



## Note 12

**WHEN YOUNG CANADIAN ADULTS  
RETURN TO SCHOOL:  
A DECISION ANCHORED IN THE INDIVIDUAL'S  
SOCIAL AND ACADEMIC PAST**

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## Research Note 12

When Young Canadian Adults  
Return to School:  
A Decision Anchored in the Individual's  
Social and Academic Past

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## Introduction

In the last four decades, the democratization of Canadian postsecondary education has enabled members of previously absent or under-represented social categories to access higher education. Among these categories, empirical studies place particular emphasis on adults<sup>1</sup> who return to school after relatively lengthy absences. For example, the analysis of longitudinal data from the *Youth in Transition Survey* (YITS Cohort B) conducted by Shaienks et al. (2008) found that, during the observation period (1999–2005), a significant proportion of respondents aged 24–26 had left their postsecondary programs prior to completion. It should be noted that this proportion was lower among university students (43%) than among those attending college (69%) or other postsecondary institutions. The study did not specify the percentages of those who, having left, later resumed studies; this was not its aim. Nonetheless, we may assume that many of those who dropped out later returned to obtain a degree. A number of empirical studies to date have shown that the variety in educational pathways is due to a range of factors.

This paper will focus in particular on interrupted educational pathways, in a bid to understand what causes adults — both those who complete their initial programs and those who drop out — to return to postsecondary studies. More specifically, we will attempt to answer two questions:

1. When is the return to postsecondary education most common?
2. What factors influence adults to resume postsecondary studies?

Our approach is based on statistical analyses that monitor a student cohort's educational pathways over successive semesters, thus enabling us to identify the points of exit and return.

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<sup>1</sup> For our purposes, the notion of “adult,” a somewhat problematic term, is based on two general definitions. The first, after Galland (1991), describes as an adult as someone possessing social autonomy: an employed individual who has left the childhood home to found his or her own household. Having completed initial education, an adult — if he or she is in school — is someone who has returned. The second definition has currency in the field of adult education, and denotes an adult student as someone who left school for a significant period (e.g. 6–12 months) before returning. In some cases, an age criterion is proposed: an adult is someone aged 25 and over. In all definitions, the adult learner is a person who has resumed studies after a period away.



# 1. Theoretical framework

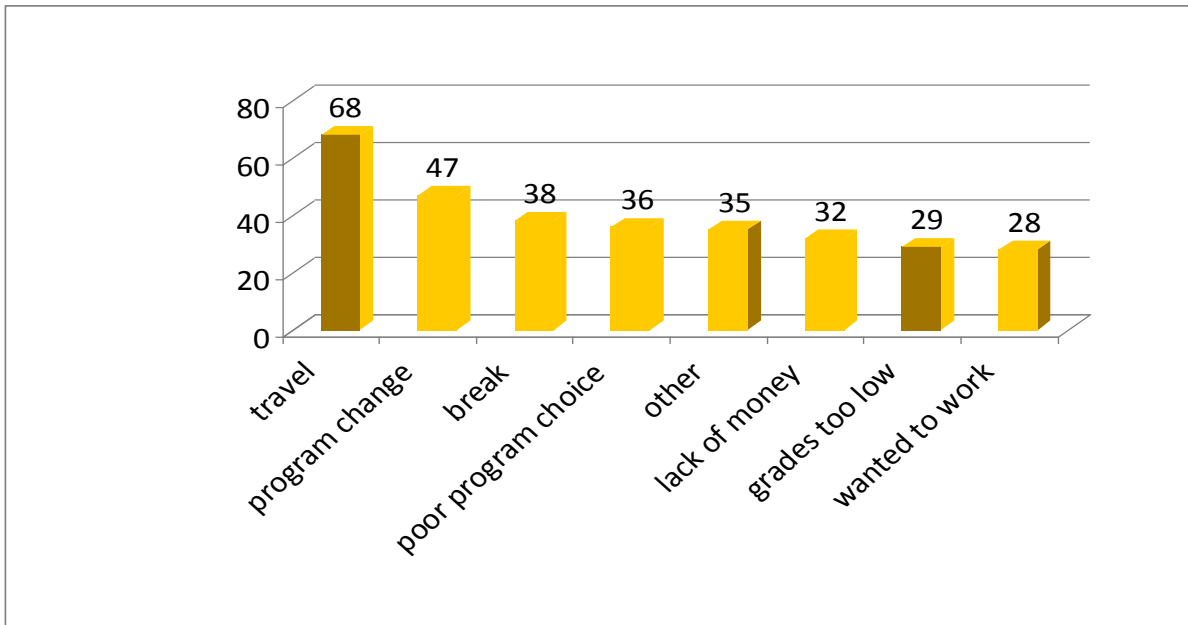
To foster equality, education shouldn't just pave the way from one academic level to the next, nor should its sole aim be to promote academic success. An equitable education system also enables individuals to return to school at different times in their lives, and for any number of reasons. A young person who dropped out may wish to finish their studies. A young unemployed adult may wish to retrain in a given field. A worker may desire a promotion that requires postsecondary training. Indeed, there are almost as many reasons for returning to school as there are adult returners. If the reasons for returning are multivariate, the day-to-day time organization needed for studies is just as remarkable. Nevertheless, it is possible to distinguish typical situations: returning to school after having obtained a first degree, dropping out without completing a program, and so on. It should be noted that returning would mean something different to someone who had dropped out than to someone in pursuit of another degree. Moreover, the point of return is just as liable to hinge on the prospective student's employment situation as it is on his or her ability to juggle the demands of work, studies and family.

## 1.1 Why the interest in the return to postsecondary studies?

Several reasons account for our interest in the phenomenon of the adult returner. The first is the rise (real or hypothetical) of discontinued or interrupted educational pathways. Students who enter the school system at age 6 and pursue their educations uninterrupted until university graduation are increasingly rare. As such, the number of leavers takes on relative significance, whatever their reasons for leaving. Lambert et al. (2004), using the *Youth in Transition Survey* (YITS), noted that in 2001, 15% of students aged 20–22 had dropped out of their postsecondary programs prior to completion. However, the same authors reported that half the leavers in 1999 had resumed their studies within two years. Figure 1.1 shows that the motives for interrupting studies are numerous and that the rate of return can vary considerably, depending on why the student left in the first place. For instance, students who interrupted their studies to “travel” (68%) were more than twice as likely to return to school than those whose exit was motivated by the desire or need to “work” (28%).

The recent study by Hango (2007), also based on YITS data, established that “some 40% of young adults had moved directly to postsecondary studies after graduating from high school (continuers), while 30% had delayed their entry to postsecondary education by four or more months after high school graduation (leavers).”

**Figure 1.1** – Return rates by reason for leaving as of December 1999, among leavers who resumed studies within two years (%)

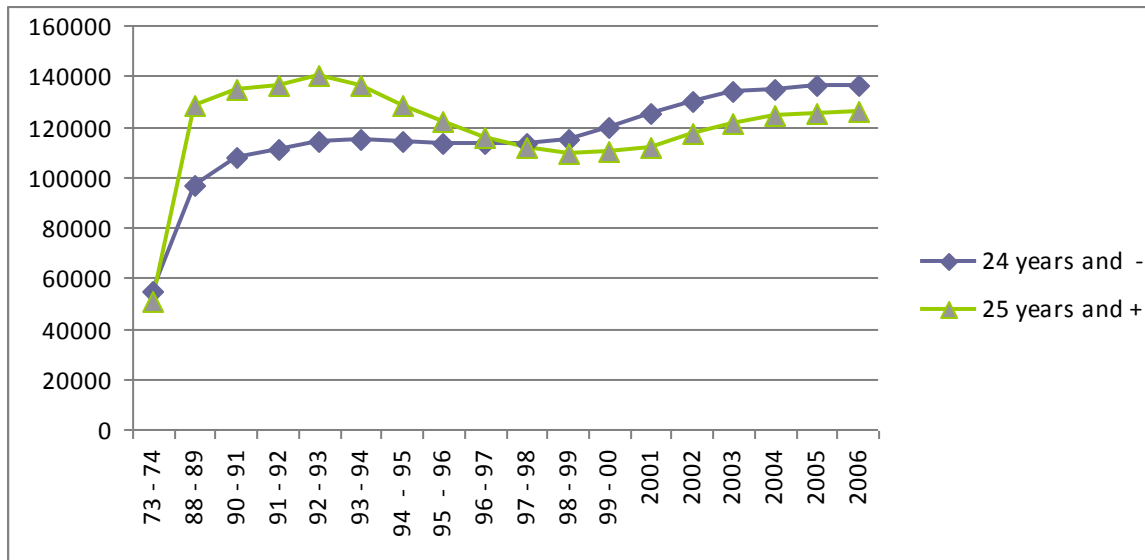


SOURCE: Lambert et al. (2004).

Though not the rule, interruptions and returns remain a significant aspect of postsecondary educational pathways — and a phenomenon that calls for structured analysis if it is to be properly understood.

A further factor spurs our interest: the weight of so-called adult students in postsecondary education, particularly at university. Table 1 (appended) and Figure 1.2 illustrate the progress of students aged 25 and over through the Quebec university system. From 51,000 in 1973-74, their numbers rose to 140,000 in 1992-93. Their presence subsequently declined until 1998-99, only to surge the following year. Depending on the year, adults accounted for 47% to 57% of enrolment — effectively half of the student body. The significance of this category within the student population justifies our interest in wanting to better understand the mechanisms and processes that characterize their return to school.

**Figure 1.2 – Adult student population in Quebec universities from 1973 to 2007 (source: MELS)**



**Sources:**

Doray, Pierre and Mayrand, Pascal. 2001. "Une innovation institutionnelle à l'Université: la participation des adultes." Talk presented at the Colloque de l'ACDEAULF, University of Ottawa.

Ouellette, Raymond. 2009. *Les statistiques de l'éducation. Enseignement primaire, secondaire, collégial et universitaire*. Québec: Quebec Ministry of Education, Leisure and Sports (information, communications and administration division)

Besides the statistical significance of university-going adults, the political context that has made life-long education and training the cornerstone of educational policy development also prompts investigation into the conditions and reasons behind the return to school by young Canadian adults.

## 1.2 Who leaves school before obtaining a degree?

For a return to school to occur, studies must first have been interrupted in one way or another. Numerous factors are associated with the phenomenon of discontinuation. Some bear on personal characteristics (gender, ethnicity, socio-economic background, etc.), while others relate to educational concerns. Research in the United States (Hearn, 1992; Horn, 1992) show that the risk of temporary or permanent interruption of studies after high school is higher among men, ethnic minorities (e.g. African Americans and Hispanics) and disadvantaged youth. The study by Lee (1996) conducted among 1,208 students at Westchester Community College drew similar conclusions: dropping out before graduation is more common among ethnic minorities and part-time students.

But there is also a link between a student's educational experience prior to the interruption and his or her demographic characteristics. For example, Cooksey and Rindfuss, in their 1994 study of American MBA students, showed that the highest rate of

non-completion occurred among part-time students. Given that individuals from low to middle socioeconomic backgrounds are more likely to enrol on a part-time basis, their risk of interrupting their studies before completing their program is thus higher than that of their wealthier counterparts. In England, Davies and Elias (2003) showed that students who dropped out were likely faced with an unsatisfactory course choices or financial or personal problems.

In Canada, the study by Tomkowicz and Bushnik (2003) showed that *delayers* (high school graduates who enter postsecondary education following a hiatus) differ from *right-awayers* (those who enrol directly after high school) in terms of both demographics and educational background. Members of the former category show a higher proportion of married individuals and individuals with children or dependents. Overall, the proportion of delayers is higher among men, rural residents and families in which neither parent has a university education. In terms of social and academic experience, delayers often have lower grades and show a lower level of commitment to school; moreover, they often belong to groups of students who, in high school, do not intend to pursue and show little interest in postsecondary education. In terms of their distribution, delayers are proportionally higher in Prince Edward Island, Saskatchewan, Alberta and British Columbia than in Ontario, but lower in Quebec.

Other Canadian studies also show a higher predisposition among delayers to interrupt their studies. Lambert et al. (2004), whose study uses data from the *Youth in Transition Survey Cohort B* (ages 18–20), presents students who leave their postsecondary programs prior to completion as having distinct social and academic characteristics. Their proportion is higher among respondents who are male and/or in a couple, have dependent children, or live with one parent (or in a household other than a two-parent family). Non-completion is far less common among students who have at least one parent with a postsecondary degree. People whose parents attach importance to postsecondary education are less likely to drop out.

As regards schooling, Lambert et al. (2004) also observed that students who leave before completing their programs show weak levels of commitment and preparation as well as distinctive psychosocial traits. They are less motivated to study, displaying instead a marked interest in paid work and/or travel. They have difficulty adapting to the demands of academia, and struggle with the workload and pace imposed by the school. They have low grades, are frequently dissatisfied and tend to want to change their program or leave it altogether.

In sum, a cause-and-effect relationship appears to exist between the tendency to interrupt studies and social background, living conditions, commitment to education, academic goals, and the characteristics of the educational experience.

### 1.3 Returning to school: what does it consist of?

Numerous factors may prompt someone to return to school. Nonetheless, according to Berger and Luckmann (1992) and Leclerc-Olive (1993), whatever its cause, the return to education aligns with a twofold process of *biographical disruption* and *conversion*. In this sense, adults who choose to return to school are motivated by the desire to make amends



for the past (“biographical accidents”) or to create new professional opportunities. Both disruption and conversion essentially use the acquisition of new skills as a means of connecting the dots between past and future. The return is part of a profound self-interrogation process by someone who questions his or her place in society and subsequently decides to change his or her life course to create a new social reality. In so doing, individuals disaffiliate with their previous lives:

Going back to school is a way of intentionally signalling discontinuity. It formalizes the break, enabling it to occur through the creation of a new social reality. In this context, the university is a *resocialization structure* in the life of the individual. Going back to school enables both the *objectivation of disruption* and *biographical conversion*. [Translation] (Berger and Luckmann, 1992, p. 18)

The dual process of disruption/conversion entails the construction of a space where identity formation and transformation can occur. In many cases, adults who return to school are concerned with legitimating their professional status, obtaining a promotion or gaining social currency. Such a conversion precedes life-course disruption, of which authors distinguish two types. In the first, the return to school can represent an upheaval to private life (*disruption 1*) in that it is liable to disrupt to a certain degree the individual’s history or family life. In the second, it represents a rupture to participation in public life (*disruption 2*), since returning to university represents integration into a *relatively new space that differs from the previous situation*.

### ***Who goes back to school?***

We can group the many factors that can motivate a return to school into three main categories: sociodemographic characteristics, previous education and living conditions.

#### ***Sociodemographic characteristics***

Returning to school is less likely among socially disadvantaged groups, who are also more likely to interrupt their studies. In the United States, having dependent children reduces the probability of returning to school (Kwong, Mok and Kwong, 1997). While belonging to an ethnic minority (e.g. African American, Hispanic) initially reduces the probability, the influence of ethnicity diminishes when other factors like family background and socio-economic status of a person’s occupation come into play (Marcus, 1986).

#### ***Previous education***

Generally speaking, the return to school is motivated by factors related to the initial reasons that caused the interruption. Davey and Jamieson (2003) cite three types of interruption. In the first, the student leaves in spite of good grades and a positive attitude toward education. In this case, leaving is often related to financial constraints or family responsibilities; correspondingly, the return to school is generally motivated by the desire to acquire new knowledge. The second type of interruption is associated with a lack of self-confidence and includes individuals who, unsure of their academic capabilities, see no point to further studies. Here, the return to school is often part of a broader personal transition (e.g. change in the wake of divorce, job loss, etc.); motivation frequently comes

from peers, whose encouragement helps compensate for any lacking confidence. In the third type, dropping out is associated with an act of rebellion, often in conjunction with behaviour problems and negative attitudes toward schooling. This is especially true for those who leave in search of paid employment or “freedom.”

