family structure (Single-parent family)	Socio-economic status (Mother had low education)	Employment status (Employed)	Student status (Postsecondary student)
<b>Low skill use in:</b>						
Reading	1.0	<b>2.3</b>	1.0	<b>1.2</b>	<b>1.1</b>	<b>0.5</b>
Writing	<b>1.2</b>	<b>2.7</b>	1.0	<b>1.3</b>	1.1	<b>0.5</b>
Numeracy	<b>0.4</b>	<b>1.7</b>	0.9	1.0	<b>0.7</b>	0.9
Verbal communication	1.0	<b>1.9</b>	<b>1.2</b>	<b>1.1</b>	<b>0.6</b>	<b>0.8</b>
Learning	<b>0.8</b>	<b>1.5</b>	<b>0.9</b>	1.1	<b>0.8</b>	<b>0.7</b>
Group or team work	<b>0.6</b>	<b>1.7</b>	1.1	1.0	<b>0.6</b>	0.9
<b>Low self-assessment in:</b>						
Reading	<b>2.2</b>	<b>2.8</b>	1.0	1.1	<b>0.8</b>	<b>0.4</b>
Writing	<b>2.1</b>	<b>2.8</b>	<b>1.2</b>	1.0	<b>0.9</b>	<b>0.7</b>
Numeracy	<b>0.6</b>	<b>1.8</b>	1.1	<b>0.9</b>	<b>0.8</b>	<b>1.2</b>
Verbal communication	<b>1.6</b>	<b>2.2</b>	1.1	<b>1.3</b>	<b>0.7</b>	<b>0.9</b>
Learning	<b>1.3</b>	<b>3.6</b>	0.9	1.0	<b>0.6</b>	<b>0.7</b>
Group or team work	1.0	<b>1.9</b>	1.1	<b>1.0</b>	<b>0.6</b>	1.1

Values in **bold and italics** are statistically significant.

Illustrative examples:

An odds ratio of or close to 1.0 indicates that the characteristic was not associated with the skill indicator (after taking the other factors into account).

An odds ratio of 2.0 indicates that individuals with the characteristic were twice as likely to have demonstrated low skill use, or to have reported a low self-assessment of a given skill ability.

An odds ratio of 0.5 indicates that individuals with the characteristic were half as likely to have demonstrated low skill use or to have reported a low self-assessment of a given skill ability.

Source: School Leavers Follow-up Survey, 1995.

## **'Low education' related to skill use and self-assessed ability**

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We ran another set of the same analyses with one important difference: 'low education' was defined more broadly to include high school graduates without further education or training (in addition to school leavers). The results are displayed in Table 6-4. Defining low education more broadly did not affect the patterns of low skill use and low self-assessments already reported. In fact, by including high school graduates without postsecondary training, having low education became slightly more important in determining low use of reading and numeracy skills, and low self-assessment of verbal communication and learning abilities. In the other skill categories, having low education was about as important as before or somewhat less important. Thus, having low education (broadly defined) is the most important determinant of low skill use and of low self-assessed skill ability.

## **Summary and Conclusions**

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Questions on the 1995 SLF measured how often young people used various types of skills: reading, writing, numeracy, verbal communication, learning, and group or teamwork. It also asked youth to assess their own level of ability in these same skill areas. (The results from these questions cannot be used to directly assess the degree of skill proficiency among youth.)

The analysis revealed low levels of skill use among youth aged 22 to 24, particularly in the areas of verbal communication and writing. Self-assessments of their skill abilities were somewhat higher. This would suggest either that some youth may have had these skills but were less likely to be using them (either at work, at school or in their personal lives), or that the young people responding to the survey were overestimating their own competencies in various skill areas.

Most likely, however, is an explanation that is consistent with the incidence of youth working in jobs requiring less education than they had completed, as documented in Chapter 4. At age 22 to

24, many young people had work that required only low or moderate levels of skill use. The groups least likely to demonstrate low levels of skill use were university graduates (who tended to be in jobs that involved more skill use) and postsecondary students (who tended to use various skills as part of their learning activity).

The way skill use and self-assessment of skill ability varied by educational attainment reinforces the notion that high school graduation, by itself, may not be the characteristic that best distinguishes between low and high education youth. High school leavers exhibited infrequent skill use and lower ability ratings than high school graduates. However, the skill use of high school graduates with no further education or training resembled that of leavers more than of high school graduates who had pursued postsecondary education.

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*Without the kind of work or learning environment that would allow them to use their skills, some youth could be at risk of not being able to maintain and develop the skills they may have already, and of not having the opportunity to acquire new ones.*

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What did differentiate high school leavers from graduates without further education or training were the latter group's more positive self-assessments of their own skill abilities in certain areas. Still, without the kind of work or learning environment that would allow them to use their skills, however, some youth could be at risk of not being able to maintain and develop the skills they may have already, and of not having the opportunity to acquire new ones.

Even among youth with postsecondary education or training, skill use was still lower than what one might have expected. Their self-assessments of skill abilities were comparatively much higher. This may indicate that these young people were not yet employed in jobs that required them to use their skills very extensively. At age 22 to 24, these youth were still very much in the midst of their school-work transitions.

## Notes for Chapter 6

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1. *The Economist*, March 29, 1997: 15 and 22.
2. Tuijnman, Albert, "The Importance of Literacy in OECD Societies," in *Literacy, Economy and Society*. Paris and Ottawa: Organisation for Economic Co-operation and Development and Statistics Canada, 1995: 22.
3. D.R. Harley Consultants Limited, *Report on Consultations in Preparation for the 1997 Survey of 1995 Graduates*. Ottawa: Statistics Canada, August 1997.
4. Youth quoted in Ekos Research Associates Inc., *Reconnecting Young Canadians: Problems and Solutions from the Labour Market*. Ottawa: Final Report submitted to Corporate Affairs Directorate, Public Affairs Branch, Human Resources Development Canada, June 1996: 28.
5. Statistics Canada, "Consultations in Preparation for Future Surveys on Youth and School-Work Transitions," April 1996: 14.
6. Human Resources Development Canada, *Take On the Future: Canadian Youth in the World of Work*. Ottawa: Report of the Ministerial Task Force on Youth, June 1996  
Statistics Canada, *Consultations in Preparation for Future Surveys on Youth and School-Work Transitions - Final Report*. Ottawa: Statistics Canada, April 1996.  
The Conference Board of Canada, *Employability Skills Profile: What Are Employers Looking For?* Ottawa: The Conference Board of Canada, 1996.
7. In a separate but related project, direct skill tests and exercises were administered to 317 SLF respondents (Mann, Jones and Gilbert 1996) to assess the correspondence between these direct tests, and the proxy measures contained in the School Leavers Follow-up Survey (Jones 1997). The correlations were too low, particularly for the teamwork questions, to be considered psychometric substitutes for the direct measures. Nonetheless, the proxies were shown to be reliable scales and the frequency questions do reflect the frequency of complex skill use.  
Mann, Alex, Stan Jones and Sid Gilbert. *Skill Assessment Project, Phase 1: Feasibility Study*. Ottawa: Report prepared for Statistics Canada and Human Resources Development Canada, April 1996.  
Jones, Stan. Relationships among Proxy and Direct Assessments of Basic Skills in the School Leavers Follow-up Survey. Ottawa: Report prepared for Statistics Canada and Human Resources Development Canada, March 1997.
8. Respondents answered according to a ten-point scale (very basic to very advanced). After examining the distribution of responses, the top two categories of the rating scale were combined to represent *very advanced* skills, the next two categories combined to indicate *advanced* skills and the bottom six points on the scale collapsed to reflect a *basic* skill level.



# Chapter 7

## Do Early Childhood Experiences Affect Labour Market Outcomes?

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*Saul Schwartz, Shelley Harris, Marie Blythe and Michael Orsini*

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### Introduction

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Does leaving high school without a diploma lead to a life of low wages and chronic unemployment? Or are those labour market difficulties, when they occur, related to problems that occurred in early childhood, problems that explain both school leaving and labour market difficulties?

