



Centre Interuniversitaire sur le Risque,  
les Politiques Économiques et l'Emploi

Cahier de recherche/Working Paper **10-45**

## **Labour Outcomes of Graduates and Dropouts of High School and Post-secondary Education: Evidence for Canadian 24- to 26-year-olds in 2005**

Pierre Lefebvre

Philip Merrigan

Novembre/November 2010

(First version November 2009, revised January 2010)

---

Lefebvre : Université du Québec à Montréal and CIRPÉE

[lefebvre.pierre@uqam.ca](mailto:lefebvre.pierre@uqam.ca)

Merrigan : Université du Québec à Montréal and CIRPÉE

[merrigan.philip@uqam.ca](mailto:merrigan.philip@uqam.ca)

Corresponding authors: Pierre Lefebvre/Philip Merrigan, Department of Economics, UQAM, CP 8888, Succ. Centre-ville, Montréal, QC, Canada H3C 3P8

The analysis is based on Statistics Canada's Youth in Transition Survey (YITS) restricted-access Micro Data Files, which contain anonymized data collected in the YITS and are available at the Québec Inter-university Centre for Social Statistics (QICSS), one of the Canadian Research Data Center network. All computations on these micro-data were prepared by the authors who assume the responsibility for the use and interpretation of these data. We thank Anne Motte and an anonymous referee for their comments and useful suggestions on the first version of this paper. This research was funded by the Canada Millennium Scholarship Foundation.

**Abstract:**

The purpose of this research is to estimate the impact of education, with a particular focus on education levels lower than a university diploma, on the labour market and social outcomes of the 24- to 26-year-old Canadians found in the fourth wave of the Youth in Transition Survey (YITS), conducted by Statistics Canada in 2006. We focus on differences between individuals who did not pursue college or university level degrees. We find that dropouts perform very poorly for most of the outcomes we analyse. Our most important result is that males who finish their high-school degree very late (after 19 years of age), perform, *ceteris paribus*, at many levels like dropouts. This suggests that policy makers should be taking a very close look at “second chance” or “adult education” programs across Canada.

**Keywords:** Education levels, high school and postsecondary dropouts, graduate and continuers, earnings, wage rates, employment, employment insurance and social assistance, volunteer activities, youth skills

**JEL Classification:** I21, I28

## 1. Introduction

The purpose of this research is to estimate the impact of education, with a particular focus on education levels lower than a university degree or college diploma, on the labour market and social outcomes of the 24- to 26-year-old Canadians found in the fourth wave of the Youth in Transition Survey-Cohort B (YITS-B), conducted by Statistics Canada and which concerns the period of January 2004 to December 2005. Most of the literature on the impact of education is concerned with the gaps between individuals with only a high school diploma and a university degree (BA). However, as observed by Boothby and Drewes (2006), about two-thirds of those with a postsecondary education (PSE) acquired such education outside universities (such as community colleges, trade institutions, or other vocational programs). Rising tuition fees and supply constraints (availability of university “seats”) in the 1990s according to Fortin (2005) and Fortin and Lemieux (2005) have limited educational achievement and increased returns to university education. This educational policy may have induced potential university students to consider PSE outside universities where the fees are generally lower. We provide estimates of early labour market outcomes for different levels of education obtained across different educational settings.

Although respondents in cycle 4 of the YITS are young (24-26 years) in terms of life-cycle labour supply decisions, we can get a good sense of who gets the better start after the completion of schooling. Surprisingly, our results show that even at such a young age, important differences exist between individuals with varying levels of education. In this respect, the YITS is an excellent data set to address this issue. First, we observe very detailed information on the type of degrees or diplomas respondents receive, if any. Second, the information on labour supply is plentiful as the following variables are available in the survey: the months of work experience from ages 18 to 26, hourly wages, annual earnings, number of jobs, and training. Finally, the YITS provides the age at which a high school diploma was received, a very important piece of information, as we shall see later, as well as a host of socio-demographic variables available for regression analysis.

The specific objective of the paper is to estimate the impact of different levels of education on labour and social outcomes and in particular for those individuals with lower educational attainments. We classify, for the purposes of regression analysis, levels of education into six main groups: 1) university graduates; 2) college graduates; 3) graduates from a diversity of post-secondary education (PSE) programs different from programs leading to a college diploma (trade, vocational, apprenticeship) with a high school diploma; 4) high school (HS) graduates with some

partial PSE education and without a diploma or certificate (they can be considered as PSE or university dropouts); 5) HS graduates (with HS only or an equivalency); and, 6) HS dropouts (no HS diploma). In another set of regressions, we replace these classes (but use the same control variables) with an alternative classification based on the age of graduation from HS (four categories are constructed: individuals who graduated between 15 and 19 years of age, 20 and 26 years of age, age of graduation not stated, and no HS diploma). All regressions are performed by gender as males and females face different labour markets and occupy different types of jobs.

There are several reasons why our analysis concentrates on low-education groups. First, we seek to determine whether an individual whose highest educational attainment is a HS diploma has better job market prospects than a dropout. It will be difficult to make the case for public policies aimed at increasing high school graduation rates if this is not the case. Second, comparing those who obtain their HS diploma at a late juncture, probably in adult education or “second chance education”, with HS dropouts, will inform us as to the value of these diplomas relative to dropping out. We want to compare young Canadians with young Americans in the United States, where Heckman and Lafontaine (2008) find that, controlling for skills, individuals with a General Equivalency Diploma or “GED” have similar wages to dropouts. This is an economically important question as provincial governments spend considerable amounts of money in these “second chance” programs. Individuals may also be losing valuable experience on the job market participating in these programs. If we find that these programs are inefficient, some type of overhaul should be considered by provincial governments.

The labour market outcomes are classified into four main groups: 1) employment; 2) receipt of social assistance or Employment Insurance (EI) benefits in year 2005; 3) annual earnings in 2005 and wages rates of last job; 4) employer and career training<sup>1</sup>. A final social outcome is analysed: volunteer activity and the frequency of such activities. These activities may be indicative of social and civic engagement by the respondent.

The paper is structured as follows: section 2 reviews recent research on the topic of education and its impacts on different outcomes. Section 3 and 4 present respectively the data from the YITS, labour market outcomes, and explanatory variables. Section 5 presents the characteristics

---

<sup>1</sup> We consider that individuals who answered yes to: “Not including any schooling or training already discussed, in the last two years, have you attended other courses or training programs related to a job or career?” received career training. Individuals who answered yes to the question: “Did you participate in any courses or training programs organized by any of your employers in the last two years?” are considered to have received employer training.

and labour market outcomes of youth by gender and level of education by December 2005. The results from multivariate regressions are discussed in section 6. Section 7 offers policy implications and concludes with a summary and some final observations.

## **2. Review of recent research**

Most of the Canadian research on education outcomes has emphasized returns and used Census data. Updating an earlier 2006 study, Bourdarbat et al (2008), rely on 1981 to 2001 Census files to estimate the skill premium, measured in weekly earnings and adjusted for experience, for the 16 to 65 age group full-time workers, and for seven educational levels. For men, they find a large (40%) wage gap between university and high school graduates which increased steeply between 1995 and 2000, and that the return to education for young men also grew substantially during the 1980s and early 1990s, in contrast to other evidence suggesting stable returns over the last two decades. The two education levels below HS, (some years of education and some HS) have negative returns (10-20%) relative to a HS diploma. The returns for the two education levels above HS ((1) some postsecondary education; (2) a postsecondary degree) have low returns compared to HS (respectively 5% and 15%) but are slowly increasing over time. The supplementary return for postgraduates over BA graduates is around 10% with marginal changes over the years.

For women, the returns to education – as measured by the skill premium relative to high school graduates - are systematically larger than for men; and most wage differentials due to education among women have been relatively constant over time. The return to high school completion has remained stable, as is the case for men. The two education levels below HS (some years of education, some HS) have higher negative returns (15-25%) relative to a HS diploma than for men. The returns for the two education levels above HS have also higher returns compared to HS (respectively 15% and 18%, higher than for males) but are rather flat over time. The supplementary return for postgraduates over BA graduates is around 15% and slightly increasing over the years. The wage gaps adjusted for experience are larger, especially for men, highlighting the importance of controlling for others factors in wage regressions.

But the existing education literature has provided few estimates of the returns to post-secondary non-university education from a community college or through a trade diploma, and even less for the returns to apprenticeship training (Gunderson, 2009). Gunderson and Krashinsky (2005) use

the 2001 Canadian census to estimate an average return of 3.9% for each year of basic education acquired by an individual plus an additional return for completing key phases of education. For completing a trade certificate over and above completing high-school, the returns averaged about 3%, although they were negative for females (-3.4%) and positive for males (5.5%).

Boothby and Drewes (2006) use the 1981, 1991 and 2001 Canadian censuses and also find small earning premiums for those with a non-university PSE (community colleges, trade institutions, and other vocational educations) compared to high school graduates, with the premium being smaller for females than for males. The premium increased, however, for individuals with both a trade certificate and a high school degree (1980 to 1985). But the earnings premiums are substantially lower than the earnings difference between high school graduates and university graduates (Bachelor's degree). Ferrer and Riddell (2002) use the 1996 Canadian census and estimate rates of return of approximately 8% annually for completing a community college or a trade diploma compared to HS; the difference between HS graduates and HS dropouts is around 12-16%, while the earnings difference between HS graduates and university graduates is significantly higher, between 36-47%.

The only published study to our knowledge specifically on college graduates from community colleges or CEGEPs, is Boudarbat (2008) who uses the National Survey of Graduates (NSG) for years 1990 and 1995 and analyses their earnings two years after their graduation retaining those aged 16 to 65 years (!). They are categorized in five fields of study and prospective gains are calculated by field of study. It is not clear which graduates are retained in terms of education programs (technical, trade, vocational?) in this study.

Hansen (2006), with the same NSG surveys, analyses wage differences between university graduates and college graduates (including those from trade schools). He also examines wage differences between individuals on the basis of their field of studies, and type of industry the respondent reports for his job as well as his occupation. He finds that the *ceteris paribus* differences in earnings based on the type of degree have decreased from 1992 to 2002 for both males and females. Furthermore, he uses the Census Public files of 1991 and 2001 to compute the internal rate of return for university education (by type of studies and region) relative to a secondary level of education. He finds that the rate of return has slightly increased from 9 to 11% across all fields and regions.

Hansen (2007), with cycle 3 of the YITS, analyses the earnings difference between post-secondary graduates and high-school graduates by region (4) as well as differences between post-secondary graduates according to their field of study (7) and their occupations (4). Other dependent variables are analyzed such as schooling interruptions and the regional mobility of graduates. The results demonstrate that those who have a high school diploma do better than dropouts. A strange result is that « Low-PSE » (lower than university) graduates do better than « High-PSE » (university graduates). This could be due to the very young age of the respondents in cycle 3 of the YITS (22 to 24). In other words, recent university graduates are at a lower point on their age-earnings profiles – because they are recent graduates – but will catch-up and surpass college graduates. Education effects are found to be stronger for females.

Using cycle 3 of the YITS-cohort-B (aged 22-24 in December 2003), Campolieli et al. (2009) examine fifteen outcomes (from wages to employment, to subsequent skill acquisition and to job/pay satisfaction) for dropouts who are compared to high school graduates who did not pursue postsecondary education. With respect to the determinants of dropping out (from a first stage of their analysis to calculate an instrumented dropout variable), they find no gender effect (which is surprising; provinces are control variables but their estimated parameters are not presented). They find that dropping out of HS compared to having only a HS diploma is associated significantly with a much lower probability of being employed (18 points lower), of having a stable job (19 points lower), of a lower starting and ending wage in the first job, of lower wages in their final job and of a lower probability of job training. Dropouts do not seem to be “able to compensate or substitute for their lack of formal education by acquiring skills through subsequent training” (page 13, Campolieli et al.).

Influential results, presented by Oreopoulos (2005, 2006, 2007) who uses compulsory schooling laws that force students to take an extra year of school experience, indicate that this extra year of schooling will increase annual earnings on average by 10 to 12% as well as generate significant benefits for health, employment, decreasing poverty, and raise subjective measures of well-being.