The decision to return to school is also influenced by previous education. Individuals whose educational experience has been positive are more liable to resume studies, since they tend to have higher educational goals overall and aim for higher levels of training. If, however, a relatively high degree of previous schooling raises the hazard of return, this tendency falls progressively over time (Marcus, 1986): the longer the interruption, the less likely the chance of returning.

### *Living conditions*

A close connection exists between returning to school and life after the initial interruption. Individuals who resume studies are often motivated by a desire to improve their situation. Apt Harper (1978) identifies five key factors, both positive and negative, that play into the return to school among adults: personal development goals, the desire for knowledge, career objectives, situational barriers, and emotional obstacles. These factors are liable to be affected in turn by personal characteristics such as age, income, conjugal status, gender and previous education. For example, age, conjugal status and occupation can influence career goals; similarly, income, gender and conjugal status can serve as situational barriers.

A longitudinal survey of 17,500 young Americans at ages 7, 11, 16, 23 and 33 found that good working conditions tend to hinder the return to school after an interruption (Thomas, 2001). A job that matched career aspirations reduced the hazard of returning to school, especially when it corresponded to the individual’s capacities and qualifications. Conversely, a job that was a poor match with career aspirations served to stoke feelings of frustration and fuel the hazard of returning to school. Similarly, Marcus (1986) found that the higher the wage, the lower the motivation to resume studying, and the same in reverse. According to Marcus, the return to school is less common among workers with good jobs (“lucky workers”) than among those working under less attractive conditions (“unlucky workers”). Simply put, people who like their work are more apt to keep on working. Smart and Pascarella (1987) have highlighted the relationship between organization size, working conditions, type of employment and returning to school. Furthermore, going back to school appears to be strongly influenced by current or anticipated living conditions: for instance, according to Goldberg (1985), the prospect of receiving a scholarship can incite adults to return to school even when they have jobs or family responsibilities.

## **1.4 Perseverance after returning**

Findings from Horn and Carroll (1998) drawing on data from the U.S.-based 1989-1990 Beginning Postsecondary Longitudinal Study showed that 16% of students who entered a university program interrupted their studies in their first year. Among this number, 64% resumed their schooling within five years of the interruption. Those who returned to the

same school did so more rapidly and had a higher probability of completing their program than those who changed schools. Additionally, students at private schools were more likely to complete their programs than those who attended public institutions.

Post-return perseverance tends to rise with the level of engagement. According to Lee (1996), perseverance is highest among students with a personal interest in their programs and a deep commitment to being a student. Conversely, it is lower among part-time, ethnic minority and male students.

Research by Malloch and Montgomery (1996) with students from Maryland University College draws similar conclusions. Adults who resume studies after a relatively long interruption show lower levels of academic perseverance than do those whose pathway is more traditional (continuous). The former are also more likely to drop out for a second time before obtaining a degree. This breach in perseverance is not attributable to age, but rather to the absence of sustained academic goals. Certain social groups — African Americans and Aboriginal peoples being but two examples — are also at a higher risk.

If, in general, an interrupted pathway reduces the hazard of obtaining postsecondary qualifications, the level of education at the point of interruption appears to be significant. According to Cooksey and Rindfuss (1994), adults who diverge from the educational pathway straight after high school and *then* return to university are at a higher risk of interrupting their studies for a second time or of never completing a postsecondary program. Conversely, taking a break from schooling after graduation from an undergraduate program does not appear to reduce the hazard of going back to obtain a master's or higher degree; students who tend to do so have generally engaged in some sort of professional activity after their undergraduate degrees.

## 1.5 Summary

The studies consulted in this report would indicate that the flexible measures implemented to facilitate adult access to higher education have had positive results: adult participation in postsecondary studies has increased over the years. In most cases, adult returners do so either to complete an unfinished program or to embark upon a new one. The main advantage of the flexible measures is their ability to correct — or at least improve — the educational pathways of socially disadvantaged youth (a category that includes youth who, due to inadequate training for job market entry, become at risk of being so). Based on recent data, we aim to determine if the return to school among young Canadians varies in relation to the *time* variable, and to what extent it may be influenced by previous education, sociodemographic characteristics and living conditions.



## 2. Methodology

### 2.1 About the survey and sample

This study uses data from the *Youth in Transition Survey* (YITS), a study jointly conducted by Statistics Canada and Human Resources and Skills Development Canada. The YITS questionnaires gathered data on significant aspects of the lives of young people, largely regarding their periods of education or employment. The data was then used to study a number of important transitions that can occur at this time of life, such as finishing high school, embarking on postsecondary studies, obtaining a first job, leaving home, and so on. The questionnaires also collected data on the factors liable to affect these transitions, some of which – including family background and previous educational experience – are “objective,” others of which (aspirations, expectations, and so on) are seen as “subjective” (Statistics Canada, 2007: 83).

Launched in 1999, YITS spanned four cycles over seven years. In Cycle 1, the questionnaires gathered information about one year only (1999); subsequent cycles covered two-year periods. Cycle 2 collected information on 2000 and 2001, Cycle 3 on 2002 and 2003, and Cycle 4 on 2004 and 2005 (Table 2.1). As such, respondents’ lives could be monitored over a relatively lengthy period.<sup>2</sup>

The YITS sample design excluded people living in the three territories, on First Nations reserves, on Canadian Forces Bases, and in remote areas. The cohort comprised young people born between 1979 and 1981 inclusively and aged 18–20 on December 31, 1999. Ultimately, the analysis was by respondents living in the ten Canadian provinces who responded to all four cycles of the survey.

**Table 2.1** – Reference years and respondent ages for each YITS cycle, Canada, Cohort B

YITS cycle	Reference year	Respondent ages for each year		
Cycle 1	1999	18	19	20
Cycle 2	2000	19	20	21
	2001	20	21	22
Cycle 3	2002	21	22	23
	2003	22	23	24
Cycle 4	2004	23	24	25
	2005	24	25	26

<sup>2</sup> During the interviews, subjects provided information about themselves or another person. In the first case, subject and respondent were one and the same; in the second, where the subject provided information on someone else, the data was collected by proxy. Given that Statistics Canada often collects information by proxy, it is best to avoid confusion by using the term “respondent” to describe the person to whom the information pertains, whether it was provided by that person or someone else.

Given the purpose of this paper, our analysis will focus on the return to school after either a first degree or dropping out of a postsecondary program. The observation period covers the years 1999 to 2005.

## 2.2 The cross-sectional approach, the longitudinal approach and risk models

The cross-sectional approach is by far the most common in the social sciences; we mention it here only as a means of introducing the longitudinal approach. In the former, a sample is drawn from a population at a single point in time, and the resulting data are used to describe the population at that time — providing what is sometimes described as a “snapshot” of that population. The frequency distribution permits the sample to be described using a range of characteristics such as gender, age, educational participation, highest level of schooling, or highest grade/degree/certification. If the sample is probabilistic, the distribution of a characteristic among that sample is seen to provide a fairly accurate portrayal of that same characteristic’s distribution in the population, and the only source of inaccuracy is sampling error. We are generally interested in the frequency distribution, since it shows the proportional representation in the sample (and, by extension, in the population) of each category of a given characteristic — for instance, the percentages of men and women, or the proportion of the population that did not advance beyond primary or secondary school, that only completed non-university (college-equivalent) postsecondary studies, that attended university, and so on.

One might, for example, examine the highest level of schooling in each age group of adults, knowing that the resulting table might have been different had the sample been taken some years earlier or later (when the combination of prolonged studies and an aging cohort would have increased the percentage of the adult population that had reached university). However, examining the data from a single sample, taken at one time only, does not allow this change to be seen. Changes only appear when similar samples drawn at successive moments are juxtaposed.

While this approach has undeniable advantages, it fails to provide the information necessary to understanding the *evolution* of the phenomenon studied. A longitudinal study does not describe the population at a particular moment, nor does it show changes by juxtaposing a succession of “snapshots.” Rather, it aims to make explicit the movement through which change occurs. To conduct a longitudinal study in the sense that it is understood here, the data must include biographical information about each individual in the study population.

Conducting a longitudinal analysis means distinguishing fixed characteristics from those that vary over time. *Gender* is one such fixed characteristic, as are *first language*, *place of birth* and *social origin*, howsoever they may be assessed. *Attending school*, *highest level of schooling* and *employment status* are characteristics that vary over time. More subtly, *date of birth* is a fixed characteristic, while *age* varies directly in proportion to time.

The categories of these characteristics correspond to as many different states. The full range of states of a given characteristic forms what is called the “state space.” Over time, individuals can move from one state to another within a given characteristic. Thus,

*attending school* and *not attending school* are the two states that comprise the state space of a characteristic that varies over time. In principle, one can move freely between states in a given state space: for example, one can begin or cease attending school at any age. The highest level of schooling at a given point also defines a state space within whose states it is possible to move freely — for instance, undertaking vocational training after completing university studies.

Completing only primary or secondary school, completing a postsecondary non-university program and completing a university program are the three states of the state space associated with the characteristic of *highest level of schooling*. In principle, one cannot move freely between the states of this space. It is common to move from the first to the second state by going from high school to college, or from the first to the third by entering university straight from high school; it is much less common to move from the third to the second or first state, although we know such passages do occur. Nonetheless, it should be remembered that attending a vocational training institute after earning a university degree does not change the fact that the highest level of schooling attained by that individual is university.

Longitudinal analysis is used to study transitions from one state to another within a given state space. Within the context of the present study, we are interested in examining how university students move from the state of having left a postsecondary program to that of being a student in a new one.

As a first approximation, we can describe the sample using frequency distributions at different periods, e.g. every year or two years, as one would do when juxtaposing frequency tables obtained from a series of successive samples. If proportions are interpreted as probabilities (as is often done), we see that the cumulative probability of having left the program increases over time. By cross-tabulating data — for instance, calculating these ratios by gender — we can see whether or not men and women leave their programs at the same rate.

In the context of a longitudinal analysis, the use of cross-tabulation quickly reaches its limits, just as it does in cross-sectional analysis. To study the links between multiple characteristics, therefore, it is necessary to use statistical models for multivariate regression analysis.

To study the links between the return to postsecondary studies after an interruption (considered in terms of three states, i.e. *not at school*, *resuming studies in a university program* or *resuming studies in a vocational program* and measured at a given moment) and various other characteristics, we postulate that the return to school is the realization of a random variable, which we will now call the “dependent variable.” We use a statistical model to estimate the net effects of the range of other characteristics, which we will now call the “independent variables,” to calculate the probability of being in one of the dependent variable’s three possible states at the time of the survey.<sup>3</sup>

This reasoning does not directly apply when considering the transition from one state to another as opposed to the state at any given moment. Instead of focusing on being

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<sup>3</sup> If we set the prediction error to follow a logistic distribution, we will use logistic regression; if we set it to follow a normal distribution, we use the probit model.



in one of those three states, we focus on the transition from what is considered to be the initial state (*not a school*) to either of the other states of destination (being enrolled *in a university program* or *in a vocational program*). To study the links between transition from the initial state to either of the destination states, we must replace the probability of being in one of the three states *at a given moment* with that of being in one of the two destination states *at each instant*.

For technical reasons, the models built on this basis are not generally expressed using instantaneous cumulative probability as the dependent variable, but rather using an algebraic transformation of this quantity: the percentage of the population that moves between states at each instant divided by the percentage of those who have not yet passed from the initial state to one of the destination states at that time. The term for this value varies by discipline; in the social sciences and in epidemiology, it is generally known as “instantaneous rate” or “instantaneous risk.” The instantaneous rate is not a proportion, cannot be less than zero, and in principle has no upper limit.

Interpreting the coefficients associated with the independent variables of a risk model is similar to interpreting logistic regression coefficients, which express the relationship between two probabilities. If gender is used as the independent variable in a logistic regression whose dependent variable is *status in a postsecondary program* (reduced to two possible states), a reference must be chosen. If men are accordingly selected as the reference and we obtain a coefficient greater than 1, we then know that the relationship between the two probabilities — that of not being in school versus that of returning to school — is higher for women than for men; and that, on average, women return to school more often than men. Similarly, the risk model coefficient represents the relationship between two rates or risks. Suppose that gender is used as the independent variable in a risk model whose dependent variable is the state of returning to school, and that once again men are chosen as the reference. If we then obtain a coefficient greater than 1, it can be seen that the risk of moving from the state of “leaver” to that of “student” is higher among women, and that women, therefore, on average, return to school earlier or more often than men.

The instantaneous risk described above can also be interpreted as a rate (in the demographic sense of the term), which is to say the relationship between the number of state changes that took place during a given (potentially infinitesimal) interval and the time during which individuals who could potentially have changed states were liable to do so. This allows us to describe a sample studied over a given period by distributing the time spent “at risk” within the time-varying states, and calculating the proportions.

Risk models may be built in discrete or continuous time. In principle, the continuous time model is used for events that can happen at any time (for example, death) while the discrete model is used for events that only occur at a given time (for example, graduating from high school). However, reality and data do not always fully respect the principle: it is common to use a discrete time model to study a phenomenon in continuous time.

Such is the case with this study. While programs are generally completed at the end of term, some programs do not follow the regular academic calendar; moreover, students can drop out at any time. Similarly, students normally enter their programs at the



beginning of a semester, but programs that do not follow the regular academic calendar allow students to return to school at any time. The event of interest — the return to school — follows a pattern that is to a large degree established by the regular academic calendar, but that nonetheless allows for many exceptions. If it followed the calendar, it could be rigorously examined using a discrete time model. Our use of this model is based on the following: the somewhat hybrid nature of the return-to-school patterns, the relative inaccuracy of the YITS dates, and the fact that it seems unreasonable to assume, a priori, that the factors of interest produce effects that do not vary within the time elapsed since leaving studies.

### 2.3 The event studied and the at-risk group

In this section, we will examine operational definitions of the event under study and the group at risk of experiencing it.

#### *Postsecondary programs*

The YITS collected dated information on each respondent's periods of postsecondary studies between January 1999 and December 2005. For the purposes of the YITS, an eligible postsecondary program "is one that is above the high school level; is towards a diploma, certificate or degree; [and] would take someone three months or more to complete." The program must have begun before December 31 of the previous year's reference period (Statistics Canada, 2007: 13).

#### *Postsecondary program levels*

The data collected through the YITS questionnaires cannot, in all cases, directly determine whether or not the "eligible postsecondary program" is a university, pre-university or vocational program. To identify respondents' programs, we combined the collected data related to the program "level" with those pertaining to the institution's "type" and name, the time required to complete the program (as a full-time student), and the province where the institution was located. The question is more complex with regard to studies in Quebec, since the YITS questionnaires did not accurately distinguish vocational training from the pre-university programs offered through the CEGEPs.

For our purposes, programs that met at least one of the following criteria were considered at the *university* level:

- ✓ Programs offered in what was clearly a university-type institution in Quebec or the rest of Canada
- ✓ Undergraduate programs in Quebec or elsewhere in Canada; or undergraduate programs offered in Quebec and preceded by a pre-university college program (to the extent we were able to identify such programs)
- ✓ College-level programs offered elsewhere in Canada, of at least four years' duration (full-time)
- ✓ Programs reported by the respondent as "postgraduate or graduate," "university certificate lower than an undergraduate degree," "university

certificate or degree above the undergraduate but beneath the master's degree," "master's program" or "PhD program."