These questions are central to education policy. If leaving school prematurely is an independent cause of labour market problems, then campaigns to keep young people in high school would be quite important. If, however, leaving school is one of the symptoms of more deep-seated intellectual or emotional problems, then those problems will affect labour market experiences even if the person succeeds in obtaining a high school diploma. In the latter case, efforts at early intervention for 6 year-olds might be a better direction for public policy than stay-in-school programs for 16 year olds.

The connections among problems in early childhood, premature school leaving and labour market difficulties are numerous and complex. It would be naïve to suggest that any single factor is all-important. Young people leave high school prematurely for a variety of reasons, some of which cannot be known in the best of circumstances. Moreover, young people have trouble finding jobs for reasons—such as unfavourable economic conditions—that have nothing to do with their own behaviour.

In this chapter, we investigate the possibility—and it will remain only a possibility—that early childhood problems lead some young people to leave high school without graduating and to have

problems in the labour market once they have left school.

The analysis of the 1991 School Leavers Survey (SLS) noted that leaving high school prior to graduation was the result of 'cumulative disadvantage'.<sup>1</sup> The image is one of children who accumulate layers of disadvantage as they grow older because they live in a world in which those with problems are more likely to acquire still others.

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*In this chapter, we establish the possibility—though it will remain only a possibility—that early childhood problems lead some young people to leave high school without graduating **and** to have problems in the labour market once they have left school.*

---

Using results of the 1995 School Leavers Follow-up Survey (SLF), we focus on labour market problems—low wages and large amounts of time spent unemployed—that some young people encounter. In accordance with the notion of 'cumulative disadvantage', we ask whether early childhood problems continue to affect young adults as they make school-work transitions. The chapter is divided into two sections. In the first, we briefly review the literature on the long-term impacts of problems encountered in early childhood. In the second, we use the 1995 SLF to address two empirical questions:

- Are the early labour force experiences of school *leavers* without postsecondary education or training significantly different than the early labour force experiences of *high school graduates* without postsecondary

education or training? The traditional notion that high school graduation, by itself, leads to better jobs than dropping out may no longer be true, at least for graduates who do not obtain significant postsecondary education or training.

- Do adverse experiences in early life, such as failing an early elementary grade, affect early labour market outcomes such as weekly wages or the proportion of time spent working? This question is independent of the first since early problems might affect wages or employment whether or not high school graduates are better off than high school leavers.

### **Are the effects of problems encountered in early childhood long-lived?**

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Many believe that problems encountered early in childhood, if left untreated, will have long-term negative impacts on later behaviour. Keating and Mustard write:

There is now substantial evidence that the quality of early childhood experiences has long-term effects on individuals' performance in the education system, their behaviour in adult life and their risks for chronic diseases in adult life.<sup>2</sup>

Despite the prevalence of that belief, however, there is a surprisingly small amount of evidence that is based on long-term studies of the actual lives of individual people.<sup>3</sup> Several studies are widely cited but these studies are of geographically limited populations and have relatively small sample sizes.<sup>4</sup>

One is a study of a group of about 700 infants born in Hawaii in 1955. Over the years, researchers followed the infants as they moved from childhood, to adolescence, and into adulthood. Early on, one-third of the infants were classified as 'at risk' because they had "experienced moderate to severe degrees of perinatal stress, were born into poverty, were reared by mothers with little formal education, and lived in a family environment troubled by discord, desertion, or divorce, or marred by parental alcoholism, or mental illness." Of these at-risk infants, two-thirds "developed serious learning or behaviour problems by the age of ten, or had delinquency records, mental health problems, or teenage pregnancies by the age of 18."<sup>5</sup>

Another study, known as the Perry Project, assessed the long-term impacts of a particular early intervention strategy. A small number of low-income children, aged 3 to 6 and living in Kalamazoo, Michigan, were randomly divided into two groups. The first group was enrolled in a pre-school program for five days a week until they were 6 years old; the second group received no special services. The study team then followed the two groups into adulthood and found that the group enrolled in the pre-school program had significantly lower school leaver rates, fewer teenage pregnancies, better employment records and less criminal activity and drug use. The Perry Project strongly influenced the nationwide adoption, in the United States, of the Head Start pre-school program. In addition, the project's cost-benefit analysis is the source of the well-known adage that "seven dollars are saved for each dollar invested" in early intervention.

In the Canadian context, the Longitudinal Study of Children at Psycho-Social Risk, a 20-year study by researchers at Concordia University, has yielded important information by tracing what happened to at-risk children as they grew up. The study found, for instance, that the children developed more slowly than others, and had more injuries or illness. Fully 40% of the high-risk families had required referrals for service at mental health facilities.

The available studies suggest that both *environmental* and *biological* factors can be the source of early problems. Studies of environmental risk (including those discussed above) indicate that children who live in poverty, have a low socioeconomic status, live in a single-parent family, or have an adolescent mother are at risk of performing poorly in school. Studies of *biological risk* indicate that children who are born prematurely or with low birth weights have increased risk of later health problems.<sup>6</sup> Furthermore, recent work shows how environmental factors can interact with biological factors.<sup>7</sup> Keating and Mustard summarize the new evidence about the interaction as follows:<sup>8</sup>

- Brain development before age one is more rapid and extensive than previously realized.
- Brain development is more vulnerable to environmental influences than suspected.
- The effects of early environment are long lasting.

- The environment affects the number of brain cells and the way they are 'wired'.
- We now have evidence of the negative impact of early stress on brain development and function.

It will be some years, however, before studies of biological risk can link brain development and events in early adulthood. Until then, we are limited to survey-based studies. A study that is similar to ours in the empirical strategy employed and in the kind of data utilized is a paper by Sanford *et al.* based on the 1983 Ontario Child Health Study (OCHS).<sup>9</sup>

In order to investigate the prevalence of psychiatric disorders among Ontario children, the OCHS collected information about roughly 4,000 Ontario children aged 4 to 16. The survey discovered that a surprising number—roughly one in six—could be diagnosed with serious psychiatric problems such as conduct disorders, emotional disorders or hyperactivity. In 1987, those who had responded to the 1983 survey were re-interviewed. Researchers then used the 1987 follow-up data to analyse the effect of various 'risk factors' on the labour force experience of the subset of young people who were aged 17 to 20 in 1987. The risk factors, drawn from the 1983 survey, included the presence of psychiatric disorders, whether or not the individual had failed a grade in school, low parental education and a number of other measures of family stress. In general, those with any one of the risk factors were more likely to be unemployed and out-of-school, as were those with greater numbers of risk factors.

## Relevance of the literature

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The link between the presence of early childhood risk factors and later adult outcomes is important to our analysis because it creates an alternative way to think about the relationship between school leaving and labour force outcomes. At least for some young people, leaving high school prematurely may not be an independent cause of later employment problems; that is, early problems might lead to labour market difficulties for some young people, even if they manage to graduate from high school.

In the next section, we use results of the 1995 School Leavers Follow-up Survey to see if the early labour market experiences of school leavers and high school graduates are related to 'risk factors' such as early grade failure, low parental education or living in a single-parent family.