Concerns about high-school dropouts regularly dominate policy discussions in the field of education. Analysts focus on interventions that will provide incentives for dropouts to eventually return to school and obtain their high-school diploma or the equivalent. However, little is known about the returns of such policies that can be costly for governments. A substantial proportion of

high school graduates in Canada obtain their high-school diploma by way of equivalencies. The exact number of young adults who obtain their diploma this way is difficult to ascertain but in the YITS at least 4.2% of females and 5.3% of males obtain their diploma between the ages of 20 and 26.

There is some recent evidence in the United States which shows that focusing on high school graduation rates as a measure of a successful education policy could be a mistake. In some recent work, Heckman and Lafontaine (2006, 2008, 2008a, 2008b) and Cameron and Heckman (2003) demonstrate that high school certificates that are named GEDs (i.e. are obtained by equivalencies) have a questionable value in the labour market:

“A substantial body of scholarship summarised in Heckman and LaFontaine (2008) shows that the GED program does not benefit most participants, and that GEDs perform at the level of dropouts in the U.S. labour market. The GED program conceals major problems in American society.” Heckman and Lafontaine (2008)

The papers show that once regression analysis controls for measures of IQ when the child is young, GED graduates sometimes actually do worst in the labour market than dropouts having never received a high school diploma or the equivalent. This result sheds some doubt on the value of these GEDs. Given their costs, governments may reconsider their investments in this area or try to increase the value of GEDs.

We can closely observe the educational choices of young adults in Canada with two comprehensive data sets: the Youth in Transition Survey (YITS) and the National Longitudinal Survey of Income and Youth (NLSCY) which is not used in this paper. The YITS-B cohort (18-20 years old in 1999) is observed at four different time periods separated by 2 years. In cycle 4, respondents are 24 to 26 years old. Therefore, it is possible to observe those who do not graduate by the age of 20 for 4 to 6 years and reveal how they finally obtain their high school diploma. It is also possible to measure how well they are doing in the labour market when compared to actual dropouts. In particular, we will be performing probit regressions of employment on education (high school graduation before the age 20 versus graduation between ages 20 to 26 versus dropouts) and other characteristics; in particular measures which proxy skill levels (Heckman and Lafontaine use IQ). Other outcomes are labour market earnings and wages with estimations performed by OLS or Tobit. As mentioned in the introduction, if conditional on skills, adult



education individuals do not perform better than dropouts, some serious doubts about the efficacy of such programs can be entertained.

Hansen (2006, 2007) examines “early” graduates (the 2007 paper uses data from cycle 3 of the YITS; the 2006 paper used the National Graduates Survey and examines earnings differences between college and university graduates across disciplines) and their labour market outcomes by education level (and field of study and occupation) but does not tackle the question of the efficacy of educational attainments at a finely disaggregated level or of “GEDs”.

In summary, Canadian studies have shown the existence of significant earnings premium associated with university graduation compared to high school graduation. However the earnings gains progression associated with acquiring education beyond high school and below a university bachelor’s degree is less documented for young adults. Nonetheless the Canadian postsecondary non-university education system offers a large diversity of programs from the special CEGEP college tracks in Québec to heterogeneous community colleges in the rest of Canada and trade schools (see below for the education status of youth below the university level). Moreover, many students do not obtain a PSE certificate. Thus, it is important to study early labour market outcomes of youth having less schooling than a university degree.

A large number of papers in the last thirty years show that education has a significant private direct life-time effect on earnings. However, other dimensions of the effects of education should be considered. For example, Hansen (2006) shows that the probability of being unemployed is significantly lower among male university graduates than among trade school/college graduates in the nineties. The experience of unemployment or non-employment may entail that society has to support through employment insurance or social assistance the less educated. Spells of unemployment and non-employment or social assistance reduce labour market experience and therefore decrease life-time income, even if their earnings are relatively modest. It is also possible that education creates other benefits to society that are not reflected in the earnings of the educated. Some studies (Oreopoulos, 2007; Moretti et al., 2004) find that students with additional schooling experience, besides substantial gains to lifetime wealth and better health, are less likely to be either depressed, looking for work, be in a low-skilled manual occupation, or unemployed. Adults with more schooling are also more likely to report being satisfied overall with the life they lead, and are better citizens (in terms of participation and involvement in political life).

Mis en forme : Retrait : Première ligne  
: 0 cm

### 3. Data set and education status

#### The YITS data set

The analysis is based on the 12,435 cohort-B respondents interviewed in cycle 4 of the YITS. They are aged from 24 to 26 as of December 31 2005. After excluding deceased respondents, those residing in the United States and a few not residing in any of the ten provinces, 12,259 youth were categorised according to ten education levels as derived from the variables related to high school and post-secondary status in the survey.

#### Educational attainment and attendance

The YITS includes many variables on the education status of respondents from which we derive their education level. The first one is the individual's high school status as of December 2005 (graduate, leaver, continuer, not stated). Very few persons are high school continuers (55) because individuals are aged 24 to 26. A second variable identifies the highest certificate, diploma or degree *obtained* as of December 2005, from a high school diploma or equivalent to a Ph. D. degree.<sup>2</sup> Two other variables specify on the one hand the highest education level *attended* as of December 2005 (less than a high school completion, high school graduation, some post-secondary education – certificate, and graduation from a post-secondary program),<sup>3</sup> and, on the other hand, the highest level of post-secondary education *attended*<sup>4</sup> across all programs and institutions as of December 2005, from attestations of a vocational specialisation, to a registered apprenticeship program, college program straight up to a Ph.D. degree.<sup>5</sup> Again, some youth who have graduated

---

<sup>2</sup> About one hundred respondents have a degree, certificate or license from a professional association (accounting, banking, or insurance) and other levels of post-secondary education (a very general category).

<sup>3</sup> For this variable, a little less than 500 respondents are categorized as not stated.

<sup>4</sup> The universe of this variable also includes respondents who may have graduated from this level, may still be in a program, or may have left a program.

<sup>5</sup> Approximately 250 respondents had taken a diploma, certificate or license from a professional association (accounting, banking, or insurance) and the unspecified other levels of post-secondary studies (a very general category).

from high school declared that they have attended a PSE program but their program is not stated (we classified them as HS graduates with a non-stated PSE status).

The levels of education derived from these four variables are presented in the first panel of Table 1. Although ten education levels can be identified, in the main estimations only seven levels of education are used. The continuers (in university, college, other PSE programs, or HS) are excluded because as of December 2005 they are classified as attending a PSE program or HS. In some estimations are also excluded the small group of HS graduates who have obtained or have attended some PSE programs but cannot be classified because their status is in the not-stated category for all education variables. The ten groups (1a, 1b, 2a, 2b, 3a, 3b, 3c, 4a, 4b, 5) are the following by level:

1) University level: a) graduates with a bachelor's degree or graduate-level diploma, certificate or degree; b) continuers (some may have already a bachelor's degree or a higher degree, diploma or certificate).

2) College level: a) graduates (college or CEGEP diploma, university diploma lower than BA or certificate below bachelor's degree); b) continuers.

3) Other post-secondary education (PSE) level: a) PSE graduates from a private business or training institute, or with a trade certification (all having a high school diploma); b) high school graduates who have pursued college or other PSE studies and can be considered as dropouts of these programs; c) high school graduates who have a different degree, diploma or certificate than college and are continuers.

4) High school level: a) high school graduates who have not pursued any other studies as of December 2005; b) and high school graduates who have graduated from any PSE program or have taken any type post-secondary education as of December 2005.<sup>6</sup>

5) Less than high school (high school dropouts). These youth have not completed their high school diploma (or equivalency) and have not taken any post-secondary education as of December 2005. Some (55) were high school continuers as of December 2005 and according to the other education variables are considered as college graduates (2) and dropouts (49). The number of high school dropouts is smaller than the number of leavers given by the variable high school status, because some have benefited from "first/second" chance programs and have pursued or obtained a PSE certificate, diploma or degree as of December 2005. They are categorized in the preceding education categories.

---

<sup>6</sup> These youth, approximately 500 respondents are in the not-stated category for all the variables, except the high school status variable. We decided to keep them in a separate category instead of dropping them of the sample. But in some estimation they were excluded since results for this category were difficult to interpret compared to the others (see descriptive statistics for this group).

Finally, 14 respondents could not be classified (they received the “not stated” status for all the education variables) and were dropped from the sample. Thus, 12,259 respondents (6,263 females and 5,996 males) can be potentially used for estimations, including 2,693 respondents (1,428 females and 1,265 males) who by December 2005 are attending an education program. In the estimations, we exclude continuers, ending up with a sample of 4,835 females and 4,731 males, abstracting from missing information for explanatory variables, reducing the number of observations in the regressions.

Table 1 presents the percentage of individuals for each of the ten levels of education by gender, for Canada and by region of residence in cycle 4 of the YITS. A striking fact is the gender gap in educational attainment. Females have higher levels of education than males in all regions and are much less likely to be high school dropouts. For Canada, and almost all provinces, more than fifty percent of females have obtained or pursue a university degree or college diploma, the exceptions being Manitoba-Saskatchewan and Alberta. For Canada more than fifty percent of youth (females or males) have obtained or pursue a non-university PSE education. The percentage for university PSE education is much lower (30% for females and 21% for males). Females are also more likely to be continuers in university and college programs. Residents of Québec, in particular males, are more likely than in the other provinces to be in the college education category, which can be explained by the role of colleges in the PSE education system (technical college diplomas are offered in CEGEP, and a CEGEP college diploma - technical or general - is compulsory for university admission). A rather large proportion of individuals (around 25%) have a lower than university or college PSE education status. At this level, except in Québec, males are more likely to have a high school diploma and be considered as continuers at some level of education. Around 10 to 12% of individuals with a high school diploma can be considered as dropouts of PSE education (i.e. those with a high school diploma with partial studies at the PSE level category). In Canada, 11% of females and 17% of males surveyed in cycle 4 of the YITS have only a HS diploma and no higher certificates or degrees. These proportions are higher in some provinces, in particular in Manitoba-Saskatchewan and Alberta and for males. The percentage of “high school dropouts” is different than the percentage with no high school diploma because some of these have a PSE credential and are therefore not included in the high-school dropout category.

#### **Age at high school diploma**

The “age at which a youth obtained a high school or equivalency certificate (HS)” variable was used to create an alternative educational status variable for regression purposes. Four variables were derived from it: 1) Graduated HS between the ages of 15 and 19; 2) Graduated from HS between the ages of 20 and 26; 3) HS degree but no stated age of completion, according to information collected in cycles 3 and 4; 4) No HS degree (nonetheless some respondents have declared receipt of a PSE diploma, certificate or degree). The bottom panel of Table 1 presents the percentage in each category. A very large percentage of youth completed their HS diploma between ages 15 and 19. Again, there is a gender gap: males are less likely to obtain a HS diploma between ages 15 and 19 and they are over-represented in the group receiving their diploma between 20 to 26 years of age. Finally, very few respondents still pursue a HS diploma at ages 24 to 26 (most are men), and males are much more likely than females to be HS dropouts.

#### **4. Labour market outcomes and explanatory variables**

##### **Labour market outcomes**

The YITS contains a large diversity of information related to the labour market over cycles 1 to 4 of the survey. We retained labour market outcomes derived in cycle 4, as a large number of youth are no longer enrolled in education programs and have joined the labour market. Earlier labour market outcomes are much more delicate to interpret as a large majority of youth are simultaneously holding a part-time or full-time job (in particular in the summer months) while enrolled full-time or part-time in education programs. Table 2 presents outcome measures used as dependent variables. Eight outcomes are studied: (1) the probability of being employed in December 2005; (2) the probability of receiving EI benefits in 2005; (3) the probability of receiving social assistance in 2005; (4) annual earnings in 2005; (5) hourly wages; (6) monthly wages; (7) the probability of career and employer training; (8) the probability and intensity of participating in volunteer activities. These outcomes are analysed by education level in a regression context.