Programs were considered *pre-university* when:

- ✓ They were college-level programs offered at a Quebec-based college and lasting two to under three years full-time
- ✓ They were described by the respondent as being a pre-university program offered by a college or CEGEP (to obtain credits, a pre-university diploma or an associate degree)

Programs were considered *vocational* when:

- ✓ They were described by respondents as being a diploma or certificate program at a private commercial school or training institute, a registered apprenticeship program or an attestation of vocational specialization
- ✓ They were college-level programs offered at a Quebec-based CEGEP lasting up to three years on a full-time basis
- ✓ They were a college-level program lasting less than four years on a full-time basis in a community college in the rest of Canada (outside of Quebec)

### *Respondents' postsecondary status*

The YITS noted the dates respondents began their programs as well as their dates of final enrolment. The database also contained a derived variable indicating whether, at the time of the survey, each individual was still enrolled in the program, had completed it or had dropped out.<sup>4</sup> We selected programs for which such information was available. Apart from Cycle 1, each YITS cycle covered two years; however, it is common for students to spend more than two years in a given program. In the database, each program followed by a respondent was associated with an identifier. The identifier indicated information on the program throughout the cycles,<sup>5</sup> thus allowing us to determine an individual's postsecondary status for each semester. The possible situations were as follows: not in school, in a university program, in a pre-university program and in a vocational program.

### *Leaving postsecondary studies*

For our purposes, respondents were considered to have left postsecondary education in the semester in which they obtained their degree or were otherwise last enrolled prior to leaving. Respondents were not considered to have left postsecondary education if they were enrolled in other programs during that semester or had started another program during the fall or winter semester following that semester. When a respondent left more than one program in the same semester, we chose the program whose "level" was the highest.

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<sup>4</sup> In YITS terminology, an individual still enrolled in a program is a "continuer"; one who has completed a program, a "graduate"; and one who has dropped out, a "leaver."

<sup>5</sup> The identifier was a four-digit code that identified the following: the cycle in which the respondent had begun the program, the program's rank and the institution's rank during the cycle in which the respondent had begun the program. Programs retained the same identifier throughout the YITS cycles.

### *Returning to school*

We chronologically ordered the postsecondary education programs in which respondents had been registered between 1999 and 2005. This allowed us to identify the programs undertaken by respondents after an interruption (whether the interruption had followed completion of a first program or the abandonment of a program that would have yielded a first degree). When an individual had started more than one program in the same semester, we chose the program whose “level” was the highest. Returns during the winter term corresponded to programs that started between January and May of that year; returns during the fall semester, to programs that started between August and December of that year.

### *The at-risk group*

Our investigation focused on the return to postsecondary studies among adult students who had obtained or failed to obtain a first degree. In methodological terms, young people become “at risk” of returning to school two terms after first leaving (with or without diploma). They were no longer “at risk” once they started a new program or ceased being under observation while still out of school (i.e. at the end of the period covered by Cycle 4). An individual who returned to school left the at-risk group by changing his or her status from *leaver* to *student*; an individual who stopped being observed while still out of school left the at-risk group without changing states.

## 2.4 Operationalizing independent variables

The YITS data enabled us to examine how three aspects of young people’s lives influenced their educational pathways:

- Living conditions: employment status (working/not working) and the characteristics of jobs held during employment periods
- Sociodemographic features: area of residence, gender, conjugal status, having children or not, parental educational capital
- Previous education: level of the program that had yielded the first degree or that the student had left without completing

The independent variables used in a life-course analysis like this study must apply the same logic as the dependent variables. It is expected that most independent variables examined here have categories that can change while the individual is “at risk” of returning to school; as such, these are time-varying variables. The analysis requires data related to the state change dates within each independent variable. For example, using employment start and end dates, we can create a time-varying covariate whose state space is defined by the shift from the state of inactivity to the state of working and vice versa throughout an individual’s educational pathway.

We classed YITS variables into three groups, according to the precision with which data on changes to value had been recorded.

- 1) Time-varying covariates, whose categories were assessed monthly and yearly (e.g. employment status, number of jobs). Using these variables, we derived the month-

by-month value of employment period characteristics whose monthly values during this period were unknown: for instance, income and number of hours worked (assessed at the job start and end dates); class of worker, work pattern and occupational skill level (assessed at the start of employment only).

- 2) Time-varying covariates, whose categories were assessed every two years (e.g. living arrangements).
- 3) Fixed independent variables whose categories do not change over time (e.g. gender or visible minority status).

The following inserts define the independent variables applied to all three groups.

**Insert 2.1 – Description of time-varying covariates**  
(each month between 1999 and 2005)

<i>Variables</i>	<i>Definition and operationalization</i>	<i>Categories</i>
<b>Employment status</b>	Whether or not the person was working during the months studied	<ul style="list-style-type: none"> <li>• has a job</li> <li>• not working</li> <li>• not stated</li> </ul>
<b>Work pattern**</b>	Whether jobs held during the month were permanent (of no predetermined duration) or temporary (of limited duration). The <i>work pattern</i> variable represents the situation at the start of employment. These data were only available for paid employees.	<ul style="list-style-type: none"> <li>• no permanent job</li> <li>• at least one permanent job</li> <li>• self-employed</li> <li>• not working</li> <li>• not stated</li> </ul>
<b>Employment income**</b>	Total monthly income received from all jobs during the month. Remuneration is calculated before taxes and deductions. This variable was derived by comparing monthly earnings recorded at the start of employment and when last employed.	<ul style="list-style-type: none"> <li>• low income (up to \$1,000)</li> <li>• medium income (\$1,000 to \$2,400)</li> <li>• high income (over \$2,400)</li> <li>• not working</li> <li>• not stated</li> </ul>
<b>Number of hours worked weekly**</b>	Average hours worked per week in all jobs during the month. This variable was derived by comparing the number of hours worked per month at the start of employment and those when last employed.	<ul style="list-style-type: none"> <li>• 1 to 8 hours</li> <li>• 9 to 16 hours</li> <li>• 17 to 24 hours</li> <li>• 25 hours or more</li> <li>• not working</li> <li>• not stated</li> </ul>

**Insert 2.1 (cont'd) – Description of time-varying covariates  
(each month between 1999 and 2005)**

<i>Variables</i>	<i>Definition and operationalization</i>	<i>Categories</i>
<b>Occupational skill level**</b>	<p>This variable is used to describe jobs held during the month, taking into consideration the length and type of schooling required to access the position. We selected the job whose skill level was highest in a given month.</p> <p>In the YITS, eligible jobs were coded using the National Occupational Classification (1991) developed by Human Resources and Social Development Canada. We grouped them into five categories (HRSDC, 2006: viii):</p> <ul style="list-style-type: none"> <li>- Managerial: including senior and middle managers</li> <li>- Professional: university degree (bachelor's, master's or doctorate) required</li> <li>- Technical, paraprofessional and skilled: 2–3 years postsecondary non-university training, 2- to 5-year apprenticeship training, or 3–4 years of high school along with over two years' on-the-job training, occupation-specific training or specific work experience</li> <li>- Intermediate positions: 1–4 years secondary school training, 2 years of on-the-job training, training courses or occupation-specific work experience</li> <li>- Elemental/labourer positions: short work demonstration or on-the-job training; no formal educational requirements</li> </ul>	<ul style="list-style-type: none"> <li>• managerial positions</li> <li>• professional positions</li> <li>• technical, paraprofessional or skilled positions</li> <li>• intermediate positions</li> <li>• elemental or labourer positions</li> <li>• not working</li> <li>• not stated</li> </ul>
<b>Province of residence</b>	<p>Respondent's province of residence during the month. This is taken to mean the province where the respondent's job was located if the respondent had worked during the month, or where the respondent's postsecondary institution was located when the respondent attended postsecondary studies during the month. We grouped the Maritime provinces (Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick) as well as the Prairie provinces (Manitoba, Saskatchewan and Alberta). Respondents who lived outside of Canada were excluded from the analysis during their period(s) of stay outside Canada.</p>	<ul style="list-style-type: none"> <li>• Maritime provinces</li> <li>• Ontario</li> <li>• Quebec</li> <li>• Prairie provinces</li> <li>• British Columbia</li> <li>• outside of Canada</li> <li>• not stated</li> </ul>
<b>Being a parent</b>	<p>Whether or not the respondent had biological children. This variable was derived by considering the children's birthdates (month/year).</p>	<ul style="list-style-type: none"> <li>• no</li> <li>• at least one child</li> </ul>

\*\* In Cycles 1 to 3, these data were collected from individuals who had jobs and had actively worked. In Cycle 4, the data were collected from individuals who had jobs.

### Insert 2.2 – Definition of time-varying covariates (every two years between 1999 and 2005)

<i>Variables</i>	<i>Definition and operationalization</i>	<i>Categories</i>
<b>Province of residence</b>	Province where the respondent lived at the time of the interview. We grouped the Maritime provinces (Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick) and the Prairie provinces (Manitoba, Saskatchewan and Alberta). Respondents living outside of Canada were excluded from this analysis.	<ul style="list-style-type: none"> <li>• Maritime provinces</li> <li>• Ontario</li> <li>• Quebec</li> <li>• Prairie provinces</li> <li>• British Columbia</li> <li>• outside of Canada</li> <li>• not stated</li> </ul>
<b>Conjugal status</b>	This variable indicates whether or not respondents were part of a couple (married, living common-law or living with a partner) in December of the first year of each cycle. This variable was seen as unchanging in the course of the same cycle.	<ul style="list-style-type: none"> <li>• not living as a couple</li> <li>• living as a couple</li> <li>• not stated</li> </ul>

### Insert 2.3 – Description of fixed independent variables

<i>Variables</i>	<i>Definition and operationalization</i>	<i>Categories</i>
<b>Gender</b>	Respondent's gender	<ul style="list-style-type: none"> <li>• male</li> <li>• female</li> </ul>
<b>Parents' educational capital</b>	This variable describes the highest level of schooling attained by one or both parents. For YITS Cycle 1, each parent was asked to specify his or her highest level of schooling. By definition, a first-generation student (FGS) is one whose parents had not gone beyond high school.	<ul style="list-style-type: none"> <li>• no postsecondary experience</li> <li>• postsecondary (non-university)</li> <li>• postsecondary (university)</li> <li>• not stated</li> </ul>
<b>Visible minority status</b>	Whether or not the respondent was part of a visible minority	<ul style="list-style-type: none"> <li>• yes</li> <li>• no</li> <li>• not stated</li> </ul>
<b>Previous program level</b>	Level of the program that yielded a first postsecondary degree or that had been left prior to completion	<ul style="list-style-type: none"> <li>• university</li> <li>• pre-university</li> <li>• vocational</li> <li>• unranked</li> </ul>

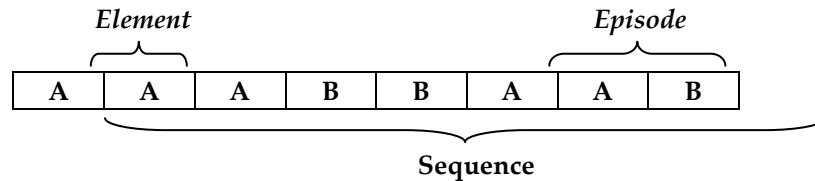
## 2.5 The at-risk group: a preliminary analysis

This section aims to describe postsecondary-level returns to school in order to provide an initial assessment of the phenomenon. We will use sequential analysis to describe the types of interruption possible, then try to elicit some of the factors that influence two kinds of return: those that occur after a short interruption (9 months or less), and those that come after a long interruption (over 9 months).

Sequential analysis enables a sequence of situations, i.e. chains of temporally located states, to be compared and ranked. A sequence is defined by an ordered list of elements (Figure 2.1). The path is mapped by choosing a temporal unit of analysis and

situational categories, followed by the identification of element and episode sequences (Brzinsky-Fay, Kohler and Luniak, 2006).

**Figure 2.1 – Composition of an event sequence**



The sample is a subset of Cohort B whose situations were monitored for a total of 84 months (January 1999 to December 2005). We only studied the youth who reported being in postsecondary studies for at least one month and had provided their final status (graduate, continuer or leaver); this amounted to 8,715 respondents in total. When more than one program was reported for the same month, the final status with the last program reported was taken into account.

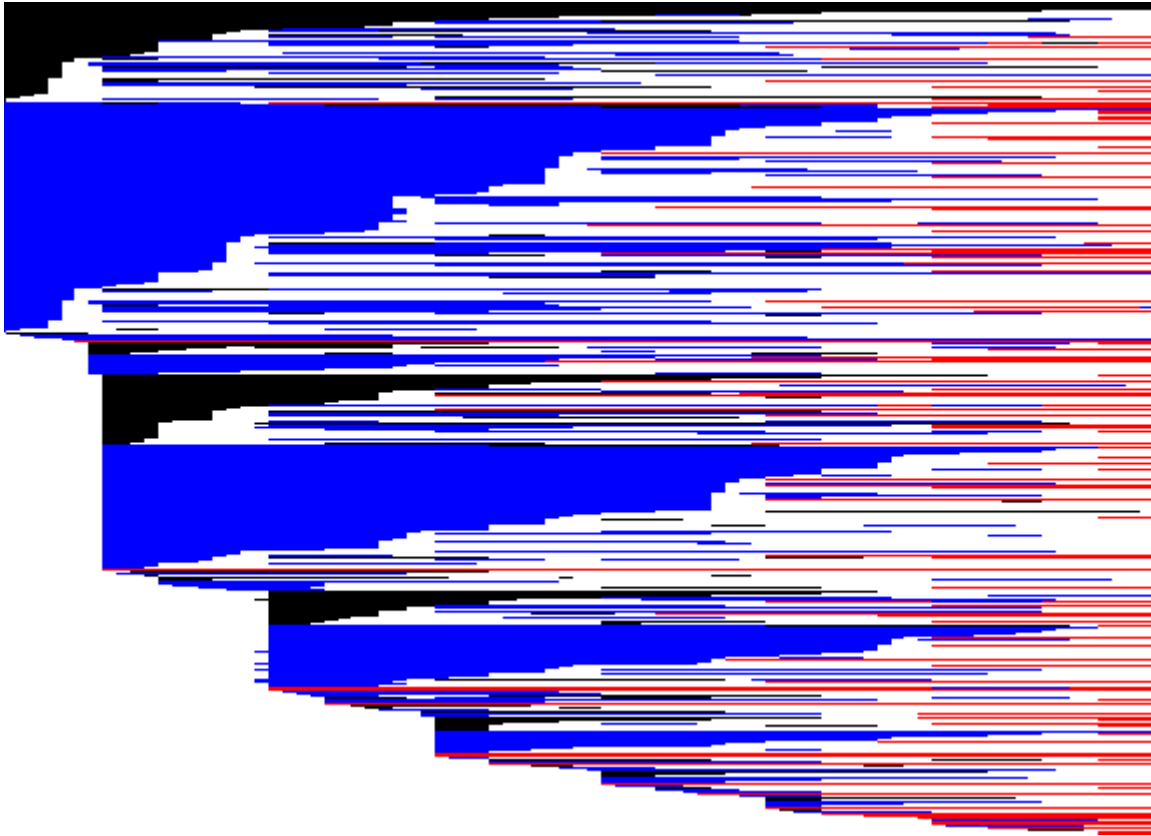
Describing postsecondary educational pathways longitudinally using a sequence index plot affords a view of the full gamut of respondent trajectories. Figure 2.2 presents a graphic synthesis of these pathways by monthly postsecondary status, of all respondents whose postsecondary status had been clearly stated. For a given month, a respondent's situation was coded as *not in postsecondary school* if that individual was not enrolled in any program (white in Figure 2.2); otherwise, the situation was coded by the status in the last reported program: *graduate* (blue), *continuer* (red), or *leaver* (black).