## Early labour force experiences of high school leavers and graduates without further education or training

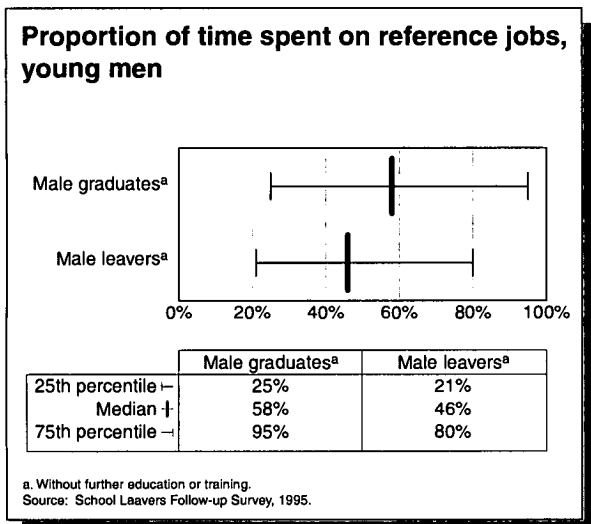
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Among those with no further education or training beyond high school, just how different are the early labour force experiences of high school leavers and high school graduates? Charts 7-1 and 7-2 compare the proportion of time that leavers and graduates had spent working since leaving high school. Charts 7-3 and 7-4 compare the distribution of weekly wages of high school graduates and leavers who had jobs in the week before they were interviewed in 1995. In these charts, we compare high school graduates *with no postsecondary education or training* to school leavers with no postsecondary education or training. That is, the only difference in educational attainment between the two groups is that individuals in one group had a high school diploma while those in the other group did not.

In these charts, we look at men and women separately because of the potentially large effects that family responsibility might have on work experience. In 1991, when the youth surveyed were aged 18 to 20, almost 33% of female high school leavers reported having at least one dependent child, as did about 10%\* of female high school graduates.

Charts 7-1 and 7-2 show several values within the distribution of the proportion of time that leavers and graduates had spent working in reference jobs—jobs lasting at least six months and requiring at least 20 hours of work per week—since leaving school. The thicker line indicates the median value while the vertical lines on either side represent the 25th and 75th percentiles, respectively. (The 25th and 75th percentiles are the points where 25% and 75% of the group in question had wages below those indicated.)

CHART 7-1

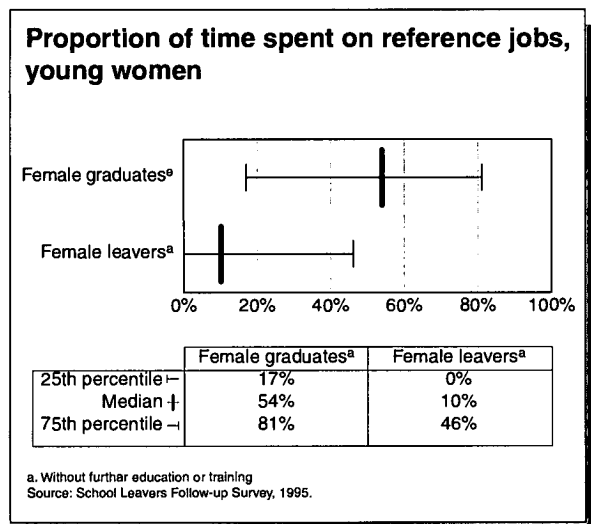


Even though the median proportion of time spent working for graduates was higher than that for leavers, there was considerable overlap in the distributions of the two groups of men. More than 41% of male leavers had worked more than the median graduate. Similarly, almost 44% of male graduates worked less than the median leaver.

There was much less overlap in the female distributions. Only 23% of leavers worked more than the median of female graduates and only 19% of graduates worked less than the median of female leavers.

Regardless of the similarities or differences in the proportions of time spent working, graduates and leavers might have earned very different wages. Charts 7-3 and 7-4 illustrate the distribution of weekly wages for male and female graduates and leavers, respectively.<sup>11</sup> As noted earlier, the groups being examined include only those who had a job at the time of the interview. For both men and women, the median weekly wage for leavers was less than the median wage for graduates. For men, the median for leavers was \$400 per week while the median male graduate earned \$430. Among the women, the median for leavers was \$260\* per week while the median for graduates was \$336.

CHART 7-2

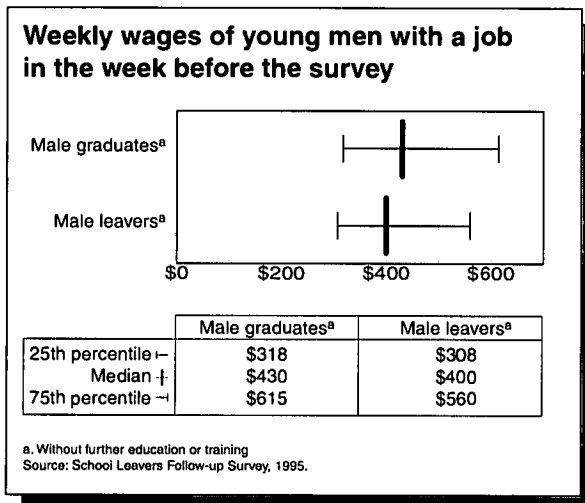


Several points should be made about the information in Charts 7-3 and 7-4. First, for the men at least, median weekly wages are well above those of a full-time worker earning minimum wages. Second, as was the case for the distributions of the proportion of time spent working, the wage distributions overlap. Among male school leavers, 45% made more than the \$430 median wage for high school graduates. And among the male graduates, 41% earned less than the median wage of male leavers.

We see that leavers and graduates differed in how much they had worked on reference jobs since leaving full-time studies. For male graduates, the median percentage of time spent working was 58% of the time while for male school leavers the median percentage was 46%.<sup>10</sup> Among women, the differences were more striking—the median percentage of time spent working was 54% for female graduates and only 10% for school leavers. About 45% of female school leavers never held a reference job, a fact that presumably resulted from the large proportion of female leavers who had dependent children.

While the wage distributions for men were fairly similar, the distributions for women were again quite different. Only 19% of the female leavers earned more than the median wage for female graduates; 31% of the female graduates earned less than the median wage of female leavers. Almost one-half of the female leavers were concentrated between \$200 and \$300 per week, while only one-quarter of the female graduates were in that range.

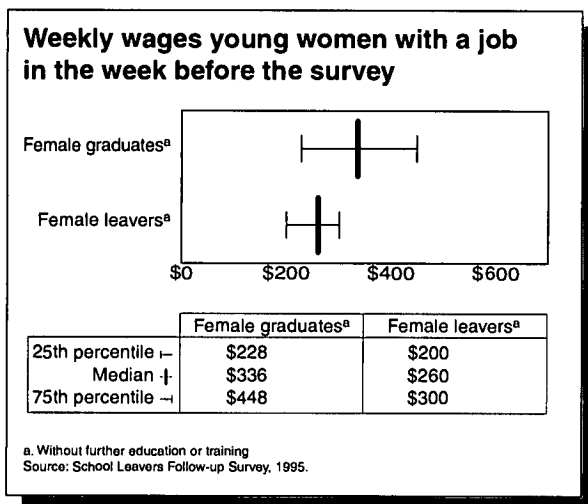
CHART 7-3



*High school graduates without further education or training did somewhat better in the labour market than did high school leavers. On average, they earned a bit more and spent more time working in long-term jobs. But, at least for young men, the advantages of the graduates were modest in size and many school leavers did just as well as graduates.*

The relative similarity of the labour force experience of leavers and graduates does not contradict the common empirical finding that those with high school diplomas fare much better than those without high school diplomas. Instead, it confirms the intuition that 'high school graduates' generally fare better not just because they have a high school diploma but because they are much more likely than school leavers to obtain postsecondary credentials.

CHART 7-4



### Are early childhood problems related to labour market outcomes?

We now turn to an analysis of whether problems occurring in early childhood are related to the labour force experience of leavers and graduates. We analyse only male graduates and leavers in this section. Estimates of detailed characteristics of female leavers are not reliable enough to publish because of the relatively small numbers in this group.<sup>12</sup>

The SLS contains excellent information on the education, training and work experiences of high school leavers and graduates. Information on their early childhood development is much more limited, however, so any conclusions that we might draw can only be preliminary. Nonetheless, the Survey does contain one very important sign of early problems: whether or not the respondents failed one or more early elementary grades. Such failure often indicates a lack of school readiness—usually reading difficulty—that may be related to earlier problems.