##### **Explanatory variables**

Regressions are performed with two sets of explanatory variables based on education. The first set is based on educational attainment and corresponds to seven of the ten categories enumerated

in the sub-section “Educational attainment and attendance” in Section 4. We use seven categories because we exclude continuers from the regression samples. Our goal is to estimate the impact of education for those who are not in school. These included categories are: University graduate, College-Graduate, PSE-trade, PSE-part-HS, High-school-other (not-stated PSE program), High-School-other, and Dropout (See Table 3, for definitions). Certain regressions exclude from the sample the respondents from the High-school-other as the interpretation of the coefficient is not clear. Because we include a constant in all regressions, we must exclude one of the seven categories, we chose University-Graduate which becomes the reference category. A second set of regressions is based on education variables which depend on the age of graduation. In this case we have four categories, HS age 15-19 years, HS age 20-26 years, HS age not stated, and Dropout (see Table 3, for definitions). Again, a constant is included in the analysis; therefore we exclude the Dropout variable, the reference category.

We also perform some regressions with what we call a low education sample. We do this because we believe that the wage structure could be different for the low education group. Hence we exclude University and College graduates because they face a different labour market. Also, unobserved skills are (arguably) higher amongst college and university graduates. This sample should reduce problems associated with unobserved “skills heterogeneity”. In this case, when we use educational attainment variables as regressors, we include 4 categories (or 3 sometimes leaving out High-school-other because it is not significant). The reference category is chosen to be High-School-other. The same 4 “education” variables as in the full sample appear for the low-education sample regressions based on age of HS graduation.

Finally, we sometimes contrast samples based on the number of months respondents have been out of school. In general, the gap between high and low education students is higher when more time has expired since leaving school. Therefore, one sample is composed of students who have left school 6 months or sooner before the survey while the other uses a 12 month cut off.

The first basic group of control variables other than education are: age and province of residence. The second group consists of background characteristics: having a child, household structure (couple, single, other), citizenship by birth, language (English, French, English and French), visible minority, urban status, work limitations, and a social support scale. The third group of variables refers to the youth’s self-reported skills (computer, writing, reading, communication, problem solving, and math). These skill variables are very important for our

comparisons of dropouts with individuals who received their high school degree in the second chance system. Indeed, we wish to compare them on the basis of similar skill levels, as in Heckman and Lafontaine, with dropouts. Two other variables appear as regressors: number of months having a job (computed over the months from January 1999 to December 2004) and number of months the youth was a full-time student, at the high school or postsecondary levels (January 1999 to December 2005). The experience variable is crucial as dropouts, for example, should have more experience on average than university graduates.

## 5. Characteristics of youth, occupations and industries by level of education and gender

Mis en forme : Interligne : 1,5 ligne

Table A1 presents the characteristics and labour outcomes of respondents by gender for the seven levels of education, with a sample including the youth with a HS diploma and unstated PSE education, finished or attended by December 2005, and excluding continuers (university, college, PSE, HS). What is most remarkable is the strong link between characteristics and educational attainments: university graduates are less likely to have children, to be citizens by birth, more likely to be part of a visible minority, more likely to have English and French as reported language, to live in an urban setting, less likely to have work limitations, have a much higher score on the social support scale, have higher skills and have accumulated much higher student months and also accumulated more working months. HS only graduates and HS dropouts present less favourable characteristics on all dimensions. Females are also different from males for all educational attainments: they are more likely to live with a child, in particular if they have a lower educational attainment, are less likely to be part of visible minority, to live in an urban setting, more likely to have work limitations, have a higher score of social support, and have higher skills in writing, reading and oral communications.

Labour outcomes are also correlated with education levels: earnings, wage rates and monthly wages of university and colleges graduates are much higher than those with lower educational attainments. The disparities for males compared to females is less severe since they have accumulated more working months (experience) and females are much more likely to have a child and be out of the labour market (as is indicated by the probability of having a job on December 2005). The probability of having received employment insurance during year 2005 is correlated with education: the lowest rate of 9% is for male university graduates and it increases with the lower education levels, reaching 17 to 19% for males having a HS only or being a HS dropout (the higher rates for females may be partly explained by the likelihood of having giving birth). A small proportion has received social assistance during 2005. But the rates increase sharply for lower education levels, in particular for females. Employer and career training are prevalent phenomena for all education levels but those with the lowest rates are the less educated. Finally, volunteering activities are more likely pursued by females and by those having higher education levels.



The last panel of Table A1 presents the same statistics by the age of completion of the high school diploma. The same pattern of differences in characteristics and labour outcomes can be observed between the four groups (HS between 15-19 years, HS between 20-26 years, HS age not-stated, and Dropout).

Table A2 presents the two digit code<sup>7</sup> occupations (10) and industries (16) of the respondents having declared an eligible job in cycle 4 (it is the last job declared that we retain)<sup>8</sup> for the ten levels of education and by gender. Continuers (university, college, PSE, HS) and dropouts are much more likely to declare no job. Surprisingly a small percentage in all education categories report having a management occupation. A large proportion of youth, especially females, declared a job associated with business, finance and administration, for all educational levels, except dropouts. Occupations associated with health are also the domain of females with very few having a HS only diploma or no HS diploma. The occupations in the social sciences, education and government are largely occupied by the university graduates or continuers. The sales and service occupations are dominated by education levels below university, especially the lower levels which are predominantly occupied by females. The main occupations for males with low levels of education are those associated with trade, transport and equipment operation.

For the industries where individuals are employed, the university level youth are concentrated in the education services, the professional, scientific and technical services, the trade services, and public administration. A traditional division by gender can be observed: females are more present in the education services, health care, and social assistance sectors as well as the accommodation and food services sector where youth with lower education levels are overrepresented. Males with lower education levels are predominantly in the construction, manufacturing, trade, transportation and warehousing, and primary sectors.

## 6. Econometric results

We present all estimated models with the same set of control variables and by gender. For each dependent variable, the regressions are performed with different samples. The first includes all individuals who are out of school (non-continuers); the second excludes from the first those who were not full-time students in the past 6 months while the third excludes those who were not full-

---

<sup>7</sup> There were not enough respondents to adopt a four digit classification.

<sup>8</sup> Up to 7 jobs can be reported over the period Jan04-Dec05, but most respondents (52%) report one job, 29% report a second job, 13% a third job, 5% a fourth job, and the rest (2%) between 5 and 7 jobs.

time students over the last twelve months. The latter samples are constructed so that they are composed of students who had some time to look for work and get their feet wet in the labour market. These three samples are sometimes reduced by excluding university or college graduates.

### **Employment outcomes**

We start with the results for the probability of being employed in Table 4A where university and College graduates are in the sample. When the outcome is binary, as is the case for employment, we present the marginal effects of the variables. These effects are computed at the mean of all the explanatory variables. An example is useful to understand what is measured with marginal effects. The estimated marginal effect for Dropout in column (1) for females in Table 4A is -0.194. This means that, all things equal, the probability of working is 0.194 points lower for a dropout compared to a university graduate. Because this result is computed for a baseline case with a probability of working around 90%, this is a large difference.

The regressions by gender (Table 4A) show some differences between males and females as the PSE-part-HS effect is very large and negative for females in all samples while it is not significant for males in the restricted (based on the number of months out of school) samples (columns (5) and (6)). In fact, none of the male education coefficients are significant in the most restricted sample, probably a reflection of a very strong labour market pre-crash period (the PSE-trade coefficient however remains large). For females, only one marginal effect is significant in the most restricted sample (column (3)), however the values of some coefficients are relatively large. For females, having a child has a negative effect on the probability of having a job. For both genders, having some work-limitations has negative effects on the probability of having a job. In Québec, females are most likely to be observed with a job and for males it is for those living in Manitoba-Saskatchewan and Alberta. Very few skills effects are statistically significant.

Table 4B presents the results for a sample excluding college and university graduates for alternative specifications based on academic degrees or age of graduation from high school. Again, a very strong economy will create job opportunities across skill levels. Very few coefficients are statistically significant for both males and females. Surprisingly, we find no differences between dropouts and those with only a high school diploma only. As for age of graduation effects, the results are very different between males and females. There is a very large positive coefficient for females who receive their degree between 20 and 26. For males, the

coefficient for the 15-19 group is .037 but not significant. Remarkably, age of graduation does not seem to make a difference for males. As for the other control variables, again for females with lower education levels, having a child means leaving the labour market. For both genders, work-limitations have negative effects on the probabilities of having a job while living in an urban area increases the probabilities of having a job. Few skills effects are statistically significant, the exceptions being oral-skill for males and the problem-solving skill for females.

We turn to the probability of receiving employment insurance benefits (EI) in year 2005 in Table 5A. The specifics of the samples are in the notes at the bottom of the table. For the education variables the results are different across genders. For most estimations, youth having a child have been excluded since this control variable is likely simultaneously determined with parental leave benefits of the employment insurance policy (illustrated in column (2) for females). For the full sample of females in (1), PSE-trade has a lower statistical significant probability of employment benefits and college graduates have a higher probability compared to university graduates. For the full sample of males in (3), the higher statistically significant probabilities of EI benefits are for high school graduates with incomplete PSE diploma or certificate or with HS only. For both genders, the Dropout variable coefficient is not statistically different of the reference category (university graduates). More likely they may be not eligible for EI. For the lower education youth samples of columns (2) and (4), almost all coefficients are not statistically significant for both genders, except female high school graduates with incomplete PSE studies. For the specification with ages at HS graduation as explanatory variables, restricted to lower education youth, the males who have graduated between the ages of 20 to 26 are much more likely to have received EI benefits in 2005 compared to HS dropouts. For the other control variables, we find that males living in the Atlantic Provinces or in Québec are more likely to receive EI benefits compared to males in Ontario. Youth who declared themselves as a visible minority have a significantly lower probability of receiving EI benefits. Few of the skills coefficients are statistically significant; the exceptions are solving-problem skill for females and computer skill for males.

The probability of receiving social assistance is analysed in Table 5B. This probability is linked to EI benefits [sinceas](#), in many cases, individuals turn to social assistance once benefits are exhausted. The results are very similar across genders. For the full sample of males and females in (1) and (3), there is a higher and statistically significant probability of receiving social assistance

as compared to university graduates for Dropout and the High-School-other groups, the effect being particularly large for male dropouts at 0.098. Other education coefficients in (1) and (3) are very similar. Turning to the sample of low-education individuals, we find very little differences across education groups as compared to the High-School-other group and the coefficients across genders are similar. When the estimates are significant, their value remain small between -0.015 and 0.021. When we regress with the age at graduation variables, we find there are no differences between dropouts and those who graduate at a later age; however those graduating early have a significantly lower probability of receiving social assistance, the effects are not very large as they value -0.024 for females and -0.030 for males. We find statistically significant effects of receiving social assistance for the following other control variables: positive effects for females and negative effects for males living in Québec, and positive effects for both genders living in British Columbia compared to youth living in Ontario; negative effects for females having a child; positive effects for living in an urban area. Some of the skill effects are statistically significant but their negative impacts on the probability of receiving social assistance are very small.

## **Earnings and wages outcomes**

### 2005 annual earnings

We continue with annual earnings as the dependent variable, computed as the sum of wages or salaries and net income from self-employment. We performed the regressions with a Tobit method because of the presence of 0 earnings for some individuals. The effects on annual earnings of the education variables reflect a mixture of effects on hourly wages and hours of work. The results are presented in Tables 6 to 9.

Table 6 shows that the consequence of being a dropout is considerably more severe for males, particularly for the restrictive samples in (2), (3) for females and (5) and (6), for males. In (6), the male Dropout coefficient is -\$15,915 while it is -\$10,861 in (3) for females, a difference of more than five thousand dollars. The High-School-other and PSE-part-HS coefficients are almost identical within a gender but are sizably more negative for males. The opposite is true for PSE-trade. The results demonstrate the distinct advantage university graduates have over all other groups.

In table 7, we restrict the sample to individuals with less than a college diploma. We start by analyzing the coefficients on the variables based on the age of graduation. Very different

conclusions emerge from the regressions depending on gender. For males, there is a distinct advantage of finishing earlier compared to being a dropout or obtaining a diploma later, as the coefficient for HS age 15-19 years is \$5,178 and significant while for age 20-26 it is -\$1,960 (but not significant). For females, the 20-26 group stands out with a coefficient of \$5,071 (but not significant), which is like with the positive effect (compared to Dropout) on the probability of being employed. The results, for males, confirm the finding by Heckman that GED's, *ceteris paribus*, do not do better in the labour market for earnings than dropouts. It is highly surprising that females finishing high-school between 15 and 19 do not do better than female dropouts even for this low education sample.