Figure 2.2 prompts the following observations:

- The first postsecondary programs reported had mostly started before January 1999 (2 out of 5 respondents); however, a certain proportion had begun in September 1999 (1 respondent in 5), others in September 2000 (1 respondent in 10).
- Returning to school is common among both leavers and graduates, though it is more common among the former.
- Returns occur after relatively long interruptions.
- In many cases, returning to school is a recurring phenomenon (975 individuals returned at least twice).

It appears therefore necessary to consider the pathways in their entirety in order to describe interruptions of postsecondary education. Among the youth who had some postsecondary experience, only 4.7% remained in school from January 1999 through December 2005. As continuers, these students never returned to school after a break. Accordingly, our preliminary analysis of returning to postsecondary education must be limited to students who discontinued their studies at least once, a total of 8,339 youth.



**Figure 2.2 – Sequential status over an 84-month period**

The distinction between short and long interruptions is due to changes to the organization of studies that are not without effect on educational pathways. Consequently, increasing numbers of students do not complete their studies at the end of the school year (spring or early summer), but in December. However, many of them cannot register in January, since admissions generally take place in the fall. Students thus find themselves in a situation of forced interruption due to the rules that apply to education at different levels. This situation, which we are unable to measure directly using YITS variables, can however be approximated by distinguishing interruptions on the basis of their duration (“short” for forced interruptions, “long” for others). The maximum duration of forced interruptions can be estimated as no more than 9 months, e.g. from January to September of a given year. Thus, we must distinguish between two types of interruptions liable to culminate in a return to school: returns after short interruptions (9 months or less) and returns after longer breaks (10 months or more). As shown in the table below, about half of the respondents experienced no return to school between January 1999 and December 2005; of the remaining half, 50% experienced a long interruption.



**Table 2.2 – Distribution of students by type of interruption of postsecondary education**

<b>Situation</b>	<b>%</b>
Return to studies after a long interruption	24.3
Return to studies after a short interruption	24.2
Did not return to studies	51.5
Total	100 (N = 8,339)

The two situations are quite different. A preliminary descriptive analysis of the determinants of both shows that many of the factors affecting the return to school after a short interruption had no effect on returns following a long interruption. Two variables serve to illustrate this difference: the province where the respondent's first postsecondary institution was located and final high school grades.

Whether the return to school came after a short or long interruption varied by province of residence. Short interruptions were most common in Quebec (35.7%) and Nova Scotia (30.8%). In Quebec, the existence of the CEGEPs as a transitional facility between high school and university may account for this difference: CEGEP students are likely to have their pathways forcibly interrupted since they are often unable to enrol in a university program directly after finishing CEGEP.

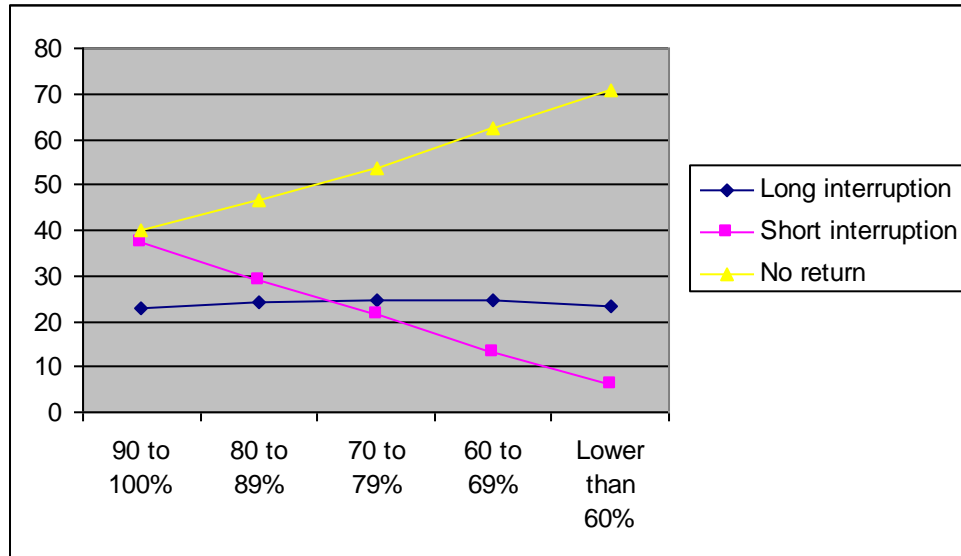
**Table 2.3 – Interruptions of postsecondary education according to first-program characteristics (%)**

<b>First-program situation</b>	<b>Long interruption</b>	<b>Short interruption</b>	<b>Permanent interruption</b>
<b>Final status</b>			
Degree obtained	19.6	23.7	56.6
Program not completed	32.9	25.2	41.9
<b>Province</b>			
Newfoundland and Labrador	22.5	18.3	59.2
Prince Edward Island	28.3	19.0	52.8
Nova Scotia	22.2	30.8	47.0
New Brunswick	23.3	22.5	54.2
Quebec	23.0	35.7	41.3
Ontario	23.5	20.4	56.1
Manitoba	26.3	15.4	58.3
Saskatchewan	22.9	16.9	60.2
Alberta	26.7	23.1	50.1
British Columbia	26.4	19.4	54.2

Similarly, final grades in high school had a strong linear impact on returns following short interruptions, but not on those following long interruptions. As shown in Figure 2.3, only 40% of those whose overall high school average was between 90 and 100%

do not return to school after an interruption, compared to 70% of students whose average is below 60%. This difference can be explained solely by the fact that youth with better results experience more short (temporary) interruptions, without however showing a higher number of returns after a long interruption.

**Figure 2.3 – Interruption based on final grades in high school**



The differences observed in both types of interruption have caused us to limit our analysis to returns that occur after a long interruption. Accordingly, the event under study will be defined as “returns to school after interruptions of more than two semesters,” thus enabling us to narrow our definition of the at-risk group to only those individuals who fall into this category.

## 2.6 A description of the at-risk group: analyzing long interruptions

The at-risk group consisted of 3,314 individuals who had already obtained a first postsecondary degree, and 2,299 individuals who had dropped out before obtaining a first degree but who were still part of the survey sample at the end of Cycle 4. Table 2.4 shows the distribution of respondents by their status at time of leaving (with or without a degree) in conjunction with a number of fixed characteristics: gender, parents’ educational capital, visible minority status and program level at time of leaving.

A first feature to consider is whether respondents interrupted their studies because they had completed their programs (graduates) or because they had dropped out (leavers). Among the first group, we noted a greater proportion of women (53%), while men accounted for a higher percentage (52%) of the second group. Whatever their mode of exit, most respondents came from families where at least one parent had some form of postsecondary training. However, the ratio of first-generation postsecondary students was slightly higher among leavers (32%) than graduates (30%). A full 87% of both groups did

not belong to a visible minority. As regards program level at time of leaving, over half (55%) of those who graduated had studied at the vocational level, over one third (37%) at the university level and 7% at the pre-university level. Among the leavers, we noted a higher percentage of university (40%) and pre-university students (15%).

**Table 2.4 – Distribution of graduate/leaver respondents who left school between 1999 and 2005, by fixed variables (%)**

	<b>Graduate</b>	<b>Leaver</b>
N	3,314	2,299
<b>Gender</b>	<b>100</b>	<b>100</b>
Male	46.6	51.6
Female	53.4	48.4
<b>Parents' educational capital</b>	<b>100</b>	<b>100</b>
High school or below	30.1	32.2
Postsecondary non-university	29.3	28.0
University	31.6	31.8
Not stated	9.1	8.0
<b>Visible minority status</b>	<b>100</b>	<b>100</b>
Yes	12.2	12.4
No	87.4	87.4
Not stated	0.5	0.1
<b>Program level</b>	<b>100</b>	<b>100</b>
University	37.0	39.8
Pre-university	6.9	15.4
Vocational	54.5	44.1
Unranked	1.5	0.6

Source: Authors' extrapolation based on YITS data, cycles 1 to 4

Tables 2.5 and 2.6 consider the distribution of graduates and leavers as time-varying covariates. The estimated effects of these variables is based upon each respondent's position at the start of the semester (January for the winter semester and September for the fall), since he or she was still "at risk" of returning to school during that semester. However, the changes that occurred throughout the period studied were due in part to composition shifts in the at-risk population. Individuals who spent longer in the at-risk group either took longer to return to school, or failed to return at all. As a result, the greater the number of semesters that had elapsed since leaving, the more respondents tended to assimilate into the non-student population.

With regard to employment, 83% of graduates and 74% of leavers were employed after leaving postsecondary studies. This proportion increased over time in both groups, though it remained lower among the leavers. Overall, the majority of leavers had found paid, permanent employment. The percentage of those with non-permanent jobs declined over time, while self-employment represented a negligible fraction of the total throughout. All in all, the majority of respondents worked 25 hours or more per week. As for job skill

levels, little difference was observed between the two groups. Nearly one-third of graduates held technical or specialized positions, while almost one-quarter had intermediate-level jobs. A higher percentage of leavers had elemental or labourer positions, though this decreased over time in favour of more skilled work. In terms of income level, graduates were more likely to hold middle- to high-income permanent jobs, while leavers tended to have middle- to low-income permanent jobs.

Regarding area of residence, 17% of graduates and 23% of leavers remained in Quebec after leaving school, a proportion that increased over time to 26% and 32% respectively. The percentage of respondents living in Ontario decreased slightly over time, from about 40% to 35%; percentages in other regions remained relatively stable.

Lastly, the majority of respondents did not live as part of a couple after leaving postsecondary studies; the percentage is slightly lower among graduates (74%) than among leavers (82%). However, the percentage of respondents living in couples increased significantly between the first and seventh semesters, going from 15% to 36% among leavers and 24% to 43% among graduates. Conversely, no significant difference was noted in the proportion of respondents who had had children, which rose from 5% in the first semester to 17% seven semesters later.

**Table 2.5 – Distribution of individuals who left postsecondary studies between 1999 and 2005 after obtaining a first degree, by time-varying variables, during the semesters (fall or winter) when they were at risk of returning to school (%)**

Variables	SEMESTER						
	1	2	3	4	5	6	7
N	3,314	3,042	2,506	2,222	1,661	1,544	1,198
<b>Employment status</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Working	83.2	86.1	85.0	85.0	85.1	86.5	87.6
Not working	13.5	10.5	10.7	10.5	9.5	7.8	7.2
Not stated	3.3	3.4	4.3	4.5	5.5	5.7	5.2
<b>Work pattern</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Employee, no permanent job	13.3	13.3	13.0	10.6	10.5	8.6	8.4
Employee, at least one permanent job	62.8	64.5	65.1	66.0	66.5	69.7	71.5
Self-employed	3.3	2.6	2.1	2.3	2.6	3.8	3.5
Not working	15.1	13.0	12.9	13.0	11.4	8.9	8.1
Not stated	5.5	6.7	6.9	8.1	8.9	9.0	8.4
<b>Average no. of hrs. worked/week</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
8 hours per week or less	3.0	2.3	0.8	0.8	0.7	1.2	1.3
9 to 16 hours per week	4.3	3.0	3.1	3.3	2.5	2.4	1.7
17 to 24 hours per week	7.6	6.3	5.4	4.3	5.3	4.2	3.7
25 or more hours per week	66.5	72.0	73.5	74.1	74.3	77.4	79.7
Not working	15.1	13.0	12.9	13.0	11.4	8.9	8.1
Not stated	3.5	3.5	4.3	4.5	5.7	6.0	5.6

**Table 2.5 (cont'd) – Distribution of individuals who left postsecondary studies between 1999 and 2005 after obtaining a first degree, by time-varying variables, during the semesters (fall or winter) when they were at risk of returning to school (%)**

Variables	SEMESTER						
	1	2	3	4	5	6	7
<b>Job skill level</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Managerial positions	3.3	3.7	4.2	3.3	4.3	4.6	4.3
Professional positions	13.6	15.1	14.3	14.4	13.6	13.3	10.3
Technical, paraprofessional and skilled positions	31.3	33.8	34.4	35.6	36.4	37.5	39.5
Intermediate positions	26.1	25.0	24.0	23.3	22.5	23.9	27.0
Elemental/labourer positions	6.7	5.5	5.2	5.6	6.1	5.9	5.6
Not working	15.1	13.0	12.9	13.0	11.4	8.9	8.1
Not stated	3.9	3.9	5.0	4.9	5.8	6.0	5.2
<b>Category, work pattern and income</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Employee, permanent, low income	8.9	7.8	6.3	5.6	4.6	5.2	4.1
Employee, permanent, middle income	31.9	30.8	30.9	29.9	29.3	30.2	32.3
Employee, permanent, high income	22.0	25.8	27.8	30.5	32.6	34.3	35.1
Employee, non-permanent, low income	1.8	1.4	1.0	0.5	0.7	0.3	0.4
Employee, non-permanent, middle income	6.7	6.3	5.9	4.4	3.1	2.2	2.9
Employee, non-permanent, high income	4.7	5.6	6.1	5.9	6.7	6.1	5.1
Self-employed	3.3	2.6	2.1	2.3	2.6	3.8	3.5
Not working	15.1	13.0	12.9	13.0	11.4	8.9	8.1
Not stated	5.5	6.7	6.9	8.1	8.9	9.0	8.4
N	3,314	3,042	2,506	2,222	1,661	1,544	1,198
<b>Province of residence</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Maritimes	8.1	8.3	8.3	8.3	8.7	8.6	8.8
Quebec	17.3	17.4	18.4	18.9	22.4	23.1	26.0
Ontario	42.2	42.4	40.9	40.3	36.2	36.6	33.5
Prairies	18.8	18.0	18.6	18.2	18.4	18.2	18.2
British Columbia	13.8	13.9	13.8	14.3	14.4	13.6	13.5
<b>Age</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
19	8.0	2.5	1.2	0.1	...	...	...
20	16.9	11.9	8.0	3.2	1.4	0.1	...
21	17.7	18.8	18.8	13.5	11.4	4.2	1.8
22	19.3	17.4	20.1	22.7	24.9	17.9	15.1
23	24.1	22.8	21.0	21.6	28.2	29.7	32.3
24	10.9	18.4	21.4	21.6	20.8	25.6	28.9
25	2.8	7.3	8.1	13.1	12.2	17.3	16.9
26	0.2	0.9	1.4	4.2	1.1	5.1	5.1
<b>Conjugal status</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Not living as part of a couple	74.0	71.5	67.3	64.5	60.6	59.8	56.3
Living as part of a couple	24.4	26.8	30.5	33.7	38.2	38.8	42.6
Not stated	1.6	1.7	2.2	1.8	1.2	1.4	1.2
<b>Is a parent</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
No	95.0	93.6	92.8	90.7	88.5	85.5	82.9
At least one child	5.1	6.4	7.2	9.3	11.6	14.5	17.1

Source: Authors' extrapolation based on YITS data (cycles 1 to 4)

**Table 2.6 – Distribution of individuals who left postsecondary studies between 1999 and 2005 without obtaining a first degree, by time-varying variables, during the semesters (fall or winter) when they were at risk of returning to school (%)**