The SLS also contains several variables that we consider 'possible risk factors'—low parental education, whether the respondent lived in a single-parent family and parental attitudes toward

Together, these charts illustrate that high school graduates without further education or training did somewhat better in the labour market than did high school leavers. On average, they earned a bit more and spent more time working in long-term jobs. But, at least for young men, the advantages of the graduates were modest in size and many school leavers did just as well as graduates. Indeed, the important differences in Charts 7-1 through 7-4 seem to be between female school leavers and the other three groups. And that difference was probably the result of teenage pregnancy rather than leaving high school prematurely.

education that are not strongly positive. Unlike early grade failure, which is an objective signal of academic difficulty, these factors are only imperfect indicators of situations that may occur in some families and may have a negative impact on children as they grow up.<sup>13</sup> Many children grow up in such families, however, without suffering any ill effects from the experience.

Table 7-1 compares the frequencies of these various risk factors for male leavers and graduates (all without postsecondary education or training) and demonstrates that there are clear differences between leavers and graduates. Leavers were more likely than graduates to have failed an elementary grade, to have lived in a single-parent family, to have parents whose attitudes toward education were not strongly positive, and to have parents with low levels of education.<sup>14</sup>

We also can define several other possible risk factors using the survey data—the self-reported presence of a long-term physical disability, the number of times that the respondent changed schools, whether or not the respondent was adopted, and whether or not the respondent was a recent immigrant. Because only small proportions of youth had these characteristics, estimates of their prevalence are not reliable enough to publish (and so they are not included in Table 7-1).

These variables are included, however, in the multivariate analysis of the next section.

If the identified risk factors are directly associated with poor labour market performance, then they should be related to poor labour market performance even among leavers and graduates taken separately. We explore this hypothesis by looking more carefully at the information in Charts 7-1 and 7-3—the distributions of the proportion of time spent working and of weekly wages for male leavers and graduates. Because of the overlap in these distributions, there were some leavers who were doing quite well, in the sense that they were earning more, or working more, than the median graduates. We will call that group ‘high-wage leavers’ or ‘high-proportion leavers’, depending on whether we are discussing the distribution of weekly wages or the proportion of time spent working. We define ‘low-wage’ or ‘low-proportion’ leavers in the same way.

Similarly, there were some graduates who were not doing very well, in that they were earning less or working less than the median school leaver. We will call those young people ‘low-wage’ or ‘low-proportion’ graduates. The remaining graduates will be called ‘high-wage’ or ‘high-proportion’ graduates.

**Table 7-1 Proportion of male graduates and leavers with various risk factors**

<i>Risk factor</i>	(Percent)	
	Graduates	Leavers
<b>Failed an elementary grade:</b>		
Never	73	53
Failed grades 1, 2 or 3	16	20*
Failed grades 4, 5, 6, 7 or 8	11*	27*
<b>Single-parent family</b>	14*	21*
<b>Mother’s education:</b>		
Less than high school diploma	24	39
High school diploma	36	17*
More than high school diploma	18	--
Unknown or not applicable	23	35
<b>Strongly positive parental attitude toward education</b>	96	79
Population represented (number)	82,593	51,583

Source: School Leavers Follow-up Survey, 1995.

**Table 7-2 Male leavers<sup>a</sup> and graduates<sup>a</sup> with various risk factors, by proportion of time spent in reference jobs<sup>b</sup>**

<i>Risk factor</i>	(Percent)			
	Leavers		Graduates	
	High Proportion	Low Proportion	High Proportion	Low Proportion
<b>Failed an elementary grade</b>				
Never	57	49	77	64
Failed grade 1, 2 or 3	21*	25*	12*	24*
Failed grade 4, 5, 6, 7 or 8	22*	26*	11*	13*
<b>Single-parent family</b>	12*	22*	11*	22*
<b>Mother's education</b>				
Less than high school diploma	43	29*	21	28
High school diploma	18*	21*	39	27*
More than high school diploma	--	--	19	19*
Unknown or not applicable	31*	40	21*	26*
<b>Strongly positive parental attitude toward education</b>	80	80	95	96
Population represented (number)	30,335	46,198	60,224	48,934

a. Those with no postsecondary education or training only.

b. See footnote 10.

Source: School Leavers Follow-up Survey, 1995.

**Table 7-3 Male leavers<sup>a</sup> and graduates<sup>a</sup> with various risk factors, by wage status**

<i>Risk factor</i>	(Percent)			
	Leavers		Graduates	
	High Wage	Low Wage	High Wage	Low Wage
<b>Failed an elementary grade</b>				
Never	50	57	76	68
Failed grade 1, 2 or 3	--	22*	14*	18*
Failed grade 4, 5, 6, 7 or 8	33*	21*	10*	13*
<b>Single-parent family</b>	--	30*	8*	23*
<b>Mother's education</b>				
Less than high school diploma	42*	37*	24	25*
High school diploma	12*	21*	37	33
More than high school diploma	--	--	21*	13*
Unknown or not applicable	36*	34*	18*	28*
<b>Strongly positive parental attitude toward education</b>	81	77	97	95
Population represented (number)	23,344	28,239	48,390	34,203

a. Those with no postsecondary education or training who had jobs in the week before the survey.

Source: School Leavers Follow-up Survey, 1995.

If we find that those with low wages or low proportions of time spent working—regardless of their status as leavers or graduates—were more likely to have failed an early elementary grade, we will have established a tentative link between the presence of early problems and both leaving high school without graduating and poor labour market performance.<sup>15</sup>

Tables 7-2 and 7-3 contain simple tabulations of each of the four major risk factors for male graduates and leavers. Table 7-2 divides the entire sample into high- and low-proportion leavers and graduates. Table 7-3 looks only at respondents who had a job when they were interviewed in 1995 and divides them into high- and low-wage leavers and graduates. The two tables show a generally consistent pattern of risk factors being associated with lower amount of time spent working and lower wages, but some of the relationships are not very strong.

In the first two columns of Table 7-2, we see that leavers who worked more than the median graduate—'high-proportion leavers'—appear slightly less likely to have failed an early grade (21%\* as compared to 25%\*), and much less likely to live in a single-parent family (12%\* as compared to 22%\*). High-proportion leavers (43%), however, were more likely than low-proportion leavers (29%\*) to have mothers with less than a high school diploma. There was no difference between high- and low-proportion leavers in terms of parental attitudes toward education.

In the last two columns of Table 7-2, we see that high-proportion graduates were less likely than low-proportion graduates to have failed an early grade (12%\* as compared to 24%\*) and to live in a single-parent family (11%\* as compared to 22%\*).

Turning to the high- and low-wage leavers and graduates, we see in Table 7-3 that high-wage leavers were actually more likely to have failed a later elementary grade (33%\* as compared to 21%\*). High-wage graduates were slightly less likely than low-wage graduates to have failed an early grade (14%\* as compared to 18%\*). For both leavers and graduates, the low-wage groups were more likely to have come from single-parent families.

## Results of a multivariate analysis

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In this section, we use the same multivariate statistical technique (logistic regression) used in the previous chapter. This is done to examine the effects of each of the possible risk factors on the probability of being in the high-wage, or high-proportion of time spent working categories, holding other factors constant. The odds ratios produced by the analysis are presented in Tables 7-4 and 7-5. (For further explanation of this technique, see the discussion in Chapter 6.)

In Table 7-4, we see that leavers who had failed an elementary grade were less likely (with an odds ratio of 0.5) than others to be high-proportion leavers (leavers who worked more than the median graduate). Similarly, leavers from a single-parent family were also less likely (with an odds ratio of 0.4) than others to be in the high-proportion leaver category.

Many but not all of the results in Table 7-4 follow the pattern that one would expect. Failing early grades and living in a single-parent family all decrease the odds of being a high-proportion leaver and increase the chances of being a low-proportion graduate. Some of the other results, however, were unexpected. For example, leavers with low-education mothers were more likely to have been high-proportion leavers. Also unexpected was the finding that high school graduates whose parents had a positive attitude toward education were more likely to be in the low-proportion graduates category.