For to the specification with academic degrees (Table (7), first 3 coefficients), (with the low education sample), we find that the males in the Dropout group perform very poorly compared to the High-School-other group while the PSE-trade group does very well. For females, there is very little difference across education groups, particularly in (3), a surprising result. Trade degrees seem to be more useful for males than females for both employment and earnings.

The effects of the other control variables are as expected. We find statistically significant large effects on earnings for all groups: provincial effects negative for the Atlantic Provinces and Québec and positive for Alberta; negative effects for females having a child; negative effects for work limitations; positive effects for higher scores of social-support. Experience on the labour market, measured by work-months since 1998 has also strong positive effects on earnings. Many of the skill effects are significant and large: oral-skills for females, math-skills for both genders. Some are significant but have an unexpected negative sign: reading-skills for males, a result which may partially linked to the type of job, and computer-skills for lower educated males. For females with lower education levels, computer-skills have a large positive effect on earnings.

#### Hourly wage and monthly earnings

We now turn to the hourly wage, the measure closest to the workers' marginal productivity. We start with the results in Table 8. Restrictions made on the basis of how long one has finished schooling, do not have much impact on the value of the "degree" coefficients for both males and females. Obviously, university graduates do much better, as the wage rates are around 18 percent higher than College graduates for females and 16 percent higher for males. It is striking that PSE-trade males do as good as College graduates. This is not the case for females as the PSE-trade coefficient is close to the Dropout coefficients. In fact, the Dropout coefficient is less negative

than the High-School-other coefficient for females while it is 4 percentage points higher for males. It is possible that selection bias is at work here as the dropouts in the wage sample are probably from the right tail of the distribution of unobserved skills (conditional on being a dropout). We saw earlier that more dropouts are out of employment making their sample of individuals with wages less representative of their group as a whole. In column (3) for females and males of Table 8, we observe that male dropouts do very poorly relative to the High-School-other group while this is not the case for females; furthermore, the PSE-trade males do much better than the High-School-other males.

Table 9 excludes recent graduates (6 months in (1) and 12 months in (2) and (3)) and university and college graduates. In Columns (1)-(2), we observe again that PSE-trade graduates do much better than High-School-other, in particular males, while male dropouts do considerably worse which is not the case for females. Turning to age at graduation, we find no differences for females, compared to dropouts, while males that graduate earlier perform statistically better than dropouts, the coefficient for the 20-26 years group is only .01 smaller than the 15-19 years group, but is far from being significant. The results for the effects of the other control variables are similar to those for annual earnings.

Table 10 presents the results for monthly earnings which reflect both effects of hours worked and hourly wages. We present only results excluding recent graduates; (1) and (2) present results for the specification with academic degrees. For all females, in (1), there is a monotonic decrease in the education degree variables. However, the difference between the High-School-other and Dropout coefficient is very small at 37 dollars. The difference for males is considerably larger at 136 dollars. What is striking for males is the PSE-trade coefficient at -\$276 and not significant, which says that the monthly earnings of the PSE-trade group are statistically identical to university graduates. In (2), for males, the 12 month restriction increases (in absolute value) the coefficient to -\$363, significant at 10%. However, it is less negative than the coefficient on College graduates. The PSE trade degree leads to very good paying jobs for males. The results with a sample of less educated individuals show no differences across degrees for females compared to High-School-other. For males, the higher degrees are statistically significant at the 10 or 5 percent level.

Some conclusions stand out for earnings at the yearly, monthly or hourly rates. First, university graduates, even at such an early stage, perform much better on the job market than individuals with lesser degrees, even college graduates. Second, dropouts do worse than individuals with a

high school diploma only, but this is particularly true of males. For females, the differences are generally small and not significant, while the opposite is true for males, where differences are large and statistically significant. This result is intriguing because males trail females in high school graduation rates. The monetary incentive for males of receiving their high-school degree is larger than for females and yet they trail their female counterparts.

A similar dichotomy emerges when we contrast dropouts with individuals who received their high school degree between the ages of 20-26. In general, females with such a degree do better than dropouts, albeit the differences between these two groups are not statistically significant, while the contrary is true for males, however again, the differences are generally not statistically significant.

### **Training outcomes**

Our next outcome is employer or career training treated as a binary variable (receiving training or not). Results are presented in Table 11. All regressions exclude those having been a full-time student over the past 12 months. Column (1) considers all female respondents and employer training. University and college graduates receive far more of this type of training than those with lower degrees which have marginal effects ranging from -0.093 to -0.164. For males, in (2), surprisingly, not one education coefficient is statistically significant. The same pattern as for employer training in (2) is true for females and career training with effects approximately 50% lower than the coefficients for employer training. For males, in (4), only PSE-trade is negative and significant, possibly a chance result. In columns (5) and (6), the dependent variable takes the value of one if the respondent received training in career or employer training, the differences between males and females is even more striking with lower degree females whose probability is 20 points lower than university graduates, the negative effect estimated for college graduates is also rather high at -0.074. For males, none of the coefficients are statistically significant. When we restrict the sample to the lower education individuals, we observe in Table 12 that the differences between the low education groups are in almost all cases not statistically significant. Therefore, there is a dichotomy in terms of training for females, university and college graduates are in one class, while the others are in another. Finally, for the other control variables, one result is striking for Québec: there are large negative statistically significant coefficients for almost all samples and for both type of trainings in particular for males compared to the other regions.

## **Volunteer activities**

Table 13A presents the marginal effects for the regression with the binary variable for participation in volunteer activities as dependent variable. One major result stands out, and this is true for all samples, university graduates have a much higher probability of participating in volunteer activities than all other type of graduates. Curiously, the effects are the smallest for female dropouts and females with only a high school diploma. This may be due to the fact that they have more time on their hands when they are not working; moreover there is a significant female gender effect with the overall sample (columns (1)-(2)). The results show no differences on the basis of age of graduation, which is not surprising given the results based on degrees. When the sample are restricted to youth with lower education levels, the results in Table 13B show that the estimations do not capture effects based on education, and age at HS graduation.

The conclusions are unchanged when an ordered logit is run to explain differences in the frequency of volunteer activities. These results are presented in Table 14 in terms of odds ratio for different samples (females and males, and un-restricted and restricted samples by education levels).

Some statistically significant effects of the other control variables can be singled out for the probability and intensity of volunteer activities. Females do more volunteering. The regional effects are negative for the Atlantic Provinces and Québec and positive for the other regions compared to Ontario. Work limitations and a higher social support scale have positive effects while residing in an urban area discourage volunteering.

## **7. Summary of the results and some concluding policy implication**

Using data from the Youth in Transition Survey (YITS), this paper provides a detailed analysis of the effect of educational attainment on earnings, employment, receipts of employment insurance and social assistance, job training, and volunteer activities. Our results demonstrate that there are considerable differences between males and females as to the relationship between education attainment and labour market outcomes. For the probability of employment, the differences, by gender, are less striking than for earnings. By gender in Table 4A, only one educational degree variable has a significant effect in columns (3) and (6), which includes only individuals who have



been out of school for a minimum of twelve months. The very tight pre-crash labour market may explain why differences across degrees are not very strong.

The effect of education levels on the probability of receiving employment insurance (EI) is partly driven by the regional factors and, for females, on the likelihood of having a child. Results show no differences between university graduates and dropouts. The differences are by gender, female college graduates and high school graduates with incomplete post secondary education have a higher probability of EI and trades graduates have a lower probability. For males, graduates with only high school, high school graduates with incomplete postsecondary education and finishing high school beyond the age of 19 have a much higher probability of receiving EI benefits.

The effect of degrees on the probability of receiving social assistance is small. However, we find no differences between the effect of being a dropout and the effect of finishing high school at a late age for both males and females.

The “dropout” effect has a very large and negative effect on the labour market earnings of young males when compared to men with a high school or trade degrees. The effect is much smaller for females when compared to the effect of these same degrees. Furthermore, for males, there is no statistical difference between individuals who have dropped out and those who finish their degree after 19 years of age. The same is true of females, but the coefficient on the dummy variable of obtaining the degree after 19 is rather large at \$5,071 for the sub-sample of low-educated females.

Major differences emerge once again between males and females for the probability of employer or career training. The probability of training is much lower for females with degrees that are lower than a university level degree and much lower (compared to a university graduate) for dropouts than for those with a high school degree only. This is also the case for males, but to a much lesser degree, as the degree coefficients are in almost all cases not significant. However, the differences are very small between individuals with lower level degrees for both males and females.

The results concerning dropouts and earnings (annual and monthly, and wage rate) replicate results from former studies showing that dropping out of high school has severe consequences in the labour market in particular for male earnings. The novel results for earnings, which is a replication of the Heckman and Lafontaine results, but only for males, show that dropouts and

males who receive their degree after 19, but who have similar characteristics, make the same annual and monthly earnings. This is a very important result for policy purposes as millions of dollars each year are spent to help individuals obtain their high school degree in settings different from high school. How to react to this is complicated because the evidence is not clear for females. One reason for this result could be that these adult education programs may be concentrating on cognitive skills rather than other social skills or self-control skills that could be more helpful to low-skill individuals on the job market. However, this remains speculative. Experimentation with different types of programs across the nation could show the way on how to reform these programs to make them work for males in particular.

This paper shows as many others that university and college education yields high returns even at a very early stage in the labour market, with the university degree dominating. But the most important result shows that for males, obtaining a high school degree later in life may have little value on the job market. It would be unreasonable for the government to abolish second chance programs on this basis possibly sending a contradictory signal to young persons as to the importance of a high school degree. However, the amount of resources spent in these programs could be used more efficiently if some of these were redirected towards supporting the teenage youth before they drop out and to increase high school graduation rates by the age of 18.<sup>9</sup> This orientation can be easily defended by the dismal state of dropouts, particularly males.

The results also demonstrate that trade degrees obtained by males have a much higher value than those obtained by females. One hypothesis explaining this result could be that several of the trade jobs occupied by males are partly controlled by unions who seek to reduce the supply of these jobs, particularly construction jobs.

The results concerning the three lower levels of education (dropouts, and high school graduates with some partial postsecondary education,<sup>10</sup> graduates with a high school diploma only) indicate that differences in term of earnings are rather small and not always statistically significant. This suggests that youth should be incited and supported in obtaining a certificate or a diploma from postsecondary studies and in pursuing college programs for those with only a high school diploma.

---

<sup>9</sup> Lefebvre and Merrigan (2009a) who analyse the gender gap in dropping out of high school propose public policy approaches for the reduction of the male-female gap and some radical measures as well as some experimental approaches (pilot projects).

<sup>10</sup> We considered this group as college or university “dropouts”.

The results of some of the other control variables also offer implications on labour outcomes of youth. Work limitations (physical or mental condition, or health problems reducing the amount or the kind of activity a person can or could do at work) have negative effects on almost all outcomes. Treating these conditions or health problems should be a preoccupation. Having a child is associated with negative outcomes for females. This indicates that young women support a very high proportion of the “costs” of a maternity and that having a child at a young age is likely conducive to lower educational attainment. The outcomes of youth, whatever their education level, are influenced by the state of the economy of their region of residence (urban or not, and province) as shown by the effects of the provinces. Although skills are self-declared, their effects indicate that some skills are associated with an important premium: oral-skills for females, computer skills for females with lower education, math-skills for both genders. Surprisingly some skills are associated with significant negative effects: writing or reading skills, computer-skills for males with lower education.

One weakness of the study is the aggregated character in terms of field of studies for some degrees. For example, the sample size of college graduates did not permit us to examine the outcomes for some specific programs: technical programs in Québec’s CEGEP versus graduates having only a diploma in the general program, or community college diplomas by duration in the other provinces. The same remark applies to university graduates. The sample size of university graduates with a diploma higher than a bachelor’s degree is very small.

The Analytical Files of the Censuses<sup>11</sup> with their very large samples and very detailed information on schooling attainments and field of studies could provide assessments of the benefits of the investments in human capital made by individuals and all levels of governments.<sup>12</sup>

---

<sup>11</sup> One in five households (20%) received the [long census questionnaire](#), which contained the eight questions from the short form plus 53 additional questions on topics such as education, ethnicity, mobility, income, employment and dwelling characteristics. The files sample one out of five respondents to the long questionnaire.