Variables	SEMESTER						
	1	2	3	4	5	6	7
N	2,299	1,908	1,666	1,358	1,171	1,077	960
<b>Employment status</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Working	73.8	78.1	77.9	75.6	79.9	82.8	83.0
Not working	20.2	15.1	14.8	16.8	12.8	10.3	10.5
Not stated	6.0	6.9	7.4	7.6	7.3	6.9	6.5
<b>Work pattern</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Employee, no permanent job	12.0	9.4	8.5	7.8	8.4	8.7	7.9
Employee, at least one permanent job	55.1	60.0	59.9	58.2	63.4	63.3	67.5
Self-employed	2.9	3.7	3.4	4.2	3.6	4.1	3.3
Not working	22.4	18.6	19.2	19.8	14.6	12.7	12.2
Not stated	7.7	8.2	9.0	9.9	10.1	11.3	9.1
<b>Average no. of hrs. worked/week</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
8 hours per week or less	3.3	2.9	3.3	2.3	1.6	1.5	0.9
9 to 16 hours per week	5.4	4.0	3.6	3.6	3.5	4.0	2.7
17 to 24 hours per week	9.7	7.7	4.4	4.3	4.9	4.8	4.5
25 or more hours per week	53.2	59.7	61.8	62.1	68.1	70.2	73.1
Not working	22.4	18.6	19.2	19.8	14.6	12.7	12.2
Not stated	6.2	7.2	7.7	7.8	7.3	7.0	6.7
<b>Job skill level</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Managerial positions	3.0	3.7	3.9	5.0	6.9	7.0	6.3
Professional positions	3.8	4.1	4.4	4.7	4.3	5.3	5.4
Technical, paraprofessional and skilled positions	18.2	20.4	22.6	24.2	27.6	29.3	28.1
Intermediate positions	29.2	29.7	28.6	25.4	26.8	27.6	31.3
Elemental/labourer positions	16.2	15.4	12.4	12.3	12.1	11.1	9.9
Not working	22.4	18.6	19.2	19.8	14.6	12.7	12.2
Not stated	7.3	8.3	8.8	8.7	7.7	7.2	6.8
<b>Category, work pattern and income</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Employee, permanent, low income	18.5	15.4	12.5	11.3	9.3	9.4	8.4
Employee, permanent, middle income	27.5	32.7	34.1	30.8	32.6	32.1	33.8
Employee, permanent, high income	9.1	11.9	13.3	16.2	21.4	21.8	25.4
Employee, non-permanent, low income	4.1	2.4	1.9	1.6	1.2	0.7	0.7
Employee, non-permanent, middle income	5.9	4.8	4.0	2.9	3.4	3.0	2.6
Employee, non-permanent, high income	2.0	2.2	2.7	3.3	3.8	5.0	4.7
Self-employed	2.9	3.7	3.4	4.2	3.6	4.1	3.3
Not working	22.4	18.6	19.2	19.8	14.6	12.7	12.2
Not stated	7.7	8.2	9.0	9.9	10.1	11.3	9.1

Source: Authors' extrapolation based on YITS data (cycles 1 to 4)

**Table 2.6 (cont'd) – Distribution of individuals who left postsecondary studies between 1999 and 2005 without obtaining a first degree, by time-varying variables, during the semesters (fall or winter) when they were at risk of returning to school (%)**

Variables	SEMESTER						
	1	2	3	4	5	6	7
N	2,299	1,908	1,666	1,358	1,171	1,077	960
<b>Province of residence</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Maritimes	7.6	7.6	7.4	7.1	6.7	6.7	6.3
Quebec	23.3	23.7	25.2	28.2	29.8	30.5	31.6
Ontario	39.8	38.1	38.0	38.0	37.1	35.7	34.6
Prairies	17.2	18.4	18.8	17.1	16.9	17.1	17.2
British Columbia	12.2	12.1	10.5	9.6	9.5	10.0	10.3
<b>Age</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
19	22.2	13.0	4.7	0.8			
20	29.4	22.4	18.4	13.0	5.0	1.0	
21	21.7	30.5	26.9	22.6	19.7	14.0	5.6
22	12.2	13.0	23.1	31.0	28.6	23.7	19.5
23	9.3	13.6	13.6	15.5	25.3	33.2	31.5
24	3.3	5.6	9.4	13.3	14.4	16.4	27.2
25	1.5	1.6	3.2	3.5	6.6	10.4	10.8
26	0.3	0.4	0.7	0.3	0.4	1.3	5.4
<b>Conjugal status</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Not living as part of a couple	82.1	79.2	76.4	67.9	63.8	62.4	60.9
Living as part of a couple	14.8	17.5	20.0	28.2	33.2	34.4	36.1
Not stated	3.2	3.3	3.6	3.9	3.0	3.2	3.0
<b>Is a parent</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
No	94.9	93.2	91.5	90.8	88.0	85.9	83.0
At least one child	5.1	6.8	8.5	9.2	12.0	14.1	17.0

Source: Authors' extrapolation based on YITS data (cycles 1 to 4)

## 2.7 The statistical model

As mentioned in Section 2.2, the return to school was examined using a discrete time model – a model that, in practice, employs multinomial logistic regression. This allows us to estimate the effects of one or more independent variables on a qualitative dependent variable with more than two categories. Depending on the nature of the program, we can distinguish two forms of the return to school: returning to a university/pre-university program, and returning to a vocational program.

Earlier, we explained that the academic calendar does not allow us to consider someone who has not been registered in a given program for at least two semesters as having “left.” For this reason, we have not examined the return to school based on the semester of leaving, but as of the third semester thereafter.

Whether or not they obtained a degree before leaving, respondents who had interrupted their studies for over two semesters were at risk of returning by entering

either a university/pre-university program or a non-university/vocational one. As such, they were subject to two competing risks. In practice this means that, at any time, a person can occupy three different states: *not in school*, *returning to school in a university/pre-university program*, or *returning to school in a vocational program*. As a result, we must gauge the effects (each semester and for the at-risk population) of independent variables on the risk of starting a university/pre-university program, and on the risk of starting a vocational program.<sup>6</sup> Multinomial logistic regression appeared the simplest way to do so.

The phenomenon of returning to school has been little studied; we do not yet know enough about it to put forth strong a priori assumptions. It is conceivable that the risk of returning to school varies depending on the time elapsed since school was last attended. As such, it is never quite the same during each semester that follows the interruption. Additionally, we cannot assume that the effects of the factors behind a return to school remain unchanging with the passage of time since leaving. Compounding the problem, it's not unreasonable to suppose that the effects of these factors will vary based on whether the student dropped out or graduated.

The instantaneous probability of returning to school depends on the time elapsed since leaving, as well as on a number of factors whose effects hinge both on the type of the exit (graduation or interruption) and the time elapsed. Once we settle on multinomial logistic regression<sup>7</sup> as a means of estimating the effects, we can express this idea through the following formula:

$$h^R(t | \mathbf{x}, z) = h_0^R(t) \exp(\mathbf{x}\boldsymbol{\beta}^R)$$

and

$$\boldsymbol{\beta}^R = g(t | z),$$

In the formula,  $h^R(t)$  represents the instantaneous rate (or instantaneous probability or instantaneous risk) of returning to school in a university or vocational program, depending on the value ascribed to  $R^8$ ;  $h_0^R(t)$  is the "base" rate of return to a university or

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<sup>6</sup> More specifically, we estimated the effects of independent variables on the hazard of undertaking either a university/pre-university or a vocational program for respondents who had not yet embarked on a new program.

<sup>7</sup> Here it may be useful to recall how logistic regression and multinomial logistic regression bear on risk model estimation. Logistic regression relates the ratio of two probabilities to a number of independent variables to which we add an intercept. The ratio of two probabilities can be ultimately reduced to a set of relationships between paired categories, which explains why the effect of independent variables in logistic regression is often called the "odds ratio." When using logistic regression to study the process that governs a change of state (thus a phenomenon that unfolds over time), the ratio of two probabilities can be reduced to the ratio between the number of individuals who undertake a program during a given semester, and the number of individuals who had not entered a program by the end of that semester. This relationship is similar to the ratio between the number of events and the number of individuals at risk of experiencing the event during a given time interval (in this case, the semester), and can be interpreted as an instantaneous rate (or instantaneous risk or instantaneous probability). The intercept of each logistic regression equation (ordinary or multinomial) can then be interpreted as the base rate — or base risk — of the time and effects of independent variables as the risk ratio.

<sup>8</sup> It is not always easy to adopt and adhere to notation that is consistent, intuitive and unambiguous. Here we would like to specify that placing the letter "R" as an exponent is not meant to denote a "number to the power of R." Rather, R denotes "return" and merely serves to distinguish the components of the equation that



vocational program in a given semester;  $t$  is the number of semesters elapsed since leaving;  $\mathbf{x}$  represents the vector of the factors that increase or decrease the rate;  $\beta^R$  is the vector of the effects of these factors on the probability of returning to school in a university or vocational program based on the  $R$  value; and  $z$  represents the fact of having put an end to studies, either by graduating or otherwise leaving. The effects ( $\beta^R$ ) of factors ( $\mathbf{x}$ ) vary based on the time elapsed since the end of studies ( $t$ ) and the manner in which they ended ( $z$ ).

To better understand the analysis strategy that we used and how our results have been presented the next chapter, it helps to reformulate the model by distinguishing both the factors we consider significant and the characteristics we control for, in order to estimate the net effect of each significant factor. While purely conceptual, this distinction is useful to make explicit. Thus reformulated, our model becomes:

$$h^R(t | \mathbf{x}_1, \mathbf{x}_2, z) = h_0^R(t) \exp(\mathbf{x}_1 \beta_1^R + \mathbf{x}_2 \beta_2^R),$$

$$\beta_1^R = g_1(t / z)$$

and

$$\beta_2^R = g_2(t | z),$$

Here,  $\mathbf{x}_1$  represents the vector of factors deemed the most significant, which we have already listed (i.e. level of last program attended, socio-demographic characteristics and living conditions).  $\beta_1^R$  represents the vector of the effects of these factors, while  $\mathbf{x}_2$  represents the vector of the characteristics with controlled effects (age, gender and province of residence) to estimate the net effect of the most important factors.  $\beta_2^R$  represents the vector of the effects of these characteristics.

To complete the presentation of our model, we need to explain how we designed the base rate, noted as  $h_0^R(t)$  in the equation. This problem can be solved in a number of ways, but given the phenomenon under study, and considering that the model's coefficients are assumed to vary depending on the time elapsed since leaving, the more natural choice is to use the age of the individual to construct the rate — i.e. designing the base rate as a function of age.

Age varies from year to year; its value for a given individual is thus a function of the time elapsed since leaving. Individuals of varying ages are at risk of starting a new program at some point during each semester. Ultimately, we have no reason to believe that the base rate of return for individuals of a given age cannot differ from one semester to the next. In the context of multinomial logistic regression, this may be expressed as follows:

$$h_0^R(t) = \exp(\mathbf{x}_0(t) \cdot \beta_0^R)$$

and that

$$\beta_0^R = g_0(t | z),$$

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governs the return to school in a university program from those in the equation governing the return in a vocational program.

Here,  $\mathbf{x}_0$  represents the individual's age during the semester, measured in years elapsed (designed as a series of discrete values) and  $\beta_0^R$  the "base" rate associated with each of these values. Accordingly, our model becomes

$$h^R(t | \mathbf{x}_0, \mathbf{x}_1, \mathbf{x}_2, z) = \exp(\mathbf{x}_0(t) \cdot \beta_0^R + \mathbf{x}_1 \beta_1^R + \mathbf{x}_2 \beta_2^R),$$

where the other terms retain the meanings and interpretation described above. This model provides the equivalent of a different integer for each age and a different set of these integers for each semester ( $t$ ).

In the following chapter, we will start by examining the base rate —  $h_0^R(t)$  or  $\beta_0^R$  — through time. After this, we will look at the effects of the characters whose effects we controlled for (the components of the  $\beta_2^R$  vector) and the factors themselves (the components of the  $\beta_1^R$  estimated for each semester), the main focus of our commentary.

In theory, one could estimate a single pair of equations — i.e. returning to a university or a vocational program — that takes into account the full complexity of the model; theoretically, this would be the most effective means of so doing. In practice, however, it would be clumsy and of no real interest. It is far easier to estimate several equations and approximate the coefficients associated with the same factors in different equations, in order to interpret the variation of these effects, depending on whether a degree was obtained or not and the time elapsed since leaving. It is this latter approach that we adopted.

The coefficients associated with independent variables are manipulated and interpreted in a manner similar to those of "ordinary" logistic regression. The exception here is that they no longer increase or decrease the ratio of two probabilities, but rather the risk. Our coefficients are therefore interpreted as *risk ratios* even if the software presents them in a column identifying them as *odds ratios* or *relative risk ratios*.<sup>9</sup> A coefficient greater than 1 indicates that the variable to which it is associated increases the instantaneous rate of returning to school, while a coefficient less than 1 indicates the contrary.

The YITS uses a complex survey design that includes strata and clusters. The "conventional" standard error estimator produces an unbiased estimate when data are collected from a simple random sample, but underestimates the standard error when using data collected from a sample that includes clusters. Statistics Canada offers researchers a bootstrap resampling method (1,000 bootstrap weights) that, in principle,

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<sup>9</sup> Terminology varies according to discipline, author and software. The problem stems from having to distinguish between probability and rate. The distinction is not always understood; moreover, many factors add to the confusion: 1) by definition, rate is a continual probability; 2) in the interests of simplicity, rate is sometimes calculated as if it were a probability; 3) the odds ratio always equals the ratio of its two corresponding probabilities; 4) the odds ratio of logistic regression is interpreted as a rate ration when using ordinary or multinomial logistic regression to estimate a risk model (which should be termed a "rate model"); 5) some disciplines use their own terminology to describe probability, such as "quotient" in demographics and "risk" in epidemiology; 6) in continued time, probability and rate are confounded, giving us "instantaneous probability," "instantaneous rate," "hazard rate" and "instantaneous risk"; 7) English uses *hazard*, *hazard rate* or *failure rate* to describe the rate of a non-renewable event (e.g. death, the breaking of a light bulb, etc.) and *intensity* to describe that of a renewable event (e.g. birth), whereas in French, *taux de première catégorie* is used for the first and *taux de deuxième catégorie* for the second (though this distinction is only made in demographics, whereas in mathematical statistics, the rate of a non-renewable event is known as *intensité*).

allows us to obtain unbiased estimates of standard errors through re-estimation, even if the YITS data were not collected through simple random sampling. We used this method to calculate standard errors that are used to determine the significance level associated with our equations' coefficients.



### 3. Results

In this chapter, we will examine the model estimation results described in section 2.7. We will focus on the effects of the factors that seem the most pertinent, i.e. previous program level, sociodemographic characteristics (parents' educational capital, conjugal status, having had children or not), and living conditions (job status, hours worked per week, work pattern, job skill level and income levels according to work pattern/worker category).

As explained in section 2.7, the effects of these factors were estimated for each semester and, as such, may vary from one semester to the next. The effect of each factor was considered after controlling for the effect of the associated variables of gender, age and province of residence.

Of course, gender, age and province of residence each have their own effect on the hazard of returning to school. In the interests of concision, we have not reported the effect of each variable after controlling for the effect of each factor. Rather, we have reported the effect of each variable after controlling for that of the other two: namely, the effect of age after controlling for gender and province of residence; of gender after controlling for age and province of residence; and of province of residence after controlling for age and gender.

The chapter is organized as follows. We will first present a simple description of how the situation evolved, semester by semester, starting in the third semester following the moment of interruption. Following this, we will present the results of our estimation of the model.