The strongest result from Table 7-4 is that even when we limit our attention to those without a high school diploma, early grade failure is still related to labour market success. Because both the measurement and the relevance of the other potential risk factors is less certain, we have less confidence in the other results reported in the Table.

Table 7-5 is similar to Table 7-4 except that odds ratios presented relate to the chances of being in the high-wage leaver group or in the low-wage graduate group (rather than in the high- and low-proportion groups). As before, living in a single-parent household decreased the odds of



**Table 7-4 Odds ratios for high-proportion leavers<sup>a</sup> and low-proportion graduates<sup>a</sup>**

	High-proportion leavers	Low-proportion graduates
<b>Failed an elementary grade:</b>		
Failed grades 1, 2 or 3	<b>0.5</b>	<b>2.4</b>
Failed grades 4, 5, 6, 7 or 8	<b>0.5</b>	1.3
<b>Single-parent family</b>	<b>0.4</b>	<b>2.1</b>
<b>Mother's education:</b>		
Less than high school diploma	<b>1.9</b>	<b>2.0</b>
<b>Positive parental attitude toward education</b>	1.1	<b>2.1</b>
<b>Changed schools more than six times</b>	0.6	1.3
<b>Long-term disability</b>	<b>0.2</b>	1.1
<b>Adopted</b>	<b>8.9</b>	1.7
<b>Recent immigrant</b>	<b>5.7</b>	1.4

Values in **bold and italics** are statistically significant.

a. Includes only those with no postsecondary education or training.

Source: School Leavers Follow-up Survey, 1995.

**Table 7-5 Odds ratios for high-wage leavers<sup>a</sup> and low-wage graduates<sup>a</sup>**

	High-wage leavers	Low-wage graduates
<b>Failed an elementary grade:</b>		
Failed grades 1, 2 or 3	0.8	1.1
Failed grades 4, 5, 6, 7 or 8	<b>1.9</b>	1.2
<b>Single-parent family</b>	<b>0.2</b>	<b>3.3</b>
<b>Mother's education:</b>		
Less than high school diploma	<b>2.4</b>	1.2
<b>Positive parental attitude toward education</b>	<b>1.9</b>	0.7
<b>Changed schools more than six times</b>	2.0	0.6
<b>Long-term disability</b>	1.0	<b>2.6</b>
<b>Adopted</b>	2.0	2.6
<b>Recent immigrant</b>	1.1	0.9

Values in **bold and italics** are statistically significant.

a. Includes only those with no postsecondary education or training who had a job in the week before the survey.

Source: School Leavers Follow-up Survey, 1995.

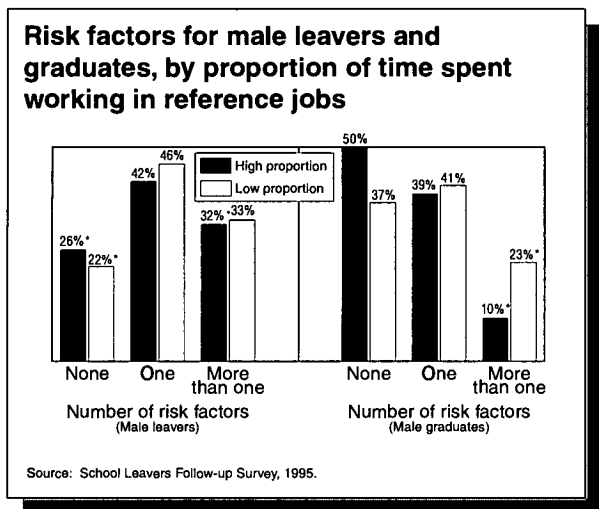
being a high-wage leaver and increased the odds of being a low-wage graduate. Leavers whose parents had strongly positive attitudes towards education were almost twice as likely as other leavers to be in the high-wage category.

Leavers who failed a later elementary grade, however, were unexpectedly more likely than those who never failed to have higher wages than the median graduate. The results on the other possible risk factors were quite inconsistent. For example, leavers whose mothers had less than a high school education were more than twice as likely as others to be in the high wage group.

### Having one or more risk factors makes a difference

Chart 7-5 shows the distribution of high- and low-proportion male leavers and graduates by the number of risk factors they had. Similarly, Chart 7-6 shows the distribution of low- and high-wage male leavers and graduates by the number of risk factors. Only those factors displayed in Tables 7-2 and 7-3 are used: failing an early grade, coming from a single-parent family, having a mother with low education, and parental attitudes toward education that were not strongly positive.

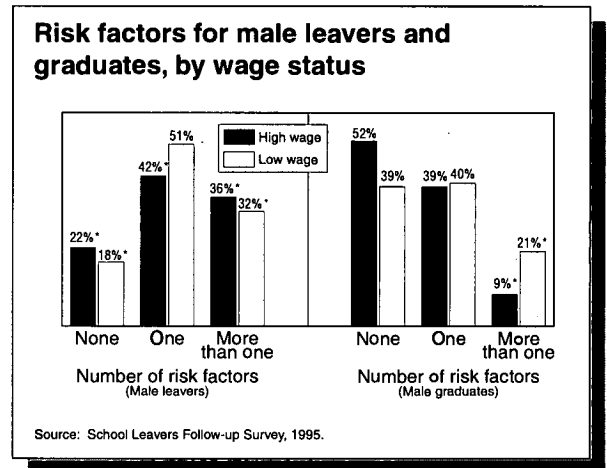
CHART 7-5



High-proportion leavers and graduates were somewhat more likely than their low-proportion counterparts to have no risk factors. Similarly, high-wage leavers and graduates were more likely than their low-wage counterparts to have no

risk factors. For example, just under 40% of the low-wage graduates had no risk factors, compared with over one-half of the high-wage graduates. In short, the presence of one or more risk factors increased the likelihood for both leavers and graduates of being in the low-proportion and low-wage categories.

CHART 7-6



### Conclusions

There is no doubt that those who leave high school prematurely face a hostile labour market. In general, young people require postsecondary education to gain access to high wages and secure jobs. Even then, there are no guarantees in today's labour market.

At the same time, data from the 1995 SLF indicate that the labour market experience of male school leavers was not all that different from that of male high school graduates with no further education or training. Leavers who were working had roughly the same weekly wages as graduates and the jobs they held probably had hourly wages that were two to four dollars higher than the minimum wage.<sup>16</sup> On average, graduates had spent a higher proportion of time working in reference jobs than leavers, but many leavers had worked more than the median graduate.

These results support the notion that high school graduation may no longer be the critical dividing line between success and failure in the job market. Acquiring the skills necessary to have

a chance at labour market success often requires more than a high school diploma. As a result, many high school graduates without further education or training may be in the same pool of workers as school leavers. An important difference, however, is that gaining admission to a postsecondary program might be easier for the high school graduates should they ever pursue that option.

The next question is whether and how we can help young people obtain the training that might lead to high wages and secure employment. A traditional answer has been to encourage young people to stay in high school until they graduate. The literature on the prevalence of problems in early childhood and on the long-lived effects of those problems suggests that the impact of such policies may be limited. First, the 1995 SLF demonstrates that the rate high school non-completion is lower than previously estimated: 15% instead of the often cited 30% or more. Second, if those who are induced to stay in school do not go on to obtain significant postsecondary training, simply receiving a high school diploma may not lead to large gains in either wages or time spent working. Third, our results suggest that early childhood problems may continue to affect labour market outcomes among graduates as well as leavers. Receipt of a high school diploma may benefit some people, but does not necessarily erase the effects of problems encountered early in life.