<sup>12</sup> See Lefebvre and Merrigan (2009b) who examine the evolution of the returns to education and experience from 1991 to 2006 by gender, provinces, and ages of youth aged 21 to 35 years.

## References

- Boothby, D. and T. Drewes (2006). "Post-secondary Education in Canada: Returns to University, College and Trades Education." *Canadian Public Policy*, Vol. 32, No. 1, 1-22.
- Boudarbat, B. (2008). "Earnings and Community College Field of Study Choice in Canada," *Economics of Education Review*, 27 (1): 79-93.
- Boudarbat, Brahim, Thomas Lemieux and W. Craig Riddell (2006). "Recent Trends in Wage Inequality and the Wage Structure in Canada" in *Dimensions of Inequality in Canada* edited by David A. Green and Jonathan Kesselman. Vancouver: UBC Press, pp. 273-306.
- Cameron, S. and J. Heckman (1993). "The Nonequivalence of High School Equivalents," *Journal of Labor Economics*, 11 (1, Part 1): 1-47.
- Campolieti, M., T. Fang and M. Gunderson (2009). "Labour Market Outcomes and Skills Acquisition of High-School Dropouts," Canadian Labour Market and Skills Researcher Network, Working Paper, No. 16.
- Ferrer, A. and W.C. Riddell (2002). "The Role of Credentials in the Canadian Labour Market," *Canadian Journal of Economics*, 35 (4): 879-905.
- Fortin, Nicole (2005). "Rising Tuition and Supply Constraints: Explaining Canada-U.S. Differences in University Enrollment Rates," in *Higher Education in Canada*, edited by Charles Beach, Robin W. Boadway and R. Marvin McNinnis, John Deutsch Institute, February 2005, .pp. 369-413.
- Fortin, Nicole and Thomas Lemieux (2005). "Population Aging and Human Capital Investment by Youth," Paper submitted to HRSDC as part of the Skills Research Initiative.
- Gunderson, Morley and Harry Krashinsky (2005). *Returns to Education and Apprenticeship Training*, Ontario: Ontario Ministry of Training Colleges and Universities, 2005.
- Gunderson, Morley (2009). "Review of Canadian and International Literature on Apprenticeships," Report to Human Resources and Social Development Canada.
- Hankivsky, Olena (2008). "Cost Estimates of Dropping Out of High School in Canada," Canadian Council on Learning.
- Hansen, J. (2007). "Education and Early Labour Market Outcomes in Canada," Report prepared for Learning Policy Directorate, Strategic Policy, Human Resources and Social Development Canada, SP-793-12-07E.
- Hansen, J. (2006). "Returns to University Level Education: Variations Within Disciplines, Occupations and Employment Sectors," Report prepared for Learning Policy Directorate, Strategic Policy, Human Resources and Social Development Canada, SP-662-09-06E.
- Heckman, James and Paul LaFontaine (2006). "Bias Corrected Estimates of GED Returns," *Journal of Labor Economics*, 24(3), July 2006, 661-700. NBER Working Paper 12018 (<http://www.nber.org/papers/w12018>).
- Heckman, James J., and Paul LaFontaine (2008). *The GED and the Problem of Noncognitive Skills in America*, Chicago: University of Chicago Press, Forthcoming.
- Heckman, J. J. and P. A. LaFontaine (2008a). "The American High School Graduation Rate: Trends and Levels," Unpublished manuscript, University of Chicago, Department of Economics.
- Heckman, J. J. and P. A. LaFontaine (2008b) "Testing the Test: What the GED Reveals and Conceals," Unpublished book manuscript, University of Chicago, Department of Economics.
- Lefebvre, Pierre and Philip Merrigan (2009a). "Gender Gap in Dropping Out of High School: Evidence from the Canadian NLSCY Youth," Working Paper, UQAM and Canada Millennium Scholarship Foundation.
- Lefebvre, Pierre and Philip Merrigan (2009b). "Returns to Education: Results from the 1991-2006 Canadian Analytic Census files," Working Paper, UQAM and Canada Millennium Scholarship Foundation.
- Moretti, Enrico, Kevin Milligan and Philip Oreopoulos (2004). "Does Education Improve Citizenship? Evidence from the U.S. and the U.K.," *Journal of Public Economics*, 88 (9): 1667-1695.

- | Oreopoulos, Philip (2007).<sup>5</sup> “Do Dropouts Drop Out Too Soon? Wealth, Health and Happiness from Compulsory Schooling,” *Journal of Public Economics* 91(11–12): 2213–29.
- Oreopoulos, Philip (2006). “The Compelling Effects of Compulsory Schooling: Evidence from Canada,” *Canadian Journal of Economics*, 39(2): 22–52.
- | Oreopoulos, P. (2005).<sup>2</sup> “Canadian Compulsory School Laws and their Impact on Educational,” Analytical Studies Branch Research Paper Series, Statistics Canada, catalogue no. 11F0019MIE, No. 251.

**Table 1: Education status of 24-26-year-olds youth, by region of residence in cycle 4 of the YTIS**

	Canada		Atlantic provinces		Québec		Ontario		Manitoba-Saskatchewan		Alberta		British Columbia	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Education levels obtained or pursued on December 2005														
University graduate	22.3	15.2	27.4	16.7	20.4	11.9	25.4	18.7	18.0	14.7	16.1	12.9	23.1	13.6
University continuer	7.7	5.3	7.9	4.2	8.1	3.8	7.6	5.7	9.9	4.3	5.9	4.1	7.8	9.2
University	30.0	20.5	35.3	28.2	28.2	15.7	33.0	24.4	22.9	19.0	22.0	17.0	30.9	22.8
College graduate	20.1	18.5	17.2	18.7	21.0	23.0	23.4	18.0	16.3	14.4	16.9	15.7	15.3	16.1
College continuer	4.6	3.9	1.8	2.2	6.8	6.9	4.2	2.9	2.4	3.4	3.4	1.2	5.4	4.8
College	24.7	22.4	19.0	20.9	27.8	29.9	27.6	20.9	18.7	17.8	20.3	16.9	20.9	20.9
PSE graduate continuer	10.5	11.9	8.2	14.2	10.1	5.9	11.3	14.3	12.8	12.5	10.7	12.8	8.6	13.9
HS	3.7	3.8	7.1	6.3	2.2	2.0	3.5	2.9	5.4	4.2	4.9	5.7	2.9	6.2
PSE trade/vocational	10.3	11.7	10.3	10.7	10.7	13.3	9.1	11.8	9.2	12.7	10.1	9.5	13.3	10.8
PSE partial-with HS	24.5	27.4	25.6	31.2	23.0	21.2	23.9	29.0	27.4	29.4	25.7	28.0	24.8	30.9
PSE														
High-School-other	10.8	16.6	12.0	17.1	7.9	15.7	7.7	15.0	14.9	22.2	19.6	21.6	13.4	16.2
High school & other PSE	5.4	3.9	4.1	3.8	6.3	5.7	4.6	3.3	5.4	3.1	6.3	4.1	5.5	2.2
High school	16.2	20.5	16.1	20.9	14.2	20.9	12.3	18.3	20.3	25.3	25.9	25.7	18.9	18.4
High school dropout	4.8	9.3	4.0	6.2	6.6	12.3	3.3	7.5	5.7	8.7	6.0	12.6	4.5	7.1
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Age youth obtained a high school diploma														
15-19 years	86.9	79.6	91.2	82.5	84.3	74.3	88.7	82.6	87.4	80.7	82.1	76.9	88.4	81.6
20-24 years	4.2	5.3	2.5	5.9	5.1	7.6	4.0	4.5	4.7	6.2	4.6	4.9	3.4	2.4
Age missing	3.2	4.5	1.2	3.8	3.0	3.8	2.7	4.3	2.1	2.7	5.8	4.7	3.3	7.7
No high school diploma	5.8	10.7	4.2	7.8	7.6	14.3	4.6	8.7	5.8	10.4	7.5	13.5	4.8	8.3
Observations un-weighted	6,263	5,996	1,138	1,051	1,325	1,290	1,763	1,708	876	841	689	657	472	449
Weighted	585,242	609,282	43,504	45,417	145,665	150,898	208,245	220,357	38,033	39,408	75,500	75,807	74,295	77,396

Source: Authors' calculation from cycle 4 weighted micro-data of the YTIS survey. Percentage may not add to 100 because of rounding.

**Table 2: Labour outcome measures and definitions in cycle 4 of the YITS**

Measures	Definition
Employed	Had a job in December 2005
Employment insurance	1 if received employment insurance in 2005, 0 otherwise
Social assistance	1 if received social assistance in 2005, 0 otherwise
Earnings	Annual wages plus net self-employment earnings in 2005
Hour wage rate last job	Log hourly wage of last job declared Jan04-Dec05
Monthly wage last job	Monthly wage of last job declared Jan04-Dec05
Employer training	Took employer organized training Jan04-Dec05
Career training	Took job or career related training Jan04-Dec05
Total training	Took employer or career training Jan04-Dec05
Volunteer activities	1 if any type of volunteer unpaid activities, 0 otherwise
Frequency of activities	1 no volunteer activities to 5 once a week

**Table 3: Selected explanatory variables (reference case for regressions in parenthesis) used in estimations**

Age	Age 24 to 26 years as of December 2005
Male	1 if male, 0 otherwise in estimations with both gender
(Separated, divorced, n.s.)	1 if marital status separated, divorced or not stated, 0 otherwise
Married, common law	1 if married or common law, 0 otherwise
Single	1 if single, 0 otherwise
Have children	1 if have one or more children, 0 otherwise
Citizen by birth	1 if Canadian by birth, 0 otherwise
(English and French)	1 if speak English and French, 0 otherwise
English	1 if speak English only, 0 otherwise
French	1 if speak French only, 0 otherwise
Other language	1 if other than English or French or not stated, 0 otherwise
Visible minority	1 if visible minority, 0 otherwise
Urban	1 if live in an urban area, 0 otherwise
Limitations-work	1 if have work limitations (physical, mental or health) sometimes or often, 0 otherwise
Social support scale	Social support received from friends, family, and other sources; standardized scale with mean 0 and standard deviation of 1
Computer skills	Self-reported 1 poor to 5 excellent
Writing skills	Self-reported 1 poor to 5 excellent
Reading skills	Self-reported 1 poor to 5 excellent
Communicating skills	Self-reported 1 poor to 5 excellent
Problem solving skills	Self-reported 1 poor to 5 excellent
Math skills	Self-reported 1 poor to 5 excellent
Work months	Number of months had a job Jan99 to Dec04
Student months	Number of months was a full-time student Jan99 to Dec05
(Ontario)	1 if lives in Ontario, 0 otherwise
Atlantic provinces	1 if lives in any Atlantic province, 0 otherwise
Québec	1 if lives in Québec, 0 otherwise
Manitoba-Saskatchewan	1 if lives in Manitoba or Saskatchewan, 0 otherwise
Alberta	1 if lives in Alberta, 0 otherwise
British Columbia	1 if lives in British Columbia, 0 otherwise
<b>Age youth obtained his/her high school diploma or equivalency</b>	
(No HS diploma)	1 if no high school diploma or equivalency, 0 otherwise
HS 15-19 years	1 if high school diploma obtained at ages 15 to 19, 0 otherwise
HS 20-26 years	1 if high school diploma obtained at ages 20 to 26, 0 otherwise
HS age not stated	1 if high school diploma obtained at age not stated, 0 otherwise
<b>Education status: highest certificate, diploma or degree attained or attended as of December 2005</b>	
(University graduate)	1 if bachelor's degree, first professional degree, graduate-level diploma or certificate above bachelor's and below master's, master's degree, Ph.D. degree, diploma, certificate or license from a professional association (accounting, banking or insurance), other level of postsecondary, 0 otherwise
University continuer	1 if same programs as university graduate taken as of December 2005, 0 otherwise
College graduate	1 if college or CEGEP diploma, university transfer diploma at a college or CEGEP, college post-diploma or graduate level program (college diploma or higher first), university diploma or certificate below bachelor's (undergraduate level), 0 otherwise
College continuer	1 if same programs as college graduate taken as of December 2005, 0 otherwise
PSE-trade	1 if postsecondary attestation of vocational specialisation, private business school or training institute diploma or certificate, registered apprenticeship program, 0 otherwise
PSE-part-HS	1 if high school diploma and some partial postsecondary studies without certificate, diploma or degree, 0 otherwise
PSE-grad-HS-continuer	1 if high school diploma, graduate and continuer of postsecondary program, 0 other wise
High-School-other	1 if high school diploma only, 0 other wise
High school and other PSE	1 if high school diploma only and other not stated postsecondary programs, 0 other wise
Dropout	1 if no high school diploma or equivalency, 0 otherwise