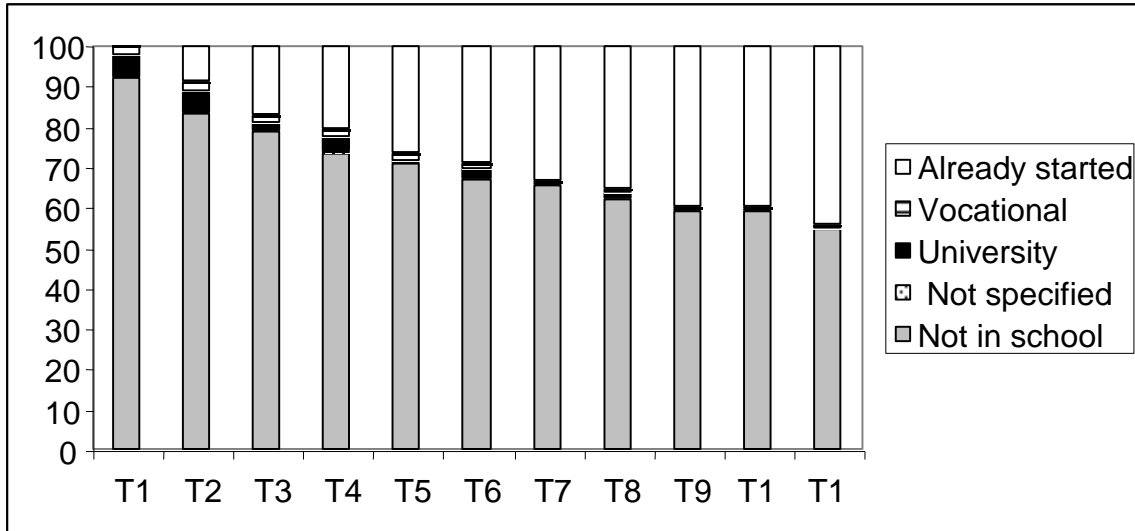
We will begin by examining the effect of age, gender and province of residence — the components of our model's  $\beta_{0^R}$  and  $\beta_{2^R}$  vectors. The greater part of the section will be devoted to the effects of the factors deemed most significant, i.e. the components of the  $\beta_{1^R}$  vector.

For the reasons outlined in section 2.3, individuals whose interruption periods amounted to less than three semesters cannot be considered as having left school. Rather, they are only considered "at risk" of returning to school as of the third semester following their last enrolment. Throughout the chapter, we have numbered the semesters based on this logic. "First semester" is used to describe the first semester in which an individual is at risk of returning to school after leaving — i.e. the third semester following the semester in which the student was last enrolled. "Second semester" refers to the second semester in which the individual is likely to return to school, which is to say, the fourth semester after semester of last enrolment; and so on for all subsequent semesters.

### 3.1 The timetable of returning to school

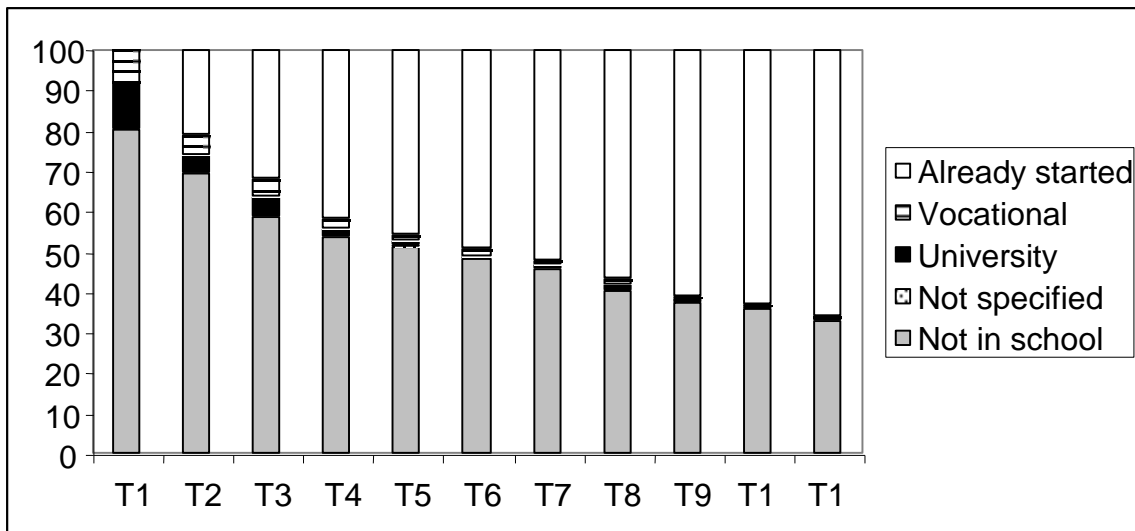
Figures 3.1 and 3.2 show graduate and leaver percentages according to the number of semesters elapsed since leaving, categorized according to program level.

**Figure 3.1** – Respondents who returned to school after having obtained a first degree, shown per semester and according to program level, from 1999 to 2005



Source: Authors' extrapolation based on YITS data (cycles 1 to 4)

**Figure 3.2** – Respondents who returned to school without having obtained a first degree, shown per semester and according to program level, from 1999 to 2005



Source: Authors' extrapolation based on YITS data (cycles 1 to 4)

Returning to school is more common among leavers than among graduates. Among those who had left their studies for over two semesters, nearly 20% of graduates and 30% of leavers went back to school during the ensuing two semesters. In the fifth semester (seven semesters after leaving), the percentages were at around 30% and 50% respectively. The two groups continued to show a difference until the end of the observation period. 11 semesters later, or six years after leaving studies, the percentage of returners had reached 45% among graduates and 66% among leavers.

Regarding the chosen program level, graduates were more likely to resume their studies in a university program, particularly when the return occurred earlier rather than later, while leavers showed a stronger tendency to resume studies in a vocational program.

### 3.2 Age

Figures 3.3 to 3.8 show the rates of return to a university or vocational program by age, controlling for gender, province of residence and previous program level.

The model shows that the effect of age on the probability of returning to school varies from one semester to another; and that, in every semester, each independent variable can differently affect the hazard of choosing a university or vocational program. The effect of age cannot be reduced to a single coefficient: in our context, this variable has been ascribed eight different values, each of which expresses a different effect. By limiting ourselves to the aims stated in our introduction, for each semester examined we need to report 28 series of 8 values, one for each of the two “leaving” categories (*graduation* and *non-graduation*), and one for each of the two “returning” categories (*university* or *vocational*). In the interests of simplicity, we will limit presentation of our age findings to the first, third and sixth semester, periods when leavers were at risk of becoming returners.

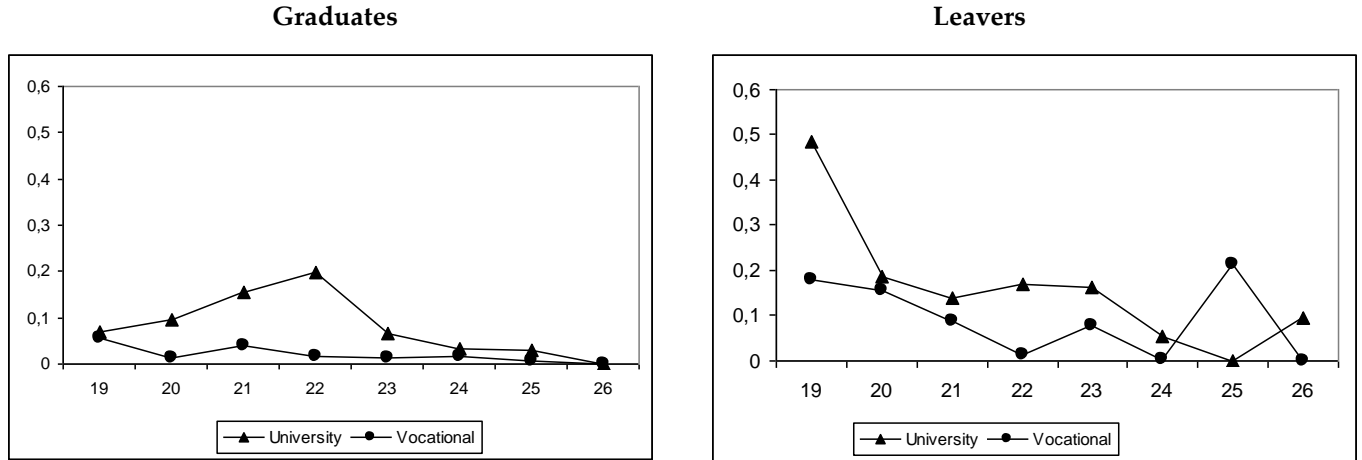
In the first semester, the rate of return among graduates to a university program increased from ages 19 to 22, then fell. For leavers, the same rate was very high up to age 20, reasonably high from ages 20 to 23, and fairly low among older respondents. The rate of return to a vocational program was fairly low for graduates of all ages, but slightly higher up to age 20. For leavers, this rate was relatively high up to age 20, fell from ages 20 to 22 and was quite a bit lower among older respondents.

In the third semester, the rate of return to a university program was low among graduates and does not appear to vary according to age. For leavers, the same rate of return is relatively high at age 19, somewhat lower between ages 20 and 22, and low thereafter. For graduates, the rate of return to a vocational program is low for all ages; for leavers, the rate is high at age 19, lower (but still significant) between ages 20 and 22, and low thereafter.

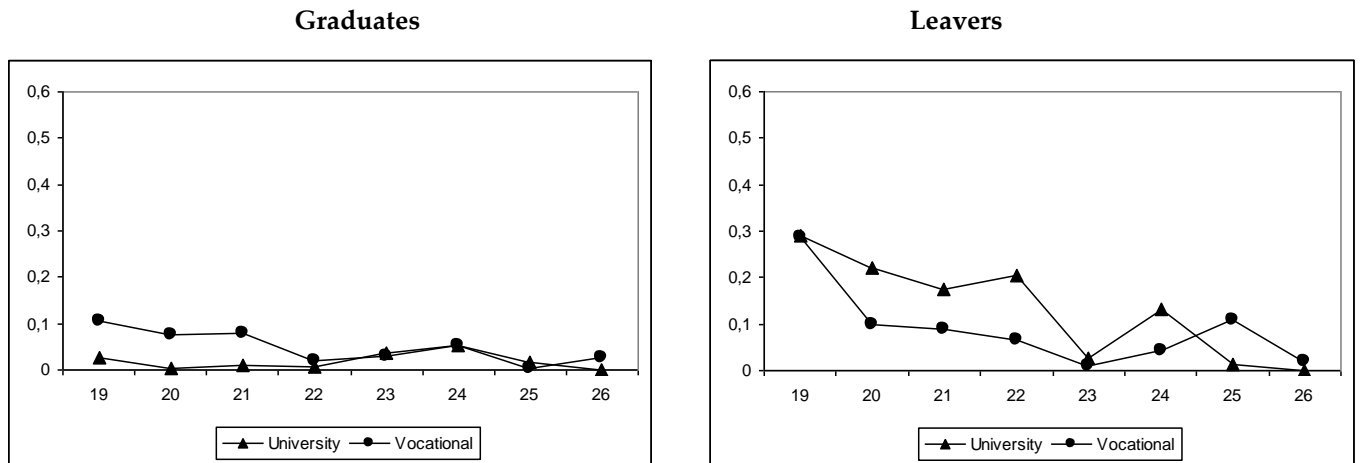
In the sixth semester, the rate of return to a university program was low among graduates and does not appear to vary according to age; the same applies to leavers. The rate of return to a vocational program is high among graduates at age 19 but low at every other age; it is low at all ages among leavers.

In sum, the rate of return shows a marked tendency to decrease with age. The effect of age, where it exists, appears to diminish with the amount of time elapsed since leaving. There is one notable exception: the rate of return to a university program increases between ages 19 and 22 during the first semester where individuals are at risk of returning to school after a “real” interruption.

**Figures 3.3 and 3.4 – Rate of return according to age, controlling for gender, province of residence and program level. First semester among the at-risk group**

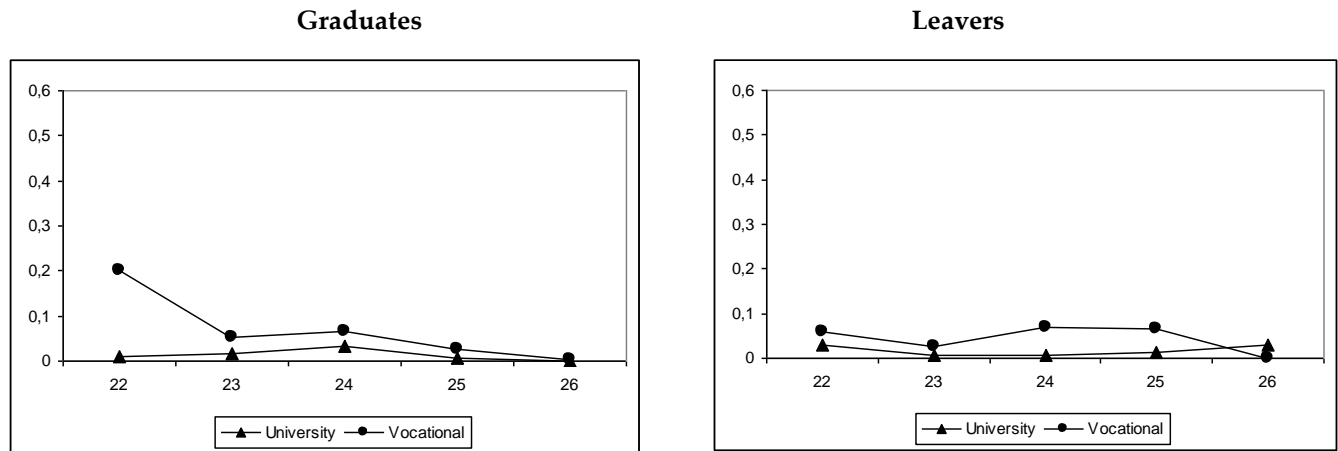


**Figures 3.5 and 3.6 – Rate of return according to age, controlling for gender, province of residence and program level. Third semester among the at-risk group**





**Figures 3.7 and 3.8 – Rate of return according to age, controlling for gender, province of residence and program level. Sixth semester among the at-risk group.**



### 3.3 Determining factors in the return to studies

Tables 3.1 to 3.10 present the results of the multinomial logistic regression models used to estimate the effects of independent variables on the risk of returning to school in a university or vocational program during the first seven semesters after leaving. The effects of different variables are presented separately for graduates and non-graduates. The same applies to the set of control variables (age, gender, previous program level and province of residence). The tables differ only by the variable used to estimate a given effect.

#### 3.3.1 The effect of previous program level

Table 3.1 shows the net effects of previous program levels by taking the *university* level as a reference for the independent variables. Vocational program graduates were less likely to return to school in a university or pre-university program: for the first five semesters, this risk represents only 15% to 24% of the risk of university graduates. The same trend was noted among leavers during the first three semesters after the initial interruption. However, no significant difference was noted between university and pre-university leavers (graduates/leavers in both cases). In effect, returning to university is less common among those whose postsecondary training led directly to labour market entry; returning to a vocational program, in turn, appears to have no connection to previous program level.

**Table 3.1** – Hazard of returning to a university or vocational program for each semester, by previous program level and type of exit (with/without degree). Net effect controlling for age, gender, and province of residence

Level of last program attended	Leaving with degree		Leaving without degree	
	Return to a university/pre- university program	Return to a vocational program	Return to a university/pre- university program	Return to a vocational program
<b>Semester 1</b>				
[University]				
Pre-university	1.851	2.567	0.692	0.707
Vocational	0.153 ***	1.435	0.145 ***	1.345
Unranked	0.924	0.968	0.996	0.000
<b>Semester 2</b>				
[University]				
Pre-university	0.771	0.635	0.523	1.189
Vocational	0.234 ***	0.657	0.237 **	1.193
Unranked	0.181	0.000	0.000	1.564
<b>Semester 3</b>				
[University]				
Pre-university	4.209	2.374	0.286 †	0.688
Vocational	0.479	1.464	0.205 ***	1.432
Unranked	0.000	0.000	0.000	0.000
<b>Semester 4</b>				
[University]				
Pre-university	0.304	3.375	1.442	0.182
Vocational	0.210 ***	1.285	0.619	1.039
Unranked	0.074	0.000	0.000	0.000
<b>Semester 5</b>				
[University]				
Pre-university	0.001 ***	4.104	0.855	2.956
Vocational	0.194 **	2.007	0.578	1.822
Unranked	0.000	2.329	0.000	0.000
<b>Semester 6</b>				
[University]				
Pre-university	0.565	0.049	2.271	0.163
Vocational	0.965	0.288	0.262	0.760
Unranked	0.000	0.000	2.319	1.602
<b>Semester 7</b>				
[University]				
Pre-university	7.499	1.774	0.030	0.943
Vocational	2.634	0.794	0.214	1.235
Unranked	0.000	0.000	0.000	10.908

Note: †:  $p < 0,10$ ; \*:  $p < 0,050$ ; \*\*:  $p < 0,010$ ; \*\*\*:  $p < 0,000$ .