In conclusion, we would be remiss if we did not reiterate the limitations of the work presented here. Solid evidence on the links between early childhood experiences and events in later life is hard to obtain because researchers must follow children from infancy to adulthood. While that research is underway, it is far from complete. Information from the School Leavers Surveys, although vastly superior to the anecdotes and stories that sometimes inform policy making, cannot be conclusive. Our measures of 'early childhood experiences' from the SLS and SLF are limited to variables such as 'early grade failure' and 'living in a single-parent family'. We simply do not know whether or not the survey respondents actually experienced early difficulties such as developmental delay, physical or sexual abuse, or early learning problems. Nor do we know whether or not such problems, if they existed, were addressed by some systematic intervention.

Few believe that early difficulties 'doom' chil-

dren forever. Instead, most people believe that we must intensify our efforts to identify potential problems early on and to provide appropriate interventions as soon as possible. Our results, and those of other researchers, support that position.

## Notes for Chapter 7

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1. Gilbert, Sid, Lynn Barr, Warren Clark, Matthew Blue and Deborah Sunter, *Leaving School—Results from a National Survey Comparing School Leavers and High School Graduates 18 to 20 Years of Age*. Human Resources Development Canada and Statistics Canada, Catalogue Number LM-294-07-93, September 1993, p.2.
2. Keating, Daniel and J. Fraser Mustard, "The National Longitudinal Survey of Children and Youth: An Essential Element for Building a Learning Society in Canada" in *Growing Up in Canada: National Longitudinal Survey of Children and Youth*, Ottawa: Human Resources Development Canada and Statistics Canada, 1996, p.7. Catalogue Number 89-550-MPE.
3. This situation will improve dramatically in Canada over the next two decades. The National Longitudinal Survey of Children and Youth (NLSCY), a joint undertaking of Human Resources Development Canada and Statistics Canada, will follow nationally-representative groups of children from birth into adulthood. Information on the first group, who were aged 0 to 11 in 1994-95, is already available. See *Growing Up in Canada: National Longitudinal Survey of Children and Youth*, Ottawa: Human Resources Development Canada and Statistics Canada, 1996. Catalogue Number 89-550-MPE.
4. Though neuroscientific and animal studies strongly support the hypothesis that early problems have long-lived effects, Keating and Mustard, *op. cit.*, p. 10, note that "[b]ecause of the difficulties in studying our own species, the evidence from human studies is incomplete and less substantial than that from primate studies."
5. This study is discussed in a number of research reports. For example, see Werner, Emmy E., "High-Risk Children in Young

Adulthood: A Longitudinal Study from Birth to 32 Years" in *American Journal of Orthopsychiatry*, 59(1). January 1989. The quotations in this paragraph are from p. 73 of that article.

6. See, for example, Meisels, S.J. "Meeting the Mandate of Public Law 99-457: Early Childhood Intervention in the Nineties" in *American Journal of Orthopsychiatry*, 59(3), July 1989, pp.451- 460; Meisels, S.J. "The Efficacy of Early Intervention: Why are We Still Asking This Question?" in *Topics in Early Childhood Special Education*, 5, (1985), pp. 1-11; Baumeister, A. *et al.* "The New Morbidity: A National Plan of Action" in *Saving Children at Risk*. Edited by T. Thompson and S. Hupp. London: Sage Publications. 1992. pp. 143-177.
7. Werner, throughout her studies of the Hawaiian infants, also emphasized this interaction. She was especially interested in the 'resiliency' shown by some of the 'at-risk' infants. While two-thirds of the at-risk infants developed later problems, one-third did not. She found that the resilient children had "three types of protective factors." Two of these factors—strong family ties and strong supports outside of the family—were environmental while the third had strong links to biological factors: "dispositional attributes of the individuals" including "activity level and sociability, at least average intelligence [and] competence in communication skills" (Werner, *op.cit.*, p. 80).
8. Keating and Mustard, *op. cit.*, p. 9.
9. Sanford, Mark, et al. "Pathways into the Work Force: Antecedents of School and Work Force Status" in *Journal of American Academic Child and Adolescent Psychiatry*. 33:7 (September, 1994), pp. 1036-1045.
10. The survey design allowed us to measure the time spent working in at most two reference jobs: the respondents' first and their most recent reference jobs. Any time spent on reference jobs other than the first and most recent ones could not be included in the proportions reported in Charts 7-1 to 7-4 and in Table 7-2. As it turns out, school leavers had more reference jobs than graduates, possibly because they had been in the labour force for a longer time period. About 30% of male graduates had more than two reference jobs while more than 40% of leavers had more than two reference jobs. Therefore, it is likely that full information about all reference jobs would narrow the differences between graduates and leavers.
11. The figures combine both full-time and part-time workers.
12. More study of this group should be undertaken using other surveys. Charts 7-2 and 7-4 indicate that this may be the group with the greatest labour market difficulties. Moreover, programs designed to help teenage mothers, many of them school leavers, have not been very successful. A recently completed experimental evaluation of a comprehensive, well-designed and well-funded program for American teenage mothers recently found very few differences between the life situations of the control and experimental groups (Manpower Demonstration Research Corporation, *New Chance: Final Report*, New York: MDRC, 1997).
13. Two other variables are included in our analysis: the presence of a serious long-term disability, and the number of elementary and secondary schools attended.
14. These differences are evident in Table 7-1 but they are not as clear cut when all graduates are compared to all leavers. By restricting the comparison to respondents without postsecondary education or training, we have eliminated those graduates who would have had even fewer 'problems' than this group. This can be seen in Gilbert *et al.*, *op. cit.*, who compare 1991 leavers and graduates along many of the same dimensions.
15. The idea here is the common one that sometimes two variables are only *seemingly* related and that, instead of one causing the other, both are caused by a third variable. Creating a statistical model of those relationships is beyond the scope of this report.
16. We say "probably" because hourly wages were not collected in the 1995 SLF. However, data on earnings were converted into median weekly wages; these were in the \$400 to \$430 range. A young person working 40 hours per week would thus have an hourly wage of between \$10 and \$11 per hour. Minimum hourly wages vary by province but are in the \$5 to \$7 range.

# Chapter 8

## Summary and Conclusions

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The economic situation in Canada is changing. Cyclical, structural and demographic forces continue to affect the labour market, including the youth labour market. As a result, youth in transition in the 1990s face many challenges. As Canada's economy becomes increasingly knowledge-based, more jobs now require high levels of education and skills.

### High school may not be enough

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Canada is becoming a high education society, as educational attainment has increased dramatically over the past few decades. In 1995, only 15% of 24 year-olds were without a high school diploma. One in four people who were school leavers as of 1991 had earned their diplomas by 1995.

Among youth aged 22 to 24 in 1995 who were high school graduates, 11% graduated at age 20 or older. Institutions and programs that make high school studies or equivalencies accessible to adults likely played an important role for many of these older graduates.

The 1995 School Leavers Follow-up Survey also documented a high level of postsecondary participation among youth. However, about 17% of the group under study were high school graduates who had not pursued further education or training. Combining this group with school leavers without further education, nearly three in ten youth aged 22 to 24 had relatively low levels of educational attainment—in a society where most young people have postsecondary qualifications or are in the process of getting them.

Therefore, 'low education' may exist not just among high school leavers, but also among other youth with relatively low education in an increasingly highly educated society. Some of these less

educated youth also appear to be constrained by their backgrounds. For example, less educated youth tend to come from less educated families.

Most youth had plans for further education or training between 1995 and the year 2000. Given the extent to which plans reported in 1991 were realized by 1995, it is encouraging that most youth seemed to recognize a need to carry on with education and training well into their twenties.

### Labour market outcomes improve with education

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In terms of labour market outcomes, youth with a just a high school diploma did have some advantages over high school leavers. However, high school graduates who pursued postsecondary education or training were substantially better off than either of these groups.

Many patterns documented in the 1980s appear to have continued into the 1990s: transitions from school to work are complex, there is no clear point of transition from school to work, and young people are combining school and work in many diverse ways.

A negligible proportion of youth without jobs were not looking for work because they 'believed no work was available', or because they were simply 'not interested in finding work'. This is consistent with other studies that have found that the work ethic is strong among Canadian youth.