Table 4A: Marginal effects of Probit estimations of having a job in December 2005, by level of education and gender

Specification	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Females	Females 6 months	Females 12 months	Males	Males 6 months	Males 12 months
College-graduate	-0.054** (0.02)	-0.040+ (0.02)	-0.029 (0.02)	-0.031 (0.02)	-0.024 (0.02)	-0.011 (0.02)
PSE-trade	-0.105** (0.05)	-0.073 (0.05)	-0.079 (0.05)	-0.117** (0.06)	-0.065 (0.05)	-0.073 (0.05)
PSE-part-HS	-0.111*** (0.04)	-0.079** (0.04)	-0.075** (0.04)	-0.045 (0.03)	-0.026 (0.03)	-0.024 (0.02)
High School-only	-0.056 (0.04)	-0.010 (0.04)	-0.003 (0.04)	-0.013 (0.03)	0.045** (0.02)	0.020 (0.02)
High-School-other	-0.083** (0.04)	-0.031 (0.03)	-0.049 (0.03)	-0.070+ (0.04)	-0.033 (0.03)	-0.020 (0.03)
Dropout	-0.194*** (0.07)	-0.091+ (0.05)	-0.078 (0.05)	-0.113** (0.05)	-0.064 (0.05)	-0.044 (0.04)
Age	0.008 (0.01)	0.008 (0.01)	0.001 (0.01)	0.002 (0.01)	0.007 (0.01)	0.013** (0.01)
Atlantic Provinces	0.001 (0.02)	0.006 (0.02)	0.012 (0.03)	-0.014 (0.02)	-0.009 (0.02)	-0.013 (0.01)
Québec	0.030 (0.02)	0.045** (0.02)	0.050**** (0.01)	0.007 (0.02)	0.022 (0.02)	0.015 (0.02)
Man-Saskatchewan	0.009 (0.02)	0.014 (0.02)	0.002 (0.02)	0.014 (0.02)	0.025+ (0.01)	0.019* (0.01)
Alberta	0.018 (0.02)	0.015 (0.02)	0.020 (0.01)	0.016 (0.02)	0.017 (0.02)	0.035**** (0.01)
British Columbia	0.036+ (0.02)	0.028 (0.02)	0.024* (0.01)	0.004 (0.02)	0.018 (0.02)	0.003 (0.02)
Children	-0.149**** (0.02)	-0.137**** (0.02)	-0.112** (0.02)	-0.011 (0.03)	-0.009 (0.02)	-0.012 (0.02)
Couple	-0.029 (0.05)	-0.026 (0.04)	0.020 (0.03)	0.076** (0.03)	0.049 (0.04)	0.035 (0.02)
Single	-0.023 (0.05)	-0.018 (0.04)	0.016 (0.07)	0.043 (0.05)	0.024 (0.05)	0.021 (0.03)
Citizen by birth	-0.012 (0.03)	0.006 (0.03)	-0.002 (0.02)	-0.030 (0.02)	-0.029 (0.02)	-0.021*** (0.01)
English	0.023 (0.02)	0.006 (0.02)	0.022 (0.02)	0.025 (0.02)	0.021 (0.02)	0.023 (0.02)
French	0.018 (0.02)	-0.005 (0.02)	-0.021 (0.02)	-0.021 (0.04)	-0.015 (0.04)	0.010 (0.02)
Visible-minority	-0.038 (0.04)	-0.011 (0.03)	-0.039 (0.04)	-0.035 (0.03)	-0.043 (0.03)	-0.025 (0.03)
Urban	0.035** (0.02)	0.029+ (0.02)	0.020 (0.01)	0.024 (0.02)	0.019 (0.02)	-0.001 (0.01)
Limitations-work	-0.053**** (0.02)	-0.047**** (0.01)	-0.020 (0.01)	-0.049**** (0.01)	-0.044**** (0.01)	-0.008 (0.01)
Social-support-scale	0.004 (0.01)	0.002 (0.01)	0.003 (0.01)	-0.003 (0.01)	-0.001 (0.01)	0.000 (0.01)
Computer-skill	0.012+ (0.01)	0.007 (0.01)	0.009 (0.01)	0.006 (0.01)	0.002 (0.01)	0.002 (0.01)
Writing-skill	-0.009 (0.01)	-0.011 (0.01)	-0.012 (0.01)	0.010 (0.01)	0.013 (0.01)	0.009 (0.01)
Reading-skill	-0.009 (0.01)	-0.004 (0.01)	-0.004 (0.01)	0.007 (0.01)	0.006 (0.01)	0.005 (0.01)
Oral-skill	0.008 (0.01)	0.013+ (0.01)	0.013** (0.01)	0.004 (0.01)	0.007 (0.01)	0.001 (0.01)
Solving-prob.-skill	0.022** (0.01)	0.017** (0.01)	0.009 (0.01)	-0.008 (0.01)	-0.009 (0.01)	-0.003 (0.01)
Math-skill	-0.004 (0.01)	-0.003 (0.01)	-0.001 (0.01)	0.006 (0.01)	0.005 (0.01)	-0.001 (0.00)
Work-months	0.005**** (0.00)	0.004**** (0.00)	0.001**** (0.00)	0.005**** (0.00)	0.005**** (0.00)	0.003**** (0.00)
Student-months	-0.001 (0.00)	0.001 (0.00)	-0.001 (0.00)	-0.002*** (0.00)	-0.000 (0.00)	0.000 (0.00)
N	4,622	4,375	3,725	4,498	4,265	3,803
Pseudo R2	0.192	0.203	0.139	0.140	0.141	0.124

Marginal effects for discrete change of dummy variable from 0 to 1; standard errors in parentheses: +  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , \*\*\*\*  $p < 0.001$ .

(1) to (6) exclude university and college continuers, pse graduate with high school continuers, and language not stated; not a full-time student for the last 6 or 12 months (July05-Dec05 or Jan05-Dec05). Reference category for education status is university graduate.

Table 4B: Marginal effects of Probit estimations of having a job in December 2005, by level of education and gender, lower education

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	Females		Females 6 months		Males		Males 6 months		Females 6 months		Males 6 months	
College graduate												
PSE-trade	-0.031	(0.05)	-0.054	(0.05)	-0.008	(0.04)	-0.08	(0.03)				
PSE-part-HS	-0.044	(0.04)	-0.064*	(0.04)	0.027	(0.02)	0.009	(0.02)				
High School-only	0.013	(0.04)	0.022	(0.04)	0.048 <sup>+</sup>	(0.02)	0.063****	(0.01)				
High-School-other												
Dropout	-0.089***	(0.05)	-0.058	(0.04)	-0.028	(0.03)	-0.028	(0.03)				
HS age 15-19 years									0.023	(0.04)	0.037	(0.02)
HS age 20-24 years									0.086***	(0.03)	0.006	(0.03)
HS age not stated									-0.004	(0.06)	0.016	(0.03)
Age	0.005	(0.02)	0.005	(0.01)	-0.007	(0.01)	0.001	(0.01)	0.004	(0.01)	0.003	(0.01)
Atlantic Provinces	-0.009	(0.04)	-0.001	(0.03)	-0.005	(0.01)	-0.001	(0.02)	0.003	(0.03)	0.000	(0.02)
Québec	-0.005	(0.06)	0.046	(0.05)	0.002	(0.04)	0.019	(0.03)	0.048	(0.05)	0.024	(0.03)
Man-Saskatchewan	0.002	(0.04)	0.021	(0.04)	0.027	(0.02)	0.028	(0.02)	0.025	(0.04)	0.029	(0.02)
Alberta	0.014	(0.04)	0.021	(0.04)	0.032	(0.03)	0.027	(0.02)	0.029	(0.04)	0.026	(0.02)
British Columbia	0.024 <sup>+</sup>	(0.04)	0.043	(0.04)	-0.002	(0.03)	0.013	(0.02)	0.044	(0.04)	0.010	(0.02)
Children	-0.152****	(0.03)	-0.147****	(0.03)	-0.021	(0.03)	-0.021	(0.03)	-0.155****	(0.03)	-0.023	(0.03)
Couple	0.090	(0.08)	0.004	(0.07)	0.090**	(0.03)	0.063*	(0.03)	0.015	(0.07)	0.060 <sup>+</sup>	(0.03)
Single	0.025	(0.08)	0.016	(0.07)	0.059	(0.05)	0.046	(0.06)	0.024	(0.07)	0.038	(0.05)
Citizen by birth	-0.050	(0.05)	-0.019	(0.05)	-0.037***	(0.01)	-0.062****	(0.02)	-0.016	(0.05)	-0.064****	(0.02)
English	-0.015	(0.05)	-0.030	(0.04)	0.022	(0.03)	0.017	(0.03)	-0.031	(0.04)	0.020	(0.03)
French	-0.012	(0.05)	-0.025	(0.05)	0.030	(0.03)	0.043**	(0.02)	-0.025	(0.05)	0.044**	(0.02)
Visible-minority	-0.096	(0.09)	-0.077	(0.09)	-0.055	(0.06)	-0.064	(0.06)	-0.064	(0.09)	-0.068	(0.06)
Urban	0.062***	(0.03)	0.045	(0.03)	0.043**	(0.02)	0.039**	(0.02)	0.048 <sup>+</sup>	(0.03)	0.042**	(0.02)
Limitations-work	-0.097****	(0.03)	-0.087***	(0.03)	-0.045****	(0.02)	-0.038**	(0.01)	-0.090***	(0.03)	-0.041***	(0.02)
Social-support-scale	0.005	(0.01)	-0.001	(0.01)	-0.000	(0.01)	0.003	(0.01)	-0.002	(0.01)	0.003	(0.01)
Computer-skill	0.021	(0.01)	0.018	(0.01)	0.002	(0.01)	-0.002	(0.01)	0.017	(0.01)	-0.002	(0.01)
Writing-skill	-0.010	(0.02)	-0.017	(0.02)	0.011	(0.01)	0.015	(0.01)	-0.015	(0.02)	0.015	(0.01)
Reading-skill	-0.013	(0.02)	-0.007	(0.02)	0.005	(0.01)	0.001	(0.01)	-0.006	(0.02)	0.002	(0.01)
Oral-skill	-0.010	(0.01)	0.007	(0.01)	0.014	(0.01)	0.016 <sup>+</sup>	(0.01)	0.006	(0.01)	0.018**	(0.01)
Solving-prob.-skill	0.052	(0.02)	0.035**	(0.02)	-0.005	(0.01)	-0.003	(0.01)	0.034**	(0.02)	-0.004	(0.01)
Math-skill	-0.000	(0.01)	0.007	(0.01)	-0.004	(0.01)	-0.007	(0.01)	0.008	(0.01)	-0.005	(0.01)
Work-months	0.007***	(0.00)	0.007****	(0.00)	0.007****	(0.00)	0.006****	(0.00)	0.007***	(0.00)	0.006****	(0.00)
Student-months	-0.000	(0.00)	0.001	(0.00)	-0.001	(0.00)	0.000	(0.00)	0.001	(0.00)	0.000	(0.00)
N	1,919		1,805		2,467		2,348		1,805		2,3483	
Pseudo-R2	0.199		0.209		0.190		0.206		0.206		0.200	

Marginal effects for discrete change of dummy variable from 0 to 1; Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$ , <sup>\*\*\*\*</sup>  $p < 0.001$ . (1) to (6) exclude university and college graduates and continuers, pse graduates with high school continuers, and language not stated; not a full-time student for the last 6 months, July05-Dec05. Reference category for education status is High-School-other and no HS diploma for specification with age received a HS diploma.