### 3.3.2 The impact of socio-demographic characteristics

Table 3.2 presents the net effect of province of residence after controlling for age, gender and previous program level. The results indicate no significant differences between the provinces; moreover, significant differences are observed only in the first three semesters. In the Prairies, graduates were more likely to return to school in a vocational program, while their leaver counterparts showed a lower risk of returning to school altogether. In Quebec, graduates were more likely to return to a university program, though this difference disappeared with time.

Parents' educational capital also had a significant effect on the hazard of returning to school (Table 3.3). Graduates and leavers whose parents had attended university were at a higher risk of returning to a university program; their risk was two to three times higher than first-generation students. Having parents with postsecondary training also increased the risk of returning to a vocational program after dropping out of a (first) program. Overall, the return to school was both more likely and more rapid among youth whose parents had university experience.

We measured the influence of family circumstances by considering conjugal status and parenthood; our results are presented in tables 3.4 and 3.5. Living as a member of a couple reduced the risk of undertaking studies, regardless of the manner of leaving (with or without a degree). Entering into parenthood does not appear to have a significant effect on the hazard of returning to school, though this is probably explained by the fact that most births occur after the couple has formed, once most of the thresholds related to the transition to adulthood have been crossed.

**Table 3.2 – Hazard of returning to a university or vocational program for each semester, by province of residence and type of exit (with/without degree). Net effect controlling for age, gender, and previous program level**

Province of residence	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Ontario]				
Maritimes	0.582	0.890	0.626	1.024
Quebec	1.547	0.251	1.359	0.871
Prairies	0.956	2.308 †	0.578 †	0.317 †
British Columbia	1.003	0.634	1.129	0.513
<b>Semester 2</b>				
[Ontario]				
Maritimes	1.333	1.041	1.444	0.761
Quebec	2.702 *	0.407	1.802	0.611
Prairies	0.851	1.150	1.322	0.651
British Columbia	0.582	1.524	2.648	1.574

**Table 3.2 (cont'd)**— Hazard of returning to a university or vocational program for each semester, by province of residence and type of exit (with/without degree).  
Net effect controlling for age, gender, and previous program level

Province of residence	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 3</b>				
[Ontario]				
Maritimes	1.435	0.312	1.091	1.065
Quebec	2.600	0.158	1.011	0.316
Prairies	1.200	0.329 **	1.245	0.757
British Columbia	1.167	0.805	1.071	2.076
<b>Semester 4</b>				
[Ontario]				
Maritimes	0.849	0.949	1.510	0.382 †
Quebec	1.800	0.518	0.524	0.164
Prairies	1.032	1.896	0.479	1.259
British Columbia	1.060	1.049	0.978	0.580
<b>Semester 5</b>				
[Ontario]				
Maritimes	3.262	0.303	0.707	0.347
Quebec	4.882	0.165	0.550	0.140
Prairies	1.044	0.580	0.430	1.330
British Columbia	0.700	2.045	0.092	0.000
<b>Semester 6</b>				
[Ontario]				
Maritimes	0.952	0.614	1.018	0.440
Quebec	2.049	0.463	0.526	0.225
Prairies	1.531	0.654	1.301	0.798
British Columbia	7.429	0.070	0.218	0.461
<b>Semester 7</b>				
[Ontario]				
Maritimes	0.000	0.177	0.460	1.597
Quebec	0.000	0.289	14.772	0.258
Prairies	0.000	0.101	1.355	0.728
British Columbia	0.000	0.000	1.527	0.705

Note: †:  $p < 0.100$ ; \*:  $p < 0.050$ ; \*\*:  $p < 0.010$  \*\*\*:  $p < 0.000$

**Table 3.3** – Hazard of returning to a university or vocational program for each semester, by parents' educational capital and type of exit (with/without degree).  
Net effect controlling for age, gender, province of residence and previous program level

Parents' educational capital	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[High school or less]				
Postsecondary non-university	1.384	1.380	1.205	2.146 *
University	2.036 *	0.963	2.383 **	2.484 **
Not stated	1.488	2.115	0.667	2.493 †
<b>Semester 2</b>				
[High school or less]				
Postsecondary non-university	1.878	0.949	1.179	0.888
University	3.942 ***	0.668	1.852	1.016
Not stated	2.807 †	1.039	0.324	0.483
<b>Semester 3</b>				
[High school or less]				
Postsecondary non-university	0.641	1.068	1.833	2.636 **
University	3.112 *	1.226	3.075 **	2.234
Not stated	1.836	0.626	1.300	1.415
<b>Semester 4</b>				
[High school or less]				
Postsecondary non-university	0.731	0.982	1.594	3.057 *
University	1.174	1.196	1.357	2.473
Not stated	0.762	1.088	0.436	2.152
<b>Semester 5</b>				
[High school or less]				
Postsecondary non-university	3.754	1.771	1.443	0.989
University	0.754	0.449	3.818 †	1.005
Not stated	0.000	1.716	0.480	0.184
<b>Semester 6</b>				
[High school or less]				
Postsecondary non-university	1.074	1.076	0.901	1.811
University	1.353	3.868 *	0.560	1.411
Not stated	1.088	3.836	0.000	3.573
<b>Semester 7</b>				
[High school or less]				
Postsecondary non-university	0.278	2.774	0.192	8.061
University	0.719	0.262	1.108	0.853
Not stated	0.000	7.497	8.170	5.991

Note: †:  $p < 0,100$ ; \*:  $p < 0,050$ ; \*\*:  $p < 0,010$  \*\*\*:  $p < 0,000$

**Table 3.4** – Hazard of returning to a university or vocational program for each semester, by conjugal status and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level

Conjugal status and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Not living as part of a couple]				
Living as part of a couple	0.180 ***	1.177	0.308 **	0.495 †
Not stated	0.464	0.000	1.025	0.310
<b>Semester 2</b>				
[Not living as part of a couple]				
Living as part of a couple	0.525 *	0.519	0.431	0.497 †
Not stated	0.836	0.264	1.265	0.432
<b>Semester 3</b>				
[Not living as part of a couple]				
Living as part of a couple	0.374 †	0.467	0.229 **	0.349 *
Not stated	0.000	0.000	0.455	1.396
<b>Semester 4</b>				
[Not living as part of a couple]				
Living as part of a couple	0.600	0.650	1.428	0.381
Not stated	1.594	1.258	1.860	0.175
<b>Semester 5</b>				
[Not living as part of a couple]				
Living as part of a couple	3.624	0.404	0.361	0.828
Not stated	0.000	0.000	0.000	0.890
<b>Semester 6</b>				
[Not living as part of a couple]				
Living as part of a couple	0.299 *	0.819	0.543	0.425
Not stated	0.000	0.000	0.303	0.536
<b>Semester 7</b>				
[Not living as part of a couple]				
Living as part of a couple	0.443	0.359	0.132	0.205
Not stated	0.000	0.000	22.650	0.803

Note: †:  $p < 0,100$ ; \*:  $p < 0,050$ ; \*\*:  $p < 0,010$  \*\*\*:  $p < 0,000$ .

**Table 3.5** – Hazard of returning to a university or vocational program for each semester, by presence of children and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level

Children	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[No children]				
At least one child	0.060	2.020	0.122	0.807
<b>Semester 2</b>				
[No children]				
At least one child	0.603	0.297	0.091	1.398
<b>Semester 3</b>				
[No children]				
At least one child	0.322	0.204	0.539	0.189 *
<b>Semester 4</b>				
[No children]				
At least one child	0.154	0.048	0.000	0.540
<b>Semester 5</b>				
[No children]				
At least one child	0.380	0.017	0.128	0.608
<b>Semester 6</b>				
[No children]				
At least one child	0.464	1.095	1.944	0.059
<b>Semester 7</b>				
[No children]				
At least one child	0.084	1.771	0.307	0.883

Note: †:  $p < 0.100$ ; \*:  $p < 0.050$ ; \*\*:  $p < 0.010$  \*\*\*:  $p < 0.000$

### 3.3.3 Living conditions

To determine the influence of living conditions, we considered respondents' employment status, their average number of hours worked per week, work pattern, job skill level, and income levels by work pattern and occupational category. The net effect of each of these variables can be seen in tables 3.6 to 3.10.

We noted that simply having a job reduced the hazard of returning to school in a vocational or university program. Returning was least likely when subjects spent most of their time at work, e.g. 25 hours per week or more. This trend, which applied to both graduates and leavers, held steady as the elapsed time since leaving increased. However, the risk of returning to a university program rose when respondents worked 9–16 hours per week — again, a trend that applied to both groups and held steady over time.

Work pattern also had an effect. Graduates with paid employment, whether permanent or non-permanent, were less likely to return to a university program during

their first semesters after leaving. On the other hand, among the leavers, only permanent employment decreased the risk of returning to school.

Having a permanent job with a middle to high income and as well as a professional, semi-professional or intermediary position reduced the risk of returning to a university program. Similarly, holding a semi-professional or intermediary position with a middle income reduced the risk of returning to a vocational program.

**Table 3.6 – Hazard of returning to a university or vocational program for each semester, by employment status and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level**

Employment status	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Not working]				
Working	0.402 ***	0.423 *	0.352 ***	0.195
Not stated	0.160	0.353	0.437 †	0.552
<b>Semester 2</b>				
[Not working]				
Working	0.136 ***	0.372 *	0.601	0.456 *
Not stated	0.162	0.367	0.315	0.310
<b>Semester 3</b>				
[Not working]				
Working	0.292 *	0.297 **	0.286 ***	0.384 **
Not stated	0.605	0.504	0.375	0.456
<b>Semester 4</b>				
[Not working]				
Working	0.213 ***	0.189 ***	0.485	0.639
Not stated	0.334	0.328	0.050	1.768
<b>Semester 5</b>				
[Not working]				
Working	0.671	1.715	0.331 †	0.221 *
Not stated	0.000	0.185	0.601	0.259
<b>Semester 6</b>				
[Not working]				
Working	0.180 *	0.077 ***	0.113	0.534
Not stated	0.623	0.279	0.293	0.826
<b>Semester 7</b>				
[Not working]				
Working	0.407	0.046 †	0.314	1.297
Not stated	0.507	0.000	12.834	2.711

Note: †:  $p < 0.100$ ; \*:  $p < 0.050$ ; \*\*:  $p < 0.010$  \*\*\*:  $p < 0.000$



**Table 3.7 – Hazard of returning to a university or vocational program for each semester, by average hours worked weekly and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level**

Number of hours and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Not working]				
Up to 8 hours	0.946	0.899	0.386	1.249
9 to 16 hours	3.095 *	1.328	1.703	1.099
17 to 24 hours	0.604	0.638	0.660	1.286
25 or more hours	0.150 ***	0.427 *	0.235 ***	0.494 *
Not stated	0.000	0.000	0.461	0.547
<b>Semester 2</b>				
[Not working]				
Up to 8 hours	1.903	1.828	3.222 †	1.174
9 to 16 hours	0.655	1.733	1.332	1.396
17 to 24 hours	0.330 **	0.718	3.248 †	1.485
25 or more hours	0.088 ***	0.361 *	0.413 *	0.317 **
Not stated	0.000	0.000	0.000	0.000
<b>Semester 3</b>				
[Not working]				
Up to 8 hours	2.410	0.000	1.697	0.701
9 to 16 hours	0.697	0.443	0.966	0.676
17 to 24 hours	0.508	0.545	0.339	0.304
25 or more hours	0.224 **	0.205 **	0.214 ***	0.204 **
Not stated	0.000	0.000	0.388	0.354
<b>Semester 4</b>				
[Not working]				
Up to 8 hours	0.967	0.855	2.245	3.952
9 to 16 hours	2.971 †	1.833	2.093	2.156
17 to 24 hours	1.285	0.177	0.736	0.613
25 or more hours	0.151 ***	0.194 ***	0.486	0.419
Not stated	0.000	0.000	0.567	1.600
<b>Semester 5</b>				
[Not working]				
Up to 8 hours	0.000	0.000	0.471	0.000
9 to 16 hours	2.110	6.325	0.725	0.000
17 to 24 hours	0.687	4.478	0.704	0.445
25 or more hours	0.310	1.594	0.207 **	0.279 †
Not stated	0.000	0.000	0.538	0.299

**Table 3.7 (cont'd) – Hazard of returning to a university or vocational program for each semester, by average hours worked weekly and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level**

Number of hours and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 6</b>				
[Not working]				
Up to 8 hours	0.677	0.294	2.248	0.000
9 to 16 hours	0.204	0.291	0.169	0.000
17 to 24 hours	1.507	0.350	0.296	1.195
25 or more hours	0.162 *	0.067 ***	0.118	0.748
Not stated	0.000	0.000	0.401	1.071
<b>Semester 7</b>				
[Not working]				
Up to 8 hours	15.603	0.000	0.000	8.993
9 to 16 hours	0.000	0.000	0.000	8.278
17 to 24 hours	0.000	0.000	0.000	0.655
25 or more hours	0.285	0.068	0.426	1.106
Not stated	0.000	0.000	15.502	2.933

Note: †:  $p < 0,100$ ; \*:  $p < 0,050$ ; \*\*:  $p < 0,010$  \*\*\*:  $p < 0,000$

**Table 3.8 – Hazard of returning to a university or vocational program for each semester, by work pattern and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level**

Work pattern and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Not working]				
Employee, non-permanent	0.509 †	0.448	0.609	0.519
Employee, permanent	0.260 ***	0.503 †	0.350 ***	0.666
Self-employed	1.597	0.538	0.285	0.422
Not stated	0.164	0.324	0.353	0.703
<b>Semester 2</b>				
[Not working]				
Employee, non-permanent	0.144 ***	0.194	0.927	0.398
Employee, permanent	0.139 ***	0.482 †	0.642	0.513 †
Self-employed	0.460	0.086	1.388	0.238
Not stated	0.244 *	0.681	0.704	0.409

**Table 3.8 (cont'd) – Hazard of returning to a university or vocational program for each semester, by work pattern and type of exit (with/without degree). Net effect controlling for age, gender, province of residence and previous program level**