Among the methods that young people used to find the jobs they held, personal networks and direct contact with employers were important. Youth with higher levels of education were most likely to have been successful through sending out their resumé, using an employment agency or

centre, or by answering newspaper advertisements—all methods that rely more on credentials than on personal connections.

At age 22 to 24, large numbers of youth were working in jobs that did not require the level of education that they had attained. Still, many young people, especially those with further education, did tend to move out of consumer service jobs and into more highly skilled work over time. Nevertheless, young people who were working expressed a remarkable degree of satisfaction with their jobs, even among those who had jobs requiring lower skill levels.

### **Education also the key to skill use and ability**

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Low skill use appeared to be more common among youth with less advantaged backgrounds, although after taking other factors into account (such as education and employment status), these differences largely disappeared. Low educational attainment, whether high school leaving or graduation with no further qualifications, was associated with low levels of skill use. Youth who were employed or who were postsecondary students were most likely to have reported higher levels of skill use and self-assessed skill abilities. Without the kind of work or learning environment that would allow them to use their skills, some youth could be at risk of not being able to maintain and develop the skills they may have already, and of not having the opportunity to acquire new ones.

### **Early childhood experiences may play an important role for some youth**

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The previous chapter raised the possibility that the same factors that lead to school leaving may also result in poor labour market outcomes, even for those who do manage to complete high school. For some young people, problems encountered in early childhood may contribute to low educational attainment as well as difficulties in the labour market.

As a result, encouraging people to stay in school may help some, particularly if they are able to benefit from further education or training. For others with more fundamental problems, a lack of

labour market success may be in store even if they finish high school. This suggests the continued need to identify potential problems among children, and that for these individuals, intervention would be most effective at as early a stage as possible.

### **Closing thoughts**

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The analysis contained in the preceding chapters is by no means conclusive. At age 22 to 24, the young people under study were still very much in the midst of their school-work transitions. Nevertheless, the research adds to a growing body of literature suggesting that in a knowledge-based economy, higher education is the major pathway to improved labour market outcomes for individuals. This fundamental truth should be at the basis of decisions made by young people as well as policy makers.

If the labour market is indeed becoming more polarized—into well paying, high-skill jobs at one end, and low paying, low-skill jobs at the other—then many challenges lie ahead. For youth who manage to pursue higher education, the situation is less critical—although they will still need to be careful about the education and training choices they make.

But what about the people who, for whatever reasons, are not suited to postsecondary studies? Or those who, because of financial or family circumstances, are not able to pursue further education or training? The labour market conditions of these groups deserve particular attention. Ensuring that there are prospects for people with relatively low education to participate in the labour market and to contribute to society should also be given consideration.

As noted in Chapter 1, the meaning of this publication's title, *High School May Not Be Enough*, is open to interpretation. Clearly, the main emphasis in this publication has been on education or training beyond high school. But other conditions are also necessary for successful school-work transitions. Early childhood experiences may be important, independent of educational attainment. Also, consideration must be given to the availability of work to youth across the country and over time. Therefore, other surveys that explore factors affecting the

development of children and youth, and studies that focus on the demand for labour will continue to be required to further our understanding of school-work transitions among youth.

High school completion remains important. Young people with a high school diploma and no more do fare somewhat better than those without

a high school diploma. And in so far as it opens the door to further studies, high school graduation is a critical step in gaining access to high-skill, higher paying work for those who aspire to it. For many young people, in an increasingly knowledge-based economy and society, high school may not be enough.





# Appendix A

## Methodological Overview of the 1995 School Leavers Follow-up Survey

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### Introduction

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This appendix provides an overview of the methodology used in developing and conducting the 1995 School Leavers Follow-up Survey (SLF). Because the SLF was a follow-up survey, much of its methodology was pre-determined by that of the original 1991 School Leavers Survey (SLS). For a more detailed description of the methodology of the 1991 survey, see Appendix A in *Leaving School* (Human Resources Development Canada and Statistics Canada, Catalogue Number LM-294-07-93).

### Survey objectives

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The primary objectives of the 1991 SLS were to establish high school leaving rates and to compare secondary school students who had successfully completed high school (graduates) with those who were still attending (continuers) and those who had left school before graduating (leavers). The SLS was conducted between April and June 1991.

The 1995 SLF, conducted between September and December 1995, gathered information on school-work transitions of these young adults by focusing on education and work activities beyond high school. Human Resources Development Canada commissioned Statistics Canada to conduct both surveys.

### Target population

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The SLS target populations consisted of young people aged 18 to 20 (as of April 1, 1991) from the ten provinces. (The Yukon and Northwest Territories were excluded.) Respondents to the

1991 survey were contacted four years later for the SLF, by which time they would likely have had one or more jobs. In addition, most continuers in 1991 would be graduates or leavers by 1995, allowing for a more in-depth labour market analysis.

The 1995 SLF was conducted in the fall rather than in the spring, as activities of individuals (going back to high school, pursuing postsecondary education, working, etc.) would be more easily discernible in the fall. In addition, a more accurate count of the number of graduates would be possible, as many individuals complete the requirements for a high school diploma in June or during the summer.

### SLS sampling frame

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The original SLS sampling frame was formed from five years (1986 to 1990) of Family Allowance (FA) files. The FA files were believed to provide the most complete listing of young persons under 15 in Canada available at the time of the survey.

These files provided indicators used to create a derived variable, 'payment status', that could identify potential leavers—youth for whom FA payments had stopped because they had left the household or had become employed and would thus be more likely to have left school. The frame was stratified using province of residence, age and payment status (the latter to help ensure an adequate number of leavers for analysis).

### Find rate test

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In 1994, Statistics Canada conducted a find rate test to estimate the percentage of SLS respon-

dents who could still be reached using the information provided three years earlier in the SLS. In addition, data that would help determine the content of the follow-up was collected. For more information on the SLF Find Rate Test see "Tracing Respondents: The Example of the School Leavers Follow-up Survey" (Lynn Barr-Telford and Éleine Castonguay, *Education Quarterly Review*, Volume 2, Number 2, Statistics Canada, Catalogue Number 81-003-XPB).

## Sample size

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The SLS sample consisted of 18,000 individuals from the ten provinces who were selected using the stratified design described above. The sample was selected to provide national and provincial leaver rates for 20 year-olds with a maximum coefficient of variation (CV) of 16.5%, and to allow estimation of some characteristics for continuers, leavers and graduates, each considered separately, with a CV no greater than 16.5%.

For the SLS, interviews were completed for 9,460 young people aged 18 to 20 years. Attempts were made to contact all these respondents for the follow-up, with the exception of 11 individuals who indicated in 1991 that they did not wish to participate in further surveys. In addition, 18 individuals who participated in a pre-test of the SLF were not contacted again for the actual follow-up survey. Thus, 9,431 people were contacted for the SLF.

## Tracing respondents and conducting the interviews

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In the 1991 SLS, respondents were asked to provide an address and telephone number where they could be reached if Statistics Canada wanted to contact them for a follow-up. They were also asked to provide the name, address and telephone number of a friend, relative or neighbour who could be contacted if the individual were to move. If contacting the respondent using the information provided in 1991 proved unsuccessful, the individual was placed in a 'tracing module' where 1995 telephone files were linked to known information about the respondent. If this also proved unsuccessful, attempts to contact the respondent were continued using directory assistance.

Both the SLS and the SLF were conducted by telephone using a computer-assisted telephone interviewing (CATI) system. Interviewers confirmed certain respondent information from the SLS before beginning the SLF interview. Of the individuals who could potentially be contacted for the SLF, 7,233 were successfully traced, and 6,284 provided completed follow-up interviews (including agreements for data sharing).

## Corrections for potential bias

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During SLS interviewing it was discovered that a larger share of the interviewers' time was being allotted to the eastern provinces because of time zone differences, and consequently priority was given to the four western provinces during the final phase of data collection.