Table 5A: Marginal effects of Probit estimations of employment insurance benefits in 2005 by level of education and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	Females		Females Lower education		Males		Males Lower education		Female Lower education		Males Lower education	
College graduate	0.037 <sup>+</sup>	(0.02)			0.050	(0.04)						
PSE-trade	-0.042 <sup>**</sup>	(0.02)	-0.022	(0.03)	0.045	(0.05)	-0.056	(0.04)				
PSE-part-HS	0.029	(0.03)	0.084 <sup>**</sup>	(0.03)	0.093 <sup>+</sup>	(0.05)	-0.015	(0.03)				
High school-only	-0.006	(0.05)	0.036	(0.06)	0.053	(0.06)	-0.040	(0.04)				
High-School-other	-0.014	(0.03)			0.103 <sup>+</sup>	(0.06)						
Dropout	0.006	(0.05)	0.038	(0.05)	0.053	(0.06)	-0.041	(0.03)				
HS age 15-19 years									-0.006	(0.04)	0.010	(0.03)
HS age 20-26 years									-0.013	(0.05)	0.197 <sup>**</sup>	(0.08)
HS age not stated									0.038	(0.07)	0.009	(0.06)
Age	-0.003	(0.01)	0.017	(0.02)	0.012	(0.01)	0.008	(0.02)	-0.010	(0.01)	0.017	(0.02)
Atlantic Provinces	0.061 <sup>**</sup>	(0.03)	0.009	(0.03)	0.135 <sup>****</sup>	(0.04)	0.149 <sup>****</sup>	(0.04)	0.094 <sup>**</sup>	(0.04)	0.142 <sup>***</sup>	(0.05)
Québec	0.036	(0.03)	0.001	(0.06)	0.092 <sup>+</sup>	(0.05)	0.157 <sup>**</sup>	(0.07)	0.106	(0.07)	0.150 <sup>+</sup>	(0.08)
Man-Saskatchewan	-0.014	(0.02)	-0.045	(0.03)	-0.000	(0.03)	-0.027	(0.03)	0.021	(0.04)	-0.032	(0.04)
Alberta	-0.006	(0.02)	-0.083 <sup>***</sup>	(0.03)	0.027	(0.04)	-0.006	(0.05)	-0.024	(0.02)	0.001	(0.05)
British Columbia	-0.015	(0.03)	-0.058 <sup>+</sup>	(0.04)	0.031	(0.04)	0.003	(0.04)	0.009	(0.04)	0.021	(0.05)
Children			0.227 <sup>****</sup>	(0.03)			-0.035	(0.03)				
Couple	-0.006	(0.05)	0.006	(0.07)	-0.022	(0.10)	-0.022	(0.08)	-0.065	(0.04)	-0.053	(0.11)
Single	-0.019	(0.06)	-0.012	(0.07)	-0.035	(0.11)	-0.041	(0.09)	-0.106	(0.07)	-0.100	(0.15)
Citizen by birth	0.002	(0.03)	0.103 <sup>***</sup>	(0.03)	-0.061	(0.05)	-0.083	(0.07)	-0.029	(0.06)	-0.101	(0.08)
English	0.003	(0.02)	0.039	(0.03)	-0.057	(0.04)	-0.025	(0.05)	0.029	(0.02)	-0.036	(0.06)
French	0.089 <sup>**</sup>	(0.04)	0.102	(0.07)	0.042	(0.04)	0.020	(0.04)	0.039	(0.06)	0.020	(0.05)
Visible-minority	-0.053 <sup>**</sup>	(0.02)	0.030	(0.07)	-0.067 <sup>**</sup>	(0.03)	-0.101 <sup>**</sup>	(0.04)	-0.062 <sup>***</sup>	(0.02)	-0.105 <sup>**</sup>	(0.05)
Urban	-0.060 <sup>***</sup>	(0.02)	-0.024	(0.03)	-0.043 <sup>+</sup>	(0.03)	-0.007	(0.02)	-0.014	(0.03)	-0.026	(0.03)
Limitations-work	0.031	(0.02)	0.004	(0.03)	0.007	(0.02)	0.012	(0.03)	-0.002	(0.02)	0.017	(0.03)
Social-support-scale	-0.004	(0.01)	0.020 <sup>+</sup>	(0.01)	0.001	(0.01)	0.006	(0.01)	0.001	(0.01)	0.002	(0.01)
Computer-skill	-0.003	(0.01)	-0.020	(0.01)	-0.022 <sup>***</sup>	(0.01)	-0.019 <sup>+</sup>	(0.01)	-0.011	(0.01)	-0.014	(0.01)
Writing-skill	-0.002	(0.01)	-0.023	(0.02)	0.000	(0.01)	-0.002	(0.01)	0.005	(0.02)	-0.007	(0.01)
Reading-skill	0.005	(0.01)	0.011	(0.02)	0.006	(0.01)	-0.006	(0.02)	-0.003	(0.01)	0.007	(0.02)
Oral-skill	0.007	(0.01)	-0.006	(0.01)	-0.004	(0.01)	0.008	(0.01)	-0.000	(0.01)	-0.005	(0.01)
Solving-prob.-skill	0.031 <sup>***</sup>	(0.01)	0.038 <sup>**</sup>	(0.02)	0.008	(0.01)	-0.010	(0.02)	0.037 <sup>***</sup>	(0.01)	-0.012	(0.02)
Math-skill	-0.004	(0.01)	0.010	(0.01)	0.004	(0.01)	0.015	(0.01)	-0.000	(0.01)	0.013	(0.01)
Work-months	-0.000	(0.00)	0.004 <sup>****</sup>	(0.00)	-0.001	(0.00)	-0.001	(0.00)	-0.001	(0.00)	0.000	(0.00)
Student-months	0.000	(0.00)			0.000	(0.00)			0.001	(0.00)	0.000	(0.00)
N	2,812		1,735		3,357		2,276		985		1,878	
Pseudo R2	0.0800		0.0809		0.0770		0.0811		0.1025		0.0960	

Marginal effects for discrete change of dummy variable from 0 to 1; standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$ , <sup>\*\*\*\*</sup>  $p < 0.001$ . (1) to (4) exclude university and college continuers, pse graduate with high school continuers, and language not stated; (2) and (4) include having a child; (5)-(6) also excludes university and college graduates; (1)-(6) not a full-time student for the last 12 months, Jan05-Dec05. Reference category for education status is university graduate and no HS diploma for specification with age.

Table 5B: Marginal effects of Probit estimations of having received social assistance in 2005 by level of education and gender

Specification	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Females	Female Lower education	Males	Males Lower education	Female Lower education	Males Lower education
College graduate	0.001 (0.01)		0.008 (0.01)			
PSE-trade	0.006 (0.01)	-0.015** (0.01)	-0.002 (0.00)	-0.012**** (0.00)		
PSE-part-HS	0.016+ (0.01)	-0.007 (0.01)	0.025*** (0.02)	-0.006 (0.00)		
High school-only	0.015 (0.02)	-0.011 (0.01)	0.001 (0.01)	-0.011**** (0.00)		
High-School-other	0.024*** (0.01)		0.032*** (0.02)			
Dropout	0.047*** (0.03)	0.014 (0.01)	0.098**** (0.06)	0.021** (0.01)		
HS age15-19 years					-0.024*** (0.01)	-0.030*** (0.01)
HS age 20-26 years					0.018 (0.02)	-0.005 (0.00)
HS age not stated					0.006 (0.02)	-0.011*** (0.00)
Age	0.008 (0.01)	0.016 (0.02)	-0.001 (0.00)	-0.002 (0.01)	0.020 (0.02)	-0.004 (0.01)
Atlantic Provinces	0.003 (0.01)	0.002 (0.02)	0.001 (0.00)	0.002 (0.01)	0.007 (0.02)	0.003 (0.01)
Québec	0.015*** (0.01)	0.028+ (0.02)	-0.004** (0.00)	-0.008*** (0.00)	0.025 (0.02)	-0.011*** (0.00)
Man-Saskatchewan	-0.001 (0.00)	-0.002 (0.01)	-0.004+ (0.00)	-0.007+ (0.00)	-0.002 (0.01)	-0.008** (0.00)
Alberta	-0.004 (0.00)	-0.014 (0.01)	-0.003 (0.00)	-0.005 (0.00)	-0.014 (0.01)	-0.005 (0.00)
British Columbia	0.034*** (0.01)	0.060**** (0.02)	0.019*** (0.01)	0.033*** (0.02)	0.060**** (0.02)	0.042*** (0.02)
Children	-0.023*** (0.01)	-0.059*** (0.02)	-0.008+ (0.00)	-0.012 (0.01)	-0.058** (0.02)	-0.017+ (0.01)
Couple	-0.002 (0.01)	-0.004 (0.02)	-0.001 (0.01)	0.003 (0.01)	-0.005 (0.02)	0.000 (0.01)
Single	-0.001 (0.01)	-0.013 (0.02)	-0.003 (0.01)	-0.014 (0.02)	-0.011 (0.02)	-0.019 (0.02)
Citizen by birth	0.000 (0.00)	-0.009 (0.01)	-0.000 (0.00)	0.004 (0.01)	-0.008 (0.01)	0.004 (0.01)
English	0.002 (0.01)	-0.003 (0.01)	-0.002 (0.00)	0.001 (0.01)	-0.007 (0.01)	0.001 (0.01)
French	-0.005 (0.00)	-0.010 (0.01)	-0.004+ (0.00)	-0.008 (0.00)	-0.007 (0.01)	-0.010+ (0.00)
Visible-minority	-0.000 (0.00)	-0.007 (0.01)	0.001 (0.00)	0.003 (0.00)	-0.009 (0.01)	0.003 (0.00)
Urban	0.011**** (0.00)	0.029*** (0.01)	0.006**** (0.00)	0.011**** (0.00)	0.030**** (0.01)	0.014**** (0.00)
Limitations-work	-0.004*** (0.00)	-0.011*** (0.00)	-0.001 (0.00)	-0.002 (0.00)	-0.009** (0.00)	-0.002 (0.00)
Social-support-scale	0.001 (0.00)	0.004 (0.00)	0.002** (0.00)	0.005*** (0.00)	0.004 (0.00)	0.005*** (0.00)
Computer-skill	-0.002 (0.00)	-0.004 (0.00)	-0.003** (0.00)	-0.004 (0.00)	-0.004 (0.00)	-0.004 (0.00)
Writing-skill	0.002 (0.00)	0.004 (0.00)	0.004*** (0.00)	0.008** (0.00)	0.004 (0.00)	0.009** (0.00)
Reading-skill	-0.001 (0.00)	-0.002 (0.00)	-0.001 (0.00)	-0.003 (0.00)	-0.003 (0.00)	-0.004 (0.00)
Oral-skill	-0.002 (0.00)	-0.005 (0.01)	0.000 (0.00)	0.001 (0.00)	-0.006 (0.01)	0.001 (0.00)
Solving-prob.-skill	-0.001 (0.00)	-0.004 (0.00)	-0.001 (0.00)	-0.001 (0.00)	-0.004 (0.00)	-0.002 (0.00)
Math-skill	-0.001**** (0.00)	-0.002**** (0.00)	-0.000**** (0.00)	-0.001**** (0.00)	-0.002**** (0.00)	-0.001**** (0.00)
Work-months	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	-0.000 (0.00)
N	4,622	1,919	4,498	2,467	1,919	2,467
Pseudo R2	0.366	0.338	0.341	0.330	0.349	0.313

Marginal effects for discrete change of dummy variable from 0 to 1; standard errors in parentheses: +  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , \*\*\*\*  $p < 0.001$ . (1) to (6) excludes university and college continuers, pse graduate with high school continuers, and language not stated. Reference category for education status is university graduate (1) and (3); High-School-other (2) and (4); and no HS diploma for specification with age received a HS diploma (5)-(6).