Work pattern and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 3</b>				
[Not working]				
Employee, non-permanent	0.482	0.122	0.750	0.144
Employee, permanent	0.233 **	0.253 **	0.258 ***	0.252 **
Self-employed	0.176	0.000	0.054	0.320
Not stated	0.377	0.417	0.382	0.389
<b>Semester 4</b>				
[Not working]				
Employee, non-permanent	0.281 *	0.344	0.817	1.002
Employee, permanent	0.262 ***	0.242 **	0.617	0.490
Self-employed	0.315	0.226	0.148	1.252
Not stated	0.370	0.242	0.053	1.138
<b>Semester 5</b>				
[Not working]				
Employee, non-permanent	0.846	1.684	0.119	0.444
Employee, permanent	0.321	1.994	0.295 *	0.261 †
Self-employed	0.000	0.000	0.125	0.000
Not stated	0.000	0.107	0.298	0.295
<b>Semester 6</b>				
[Not working]				
Employee, non-permanent	0.000	0.250	0.352	0.000
Employee, permanent	0.222 *	0.079 ***	0.161	0.873
Self-employed	1.074	0.088	0.000	0.000
Not stated	0.474	0.210	0.193	0.638
<b>Semester 7</b>				
[Not working]				
Employee, non-permanent	1.554	0.478	0.000	4.559
Employee, permanent	0.510	0.036	0.476	1.338
Self-employed	0.000	0.000	0.000	0.000
Not stated	0.565	0.000	12.400	2.231

Note: †:  $p < 0.100$ ; \*:  $p < 0.050$ ; \*\*:  $p < 0.010$  \*\*\*:  $p < 0.000$

**Table 3.9 – Hazard of returning to a university or vocational program for each semester, by job skill level and type of exit (with/without degree). Net effect controlling age, gender, province of residence and previous program level**

Job skill level and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Not working]				
Managerial position	0.018	0.867	0.357	0.369
Professional position	0.384 *	0.201	0.311	0.281
Semi-professional position	0.336 **	0.439	0.295 **	0.390 *
Intermediate position	0.325 **	0.485	0.389 **	0.919
Elementary position	0.711	0.999	0.529 †	0.617
Not stated	0.120	0.424	0.369 *	0.460
<b>Semester 2</b>				
[Not working]				
Managerial position	0.072	0.283	0.037	0.386
Professional position	0.285 **	0.327	0.716	0.256
Semi-professional position	0.107 ***	0.430 †	0.719	0.187 **
Intermediate position	0.118 ***	0.435 †	1.008	0.590
Elementary position	0.309 †	0.931	0.635	0.762
Not stated	0.211	0.358	0.366	0.343
<b>Semester 3</b>				
[Not working]				
Managerial position	0.971	0.927	0.368	0.142
Professional position	0.205	0.043	1.216	0.100
Semi-professional position	0.141 ***	0.171 *	0.158 ***	0.287 *
Intermediate position	0.342	0.370 *	0.324 **	0.177 **
Elementary position	0.344	0.000	0.301	0.383 †
Not stated	0.481	0.418	0.299	0.346
<b>Semester 4</b>				
[Not working]				
Managerial position	0.294	9.017	0.215	0.000
Professional position	0.273 *	0.232	0.095	1.111
Semi-professional position	0.307 **	0.103 **	0.256	0.627
Intermediate position	0.245 **	0.478	1.257	0.573
Elementary position	0.113	0.160	0.668	0.587
Not stated	0.373	0.378	0.043	1.358
<b>Semester 5</b>				
[Not working]				
Managerial position	0.173	0.000	0.000	0.496
Professional position	0.726	0.764	0.109	0.448
Semi-professional position	0.356	2.000	0.219	0.022
Intermediate position	0.073	2.022	0.512	0.277
Elementary position	0.000	3.515	0.000	0.663
Not stated	0.000	0.180	0.500	0.297

**Table 3.9 (cont'd) – Hazard of returning to a university or vocational program for each semester, by job skill level and type of exit (with/without degree). Net effect controlling age, gender, province of residence and previous program level**

Job skill level and semester	Leaving with degree		Leaving without degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 6</b>				
[Not working]				
Managerial position	0.326	0.000	0.000	0.416
Professional position	0.237	0.000	0.499	1.839
Semi-professional position	0.197 †	0.044	0.072	0.591
Intermediate position	0.168	0.227 **	0.142	0.643
Elementary position	0.270	0.181	0.329	0.683
Not stated	0.694	0.263	0.566	0.989
<b>Semester 7</b>				
[Not working]				
Managerial position	4.360	0.000	0.000	0.280
Professional position	1.230	0.000	0.000	0.000
Semi-professional position	0.295	0.057	0.353	1.952
Intermediate position	0.568	0.056	0.327	1.008
Elementary position	0.000	0.276	1.489	3.118
Not stated	0.643	0.000	15.264	3.612

Note: †:  $p < 0.100$ ; \*:  $p < 0.050$ ; \*\*:  $p < 0.010$  \*\*\*:  $p < 0.000$

**Table 3.10 – Hazard of returning to a university or vocational program for each semester, by income in relation to work pattern and type of exit (with/without degree) – Net effect controlling for age, gender, province of residence and previous program level**

Income level according to job category and work pattern	Leaving with a degree		Leaving without a degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 1</b>				
[Not working]				
Permanent, low income	0.905	1.203	0.744	1.276
Permanent, middle income	0.198 ***	0.538	0.209 **	0.465
Permanent, high income	0.077 *	0.216	0.114 **	0.355 †
Non-permanent, low income	0.986	0.166	1.432	0.564
Non-permanent, middle income	0.504	0.579	0.354	0.669
Non-permanent, high income	0.310	0.264	0.071	0.000
Self-employed	1.578	0.526	0.283	0.422
Not stated	0.167	0.319	0.361 †	0.706

**Table 3.10 (cont'd) – Hazard of returning to a university or vocational program for each semester, by income in relation to work pattern and type of exit (with/without degree) – Net effect controlling for age, gender, province of residence and previous program level**

Income level according to job category and work pattern	Leaving with a degree		Leaving without a degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 2</b>				
[Not working]				
Permanent, low income	0.551 *	1.421	1.802	1.156
Permanent, middle income	0.076 ***	0.477	0.435 †	0.370 *
Permanent, high income	0.108 ***	0.232 *	0.111	0.119
Non-permanent, low income	0.661	2.688	4.579	1.010
Non-permanent, middle income	0.125 ***	0.060	0.253	0.198
Non-permanent, high income	0.038	0.000	0.094	0.326
Self-employed	0.474	0.092	1.380	0.233
Not stated	0.243	0.647	0.733	0.403
<b>Semester 3</b>				
[Not working]				
Permanent, low income	1.145	0.596	0.661	0.375 †
Permanent, middle income	0.134 **	0.185 *	0.200 ***	0.182 **
Permanent, high income	0.208	0.257 **	0.120	0.359
Non-permanent, low income	0.736	1.496	1.463	0.215
Non-permanent, middle income	0.950	0.000	0.970	0.211
Non-permanent, high income	0.176	0.119	0.120	0.000
Self-employed	0.168	0.000	0.051	0.323
Not stated	0.377	0.414	0.381	0.384
<b>Semester 4</b>				
[Not working]				
Permanent, low income	0.960	0.735	1.555	0.552
Permanent, middle income	0.292 *	0.290 *	0.693	0.503
Permanent, high income	0.157 **	0.129 **	0.143	0.432
Non-permanent, low income	2.053	0.000	1.092	2.059
Non-permanent, middle income	0.319	0.182	2.090	1.973
Non-permanent, high income	0.183	0.484	0.000	0.086
Self-employed	0.313	0.229	0.141	1.190
Not stated	0.361	0.231	0.055	1.088
<b>Semester 5</b>				
[Not working]				
Permanent, low income	2.206	11.471	0.779	0.503
Permanent, middle income	0.190	1.301	0.102	0.111 *
Permanent, high income	0.288	1.595	0.463	0.445
Non-permanent, low income	5.852	27.192	0.522	0.000
Non-permanent, middle income	0.301	2.042	0.000	0.833
Non-permanent, high income	0.858	0.062	0.000	0.312
Self-employed	0.000	0.000	0.130	0.000
Not stated	0.000	0.103	0.318	0.299

**Table 3.10 (cont'd) – Hazard of returning to a university or vocational program for each semester, by income in relation to work pattern and type of exit (with/without degree) – Net effect controlling for age, gender, province of residence and previous program level**

Income level according to job category and work pattern	Leaving with a degree		Leaving without a degree	
	Return to a university/pre-university program	Return to a vocational program	Return to a university/pre-university program	Return to a vocational program
<b>Semester 6</b>				
[Not working]				
Permanent, low income	0.916	0.335	0.628	0.452
Permanent, middle income	0.087	0.107	0.115	1.214
Permanent, high income	0.243	0.006	0.036	0.587
Non-permanent, low income	0.000	2.905	0.000	0.000
Non-permanent, middle income	0.000	0.382	0.870	0.000
Non-permanent, high income	0.000	0.076	0.100	0.000
Self-employed	1.076	0.090	0.000	0.000
Not stated	0.477	0.187	0.191	0.622
<b>Semester 7</b>				
[Not working]				
Permanent, low income	3.223	0.046	0.000	4.399
Permanent, middle income	0.334	0.022	0.639	0.570
Permanent, high income	0.000	0.045	0.402	1.559
Non-permanent, low income	0.000	0.000	0.000	0.000
Non-permanent, middle income	1.311	1.354	0.000	0.000
Non-permanent, high income	1.520	0.000	0.000	10.694
Self-employed	0.000	0.000	0.000	0.000
Not stated	0.520	0.000	12.377	1.997

Note: t:  $p < 0.100$ ; \*:  $p < 0.050$ ; \*\*:  $p < 0.010$  \*\*\*:  $p < 0.000$





## Conclusion

This study aimed to understand the phenomenon of the return to postsecondary education among young adults who had either left school after graduation or otherwise withdrawn from their program. Specifically, we wanted to know more about the pace at which adults returned to school, the factors that promoted or hindered the return and the influence of variables linked to previous education, socio-demographic characteristics and living conditions. Two modes were identified: returning to a university/pre-university program and returning to a vocational program. We examined these modes separately, using data from the *Youth in Transition Survey* (YITS) gathered from youth aged 18-20 years at the start of the first YITS cycle.

We considered an individual to have “left” school when at least two semesters had passed without that individual being registered in a postsecondary program. For our purposes, the interruption needed to be of a certain length, since some breaks can stem from administrative constraints rather than from personal choice. For example, failure to enrol during the summer semester could be due the unavailability of courses rather than to any individual decision.

The results showed that returning to school can vary significantly depending on the time elapsed since leaving. Most who left (whether through graduation or interruption) were likely to return between the first and third semester during the period when they were considered “at risk” of returning to school — i.e. between the third and the fifth semester following the semester preceding the interruption. Thus, a preliminary finding is that returns are most likely in the two semesters following the cessation of studies; the longer the interruption, the less likely the return.

The second finding is that returning to school is significantly influenced by previous schooling. Youth who left school without obtaining their degree return in greater numbers than graduates. Returns are also more common, generally speaking, among those who were previously enrolled in a university or pre-university program. Among them, graduates were more likely to re-enrol in a university or pre-university program, while leavers (those who left their programs without obtaining a degree) were as likely to enter a vocational as a university program.

The third finding is that there exists a significant relationship between an individual’s demographic characteristics, his or her living conditions and the decision to return to school. Table 3.11 lists the variables that influence the return to school by type of exit and type of program.

**Table 3.11 – Summary of results**

Returner	Returning to a university/ pre-university program		Returning to a vocational program	
	Increased risk of return	Reduced risk of return	Increased risk of return	Reduced risk of return
<b>Graduate</b>	<ul style="list-style-type: none"> <li>• Living in Quebec</li> <li>• Parents who went to university</li> <li>• Working 9 to 16 hours per week</li> </ul>	<ul style="list-style-type: none"> <li>• Previous program at vocational level</li> <li>• Living as part of a couple</li> <li>• Having a permanent or non-permanent paid job</li> <li>• Working full-time</li> <li>• Having a professional, semi-professional or intermediary position</li> <li>• Earning a middle to high income</li> </ul>	<ul style="list-style-type: none"> <li>• Living in the Prairies</li> </ul>	<ul style="list-style-type: none"> <li>• Having permanent paid employment</li> <li>• Working full-time</li> <li>• Having a semi-professional or intermediary position</li> <li>• Earning a middle to high income</li> </ul>
<b>Leaver</b>	<ul style="list-style-type: none"> <li>• Parents who went to university</li> </ul>	<ul style="list-style-type: none"> <li>• Previous program at vocational level</li> <li>• Living in the Prairies</li> <li>• Living as part of a couple</li> <li>• Having permanent paid employment</li> <li>• Working full-time</li> <li>• Having a semi-professional or intermediary position</li> <li>• Earning a middle income</li> </ul>	<ul style="list-style-type: none"> <li>• Parents with postsecondary training</li> </ul>	<ul style="list-style-type: none"> <li>• Living in the Prairies</li> <li>• Living as part of a couple</li> <li>• Having permanent paid employment</li> <li>• Working full-time</li> <li>• Having a semi-professional or intermediary position</li> <li>• Earning a middle income</li> </ul>

The results indicate that two variables exert a significant influence on the hazard of returning to school: parents' educational capital, and conjugal status. Having a parent or parents with a university degree fostered the return to school whether the individual had initially graduated or dropped out. The positive influence of parental educational capital corroborates the idea that returning to school is less likely among socially disadvantaged

groups, who were also more willing to interrupt their studies (Marcus, 1986). Living with a partner also reduces the hazard of returning to school.

Secondly, as regards occupation and living conditions, being employed during the interruption period reduced the probability of returning, though it rather depended on type of employment. Indeed, the results indicate a significant relationship between job duration, wages and the number of hours worked per week. Specifically, those who had comparatively good working conditions – i.e. a relatively well-paid permanent job – as well as those working 25 hours or more per week were less likely to return to school, a finding supported by previous studies, including that of Marcus (1986). One could argue that returning to school is associated with the aim of acquiring additional human capital to increase the chances of accessing a desired job or improved working conditions.

Lastly, a number of differences were noted between the provinces. Among university graduates, the rate of returning to school was higher in Quebec, while resuming studies in a vocational program is higher in the Prairies.

The significance of our study bears on two main aspects. The first is that, from a purely descriptive standpoint, it underscores the growing numbers of adult returners. In this respect, returns are doubly advantaged in that they achieve complementary objectives: they enhance the democratization of education, and they enable adults to update their knowledge and skills in key labour market sectors.

Secondly, in highlighting the complexity and transformation of today's educational pathways, the study alerts policy makers and administrators to the need to consider new contingents of adult students when developing educational policies and vocational spheres.

However, our findings must be qualified, since the study is limited to a sample of young adults aged 24–26, whereas we know that older adults also return to school. Kamanzi et al. (2009), using data from the ICOPE, showed that 45% of the students registered in the Université du Québec network were aged 26 and over. Moreover, the YITS covered a relatively short period. In other respects, due to lack of data, the study was limited in its ability to profile student returners, and unable to address the reasons that propel adults to return to school after an interruption. To better understand the complexity of the phenomenon, future research should expand the analysis of older adults (26 and up) to cover a longer period and investigate their motivations for returning to school.



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## Appendix

### Quebec university registration according to age between 1973 and 2006

In thousands

	73-74	88-89	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	2001	2002	2003	2004	2005	2006
24 years and -	55	97	108	111	114	115	114	113	113	113	115	120	125	130	134	135	136	136
25 years and +	51	128	135	136	140	136	128	122	116	112	109	110	112	117	121	124	125	126
25-29			47	47	47	46	43	41	39	38	38	39						
30-34			30	31	31	30	28	27	25	23	22	21						
35-39			24	24	25	24	22	21	19	19	18	18						
40-44			18	18	18	18	17	16	15	15	15	14						
45-49			10	10	11	11	11	11	10	10	9	10						
50 years and +			6	7	7	7	7	7	7	7	7	7						
<b>Total</b>	106	225	243	247	254	251	242	235	229	225	224	230	227	247	255	259	261	262
<b>% of 25 years and +</b>	48	57	56	55	55	54	53	52	51	50	49	48	47	47	47	48	48	48

Source: MELS