In order to ensure an adequate number of leavers for analysis, provincial target response rates for leavers were established prior to the SLF and emphasis was directed where appropriate to meet these targets.

## Weighting procedures—SLS

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The principal behind estimation in a probability sample such as the SLS is that each person in the sample 'represents', besides himself or herself, several other persons not in the sample. The weighting phase is a step which calculates, for each record, the number of individuals in the population represented by the record. This number is known as the weight, and is used to derive unbiased and meaningful estimates from the survey.

The SLS weight attached to each record was the product of three factors: a basic sampling weight, an adjustment to account for non-response and benchmarking to population totals by sex derived from an imputation strategy. Each is described below.

## Basic sampling weight

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In a probability sample, the sample design itself determines a component of the weight which must be used to produce unbiased estimates of the population. This factor is known as the basic

sampling weight, and is the inverse of the probability of selecting the person to whom the record refers. In the example of a 2% simple random sample, this probability would be 0.02 for each person, and the basic sampling weight for each record would be  $1/0.02=50$ .

### **Adjustment to account for non-response**

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Notwithstanding controls, some non-response is inevitable, despite all attempts made by interviewers. Non-response is compensated for by proportionally increasing the weights of responding youth, by a factor of the ratio of the number of youth that should have been interviewed to the number of youth actually interviewed. This adjustment was done in each stratum. It is based on the assumption that the young people interviewed represent the characteristics of those who were not. To the extent that this assumption is not true, estimates will be somewhat biased.

### **Benchmarking to population totals by sex**

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Subsequent to the SLS it was discovered that there were some differences in the survey results between males and females, so an adjustment for sex was introduced into the weighting scheme. As no frame totals by sex were available (FA contains the first name of child but not gender) it was necessary to impute sex on the frame. An imputation strategy was built from the male/female breakdown for first names observed in the SLS. From this population totals of males and females were obtained for each post-stratum (i.e., each combination of stratum and sex).

The weight adjustment factor consisted of the ratio of the post-stratum population total to the sum of weights in the post-stratum. This factor 'benchmarks' the SLS weights to the population totals obtained from the imputation strategy. That is, consistent estimates of the number of males and females in each stratum is obtained using the imputation strategy and the SLS survey data.

### **Weighting procedures—SLF**

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The SLF weight assigned to a record consisted of the ratio of the sum of SLS weights in the weighting class to the number of SLF respondents in the weighting class, where the weighting class is defined by province, age, payment status, sex and SLS type (graduate, continuer, leaver). Some weighting classes were collapsed (by payment status or by payment status and sex) in order to have sufficient SLF respondents for variance estimation. The SLF weights are benchmarked to SLS population estimates by SLS type; consistent estimates are obtained using the 1991 and 1995 survey data for each of 1991 graduates, continuers and leavers.

### **Editing and correction**

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Much of the editing that would normally be performed on questionnaires after collection were programmed into the computer-assisted interview, thereby saving time and editing problems. In this manner, errors related to questionnaire flow (where questions which did not apply to the respondent were found to contain answers) were minimized. In such cases, a computer edit automatically eliminated superfluous data by following the flow of the questionnaire implied by answers to previous, and in some cases, subsequent questions. This only occurred when the interviewer had to 'back up' during the interview to change a response which then put the respondent on a different flow through the questionnaire. In most cases the CATI system ensured that the correct sequence of questions was answered.

Other errors involved a lack of information in questions that should have been answered. For errors of this type, a non-response or 'not-stated' code was assigned to the item.

### **Coding of open-ended questions**

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A few data items on the questionnaire were recorded by interviewers in an open-ended format. Following the data collection process, a team of specialized coders was given the task of looking at the written responses and coding them according to existing standard education coding lists of courses and standard occupational

classification codes. For those questions where there were no existing lists, responses to the open ended questions, such as 'other - please specify', were coded by a subject matter analyst.

## Sampling error

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The SLS and SLF produce estimates based on information collected from and about a sample of individuals. In sample surveys, since inference is made about the entire population covered by the survey on the basis of data obtained from only a part (sample) of the population, the results are likely to be different from the 'true' population values. The true population values in this context refer to the values that would have been obtained had the entire population been surveyed under the same conditions. The error arising due to drawing inferences about the population on the basis of information from the sample is termed 'sampling error'.

It is unavoidable that estimates from a sample survey are subject to sampling error. As such, it is sound statistical practice to provide data users with some indication of the magnitude of this sampling error. This section of the appendix outlines the measures of sampling error used in this report and which researchers producing estimates are also urged to use.

The sampling error, in addition to the size of the sample, depends on factors such as variability in the population, sampling design and method of estimation. For example, the sampling error

depends on the stratification procedure employed, allocation of the sample, choice of sampling unit, and method of selection employed.

The exactness of estimates from sample surveys is affected by both variance and bias. Under the assumption of simple random sampling within each stratum and with the further assumption of absence of bias, the relative variance of an estimated characteristic value is a good indicator of its reliability. Since the true variance of the estimate depends, like the estimate itself, on whole population, it must be estimated from the available sample.

A notable feature of probability sampling is that the quality of the estimates may be estimated from the sample itself. The estimated coefficient of variation (CV) is defined as the ratio of the square root of the estimated variance to the estimate itself. Guides to the potential size of sampling errors are provided by the estimated coefficients of variation. The quality of the estimate increases as the corresponding coefficient of variation decreases.

In this publication, where the CV is 0% to 16.5%, the estimate is unqualified and there is no special notation in the text. For CVs from 16.6% to 33.3%, the estimate is qualified with an asterisk (\*) which indicates that higher sampling variability is associated with the estimate and it should be used with caution. For CVs above 33.3%, the sampling variability is too high to release an estimate. Such estimates are deleted and replaced with dashes (--).

# Appendix B

## Glossary of Key Terms

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### **Gap**

The period between last being in high school full time and the start of the first reference job.

### **High School Leavers (or Leavers)**

Youth who at a given reference time (either 1991 or 1995) had left high school without graduating.

### **High School Leaver Rate (or Leaver Rate or High School Non-completion rate)**

The proportion of people in a specified age group who had left high school without graduating at a given point in time.

### **High School Continuers (or Continuers)**

Youth who at a given reference time (either 1991 or 1995) were high school students. In 1995, high school continuers accounted for less than 1% of youth aged 22 to 24 and are not analysed as a separate category.

### **High School Graduates (or Graduates)**

Youth who at a given reference time (either 1991 or 1995) had graduated from high school. A further distinction is made between high school graduates with and without postsecondary (further education or training toward a degree, diploma or certificate). Those with further education or training are further subdivided. (See Some Postsecondary, University Graduates, Other Postsecondary Graduates and Postsecondary Students.)

### **Job Last Week (or Last Week's Job)**

This was the job held during the week before the 1995 survey. It may or may not also have been a reference job; therefore, 'job last week' includes those that were less than 20 hours per week or that lasted less than six months.

### **Main Job**

The job at which the respondent usually worked the most hours per week.

### **Other Postsecondary Graduates**

A sub-category of high school graduates (with further education or training toward a degree, diploma or certificate) who had completed a non-university postsecondary program.

### **Some Postsecondary (Graduates with)**

A sub-category of high school graduates (with further education or training toward a degree, diploma or certificate) who had not completed a postsecondary program and were not students at the time of the survey.

### **University Graduates**

A sub-category of high school graduates (with further education or training toward a degree, diploma or certificate) who had completed a university program by the time of the 1995 SLF.

### **Postsecondary Students**

A sub-category of high school graduates (with further education or training toward a degree, diploma or certificate) who were postsecondary students at the time of the 1995 SLF.

### **Reference Job**

A job that involved at least 20 hours of work per week for a period of at least six consecutive months. The 1995 SLF collected information on the first and the most recent reference job held. For some respondents, this may have been the same job. Others may never have had a reference job at all.

### **School-work Transitions**

The various ways that young people move among and within the worlds of education, training and work.



# Appendix C

## List of Contributors

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