Table 6: Tobit estimations of 2005 annual earnings in dollars by educational levels and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	Females		Females 6 months		Females 12 months		Males		Males 6 months		Males 12 months	
College-graduate	-4312 <sup>***</sup>	(1109)	-3893 <sup>***</sup>	(1106)	-4697 <sup>***</sup>	(1182)	-5048 <sup>***</sup>	(2055)	-4888 <sup>*</sup>	(1106)	7062 <sup>***</sup>	(2083)
PSE-trade	-10233 <sup>***</sup>	(1549)	-9226 <sup>***</sup>	(1591)	-9669 <sup>***</sup>	(1649)	-7899 <sup>***</sup>	(2858)	-6412 <sup>*</sup>	(1591)	-8345 <sup>***</sup>	(3145)
PSE-part-HS	-9457 <sup>***</sup>	(1348)	-9101 <sup>***</sup>	(1330)	-9325 <sup>***</sup>	(1420)	-10446 <sup>***</sup>	(2074)	-9463 <sup>***</sup>	(1330)	-11366 <sup>***</sup>	(2257)
High-School-other	-10430 <sup>***</sup>	(1611)	-9151 <sup>***</sup>	(1609)	-8864 <sup>***</sup>	(1689)	-11518 <sup>***</sup>	(2400)	-9750 <sup>***</sup>	(1609)	-11437 <sup>***</sup>	(2404)
Dropout	-13890 <sup>***</sup>	(2322)	-11310 <sup>***</sup>	(2058)	-10861 <sup>***</sup>	(2119)	-16027 <sup>***</sup>	(2776)	-14209 <sup>***</sup>	(2058)	-15915 <sup>***</sup>	(2853)
Age	2140 <sup>***</sup>	(435)	2084 <sup>***</sup>	(440)	1934 <sup>***</sup>	(449)	1643 <sup>*</sup>	(722)	1966 <sup>**</sup>	(440)	1337 <sup>+</sup>	(692)
Atlantic Provinces.	-2151 <sup>+</sup>	(911)	-2047 <sup>*</sup>	(920)	-2249 <sup>*</sup>	(959)	-7708 <sup>***</sup>	(1352)	-7526 <sup>***</sup>	(920)	-6948 <sup>***</sup>	(1377)
Québec	-1192	(1583)	-1033	(1543)	-1418	(1674)	-4856 <sup>*</sup>	(1794)	-4399 <sup>*</sup>	(1543)	-4381 <sup>*</sup>	(1917)
Man-Saskatchewan	-1491	(922)	-1306	(935)	-1876 <sup>+</sup>	(980)	-2434	(1754)	-1683	(935)	-1415	(1855)
Alberta	2269 <sup>+</sup>	(1276)	2210 <sup>+</sup>	(1303)	2942 <sup>+</sup>	(1334)	9324 <sup>***</sup>	(2453)	9888 <sup>***</sup>	(1303)	11847 <sup>***</sup>	(2709)
British Columbia	-1798	(1102)	-2082 <sup>+</sup>	(1105)	-2451 <sup>*</sup>	(1157)	-2837 <sup>+</sup>	(1674)	-2260	(1105)	-2295	(1710)
Children	-12559 <sup>***</sup>	(917)	-12509 <sup>***</sup>	(915)	-12529 <sup>***</sup>	(934)	-667	(1619)	-383	(915)	-72	(1681)
Couple	332	(2856)	278	(2920)	-44	(3051)	6122	(5315)	3338	(2920)	2395	(5272)
Single	-1437	(2862)	-1523	(2930)	-1482	(3058)	-2623	(5290)	-5346	(2930)	-6672	(5261)
Citizen by birth	8	(1626)	53	(1586)	228	(1672)	-825	(2952)	-1408	(1586)	456	(2011)
English	-287	(1208)	-444	(1221)	-285	(1336)	775	(1492)	463	(1221)	195	(1559)
French	-371	(1278)	-1423	(1213)	-1431	(1284)	-1632	(1941)	-767	(1213)	342	(1956)
Visible-minority	612	(1696)	1930	(1566)	1868	(1642)	-3567	(2295)	-3312	(1566)	-737	(1687)
Urban	1460	(782)	1683 <sup>+</sup>	(798)	1350 <sup>+</sup>	(804)	-2183 <sup>+</sup>	(1261)	-2281 <sup>+</sup>	(798)	-2199	(1340)
Limitations-work	-3723 <sup>***</sup>	(955)	-3936 <sup>***</sup>	(974)	-4079 <sup>***</sup>	(1026)	-7020 <sup>***</sup>	(1419)	-7041 <sup>***</sup>	(974)	-7120 <sup>***</sup>	(1412)
Social-support-scale	894 <sup>*</sup>	(411)	812 <sup>+</sup>	(416)	778 <sup>+</sup>	(441)	592	(534)	624	(416)	909 <sup>+</sup>	(490)
Computer-skills	744 <sup>+</sup>	(430)	539	(420)	504	(443)	7	(569)	-130	(420)	-627	(502)
Writing-skills	-834	(571)	-1122 <sup>+</sup>	(574)	-1221 <sup>*</sup>	(601)	-694	(713)	-562	(574)	-297	(735)
Reading-skills	-921	(625)	-423	(587)	-222	(612)	-1789 <sup>*</sup>	(809)	-1799 <sup>*</sup>	(587)	-1521 <sup>+</sup>	(808)
Oral-skills	1237 <sup>**</sup>	(442)	1365 <sup>**</sup>	(417)	1508 <sup>**</sup>	(441)	937	(1008)	1058	(417)	94	(752)
Solving-prob.-skills	672	(486)	528	(472)	425	(499)	892	(903)	981	(472)	2029 <sup>**</sup>	(750)
Math-skills	1210 <sup>***</sup>	(337)	1223 <sup>***</sup>	(335)	1205 <sup>***</sup>	(347)	1988 <sup>***</sup>	(511)	2068 <sup>***</sup>	(335)	1564 <sup>**</sup>	(508)
Work-months	219 <sup>***</sup>	(33)	234 <sup>***</sup>	(35)	238 <sup>***</sup>	(37)	437 <sup>***</sup>	(51)	429 <sup>***</sup>	(35)	440 <sup>***</sup>	(56)
Student-months	-136 <sup>***</sup>	(32)	-77 <sup>*</sup>	(33)	13	(36)	-163 <sup>***</sup>	(43)	-92 <sup>*</sup>	(33)	-6	(46)
Constant	-32569 <sup>**</sup>	(12183)	-33472 <sup>**</sup>	(12330)	-30746 <sup>*</sup>	(12622)	-13521	(20519)	-21013	(12330)	-4739	(20443)
N	4,342		4,137		3,710		4,279		4,090		3,736	
Sigma	15063 <sup>***</sup>	(438)	14835 <sup>***</sup>	(443)	14593 <sup>***</sup>	(477)	23959 <sup>***</sup>	(2253)	23976 <sup>***</sup>	(443)	22857 <sup>***</sup>	(2277)
Pseudo-R2	0.0160		0.0164		0.0191		0.008		0.008		0.009	
Left-censored obs.	363		326		309		195		165		144	

Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$ . (1) to (6) exclude university and college continuers, pse graduate with high school continuers, high school graduates with other pse non-stated, and language not stated; (2) and (4) not a full-time student for the last 6 months, July05-Dec05; (3) and (6) not a full-time student for the last 12 months, Jan05-Dec05. Reference category for education status is university graduate.

Table 7: Tobit estimations of 2005 annual earnings in dollars by lower education levels and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	Females 12 months		Females 6 months		Female 12 months		Males 12 months		Males 6 months		Males 12 months	
PSE-part-trade			-6944	(1411)	-521	(1484)			4604 <sup>+</sup>	(2350)	4580 <sup>+</sup>	(2552)
PSE-part-HS			-172	(1196)	-784	(1240)			1248	(1663)	612	(1726)
Dropout			-3003 <sup>+</sup>	(1675)	-1937	(1619)			-3965 <sup>*</sup>	(1858)	-4064 <sup>*</sup>	(1915)
HS age 15-19 years	1597	(1415)					5178 <sup>**</sup>	(1967)				
HS age 20-26 years	5071	(3424)					-1960	(2321)				
HS age not stated	-1334	(2686)					3922	(2521)				
Age	1191 <sup>*</sup>	(572)	1335 <sup>*</sup>	(594)	1225 <sup>*</sup>	(575)	361	(818)	-415	(796)	62	(840)
Atlantic Provinces	-3239 <sup>*</sup>	(1314)	-3821 <sup>**</sup>	(1299)	-3362 <sup>*</sup>	(1313)	-7465 <sup>***</sup>	(1951)	-7482 <sup>***</sup>	(1826)	-7885 <sup>***</sup>	(1894)
Québec	-1288	(2116)	-4237 <sup>+</sup>	(2341)	-1378	(2122)	-7725 <sup>**</sup>	(2808)	-8180 <sup>**</sup>	(2713)	-8118 <sup>**</sup>	(2799)
Man-Saskatchewan	-1115	(1308)	-1822	(1262)	-1106	(1285)	-367	(2666)	-1128	(2592)	-839	(2665)
Alberta	3734 <sup>*</sup>	(1854)	3051 <sup>+</sup>	(1824)	3551 <sup>+</sup>	(1853)	8924 <sup>***</sup>	(2564)	8156 <sup>***</sup>	(2475)	8615 <sup>***</sup>	(2560)
British Columbia	-2626 <sup>+</sup>	(1446)	-3148 <sup>*</sup>	(1440)	-2590 <sup>+</sup>	(1459)	-1909	(2129)	-2019	(2055)	-2020	(2136)
Children	-10176 <sup>***</sup>	(1087)	-9734 <sup>***</sup>	(1076)	-10245 <sup>***</sup>	(1097)	-1335	(1902)	-1322	(1824)	-1029	(1881)
Couple	58	(3286)	-98	(3249)	75	(3291)	3134	(6128)	5930	(5892)	3782	(6040)
Single	637	(3304)	353	(3246)	733	(3296)	-6241	(6048)	-3775	(5802)	-5618	(5969)
Citizen by birth	1653	(1963)	332	(2100)	1672	(1986)	451	(2827)	278	(2725)	326	(2853)
English	-3242 <sup>*</sup>	(1491)	-3209 <sup>*</sup>	(1509)	-3200 <sup>*</sup>	(1501)	-1616	(2241)	-1535	(2129)	-2011	(2198)
French	-1929	(2040)	132	(2218)	-1625	(2027)	1122	(2053)	-677	(2029)	508	(2070)
Visible-minority	3711 <sup>+</sup>	(2036)	925	(2597)	3511 <sup>+</sup>	(2052)	-2048	(2180)	-2266	(2081)	-2215	(2135)
Urban	2875 <sup>**</sup>	(1049)	2621 <sup>*</sup>	(1043)	2826 <sup>**</sup>	(1077)	-1907	(1620)	-2020	(1585)	-2014	(1643)
Limitations-work	-3682 <sup>**</sup>	(1247)	-3642 <sup>**</sup>	(1191)	-3650 <sup>**</sup>	(1246)	-5989 <sup>***</sup>	(1745)	-6005 <sup>***</sup>	(1630)	-6207 <sup>***</sup>	(1666)
Social-support-scale	997 <sup>*</sup>	(508)	1211 <sup>*</sup>	(509)	1104 <sup>*</sup>	(519)	1280 <sup>*</sup>	(592)	1281 <sup>*</sup>	(577)	1336 <sup>*</sup>	(594)
Computer-skills	1290 <sup>**</sup>	(459)	1547 <sup>**</sup>	(496)	1293 <sup>**</sup>	(465)	-1160 <sup>*</sup>	(566)	-1087 <sup>+</sup>	(555)	-1175 <sup>*</sup>	(572)
Writing-skills	-630	(720)	-583	(730)	-636	(739)	555	(840)	331	(836)	608	(855)
Reading-skills	-452	(763)	-1071	(876)	-542	(791)	-2157 <sup>*</sup>	(915)	-1682 <sup>+</sup>	(905)	-2007 <sup>*</sup>	(932)
Oral-skills	1377 <sup>**</sup>	(511)	1148 <sup>*</sup>	(568)	1404 <sup>**</sup>	(517)	558	(986)	285	(950)	405	(987)
Solving-prob.-skills	295	(609)	647	(662)	320	(633)	1526	(941)	1349	(914)	1415	(957)
Math-skills	979 <sup>*</sup>	(430)	777 <sup>+</sup>	(430)	996 <sup>*</sup>	(436)	1563 <sup>*</sup>	(636)	1508 <sup>*</sup>	(634)	1560 <sup>*</sup>	(652)
Work-months	287 <sup>***</sup>	(49)	290 <sup>**</sup>	(50)	280 <sup>***</sup>	(54)	548 <sup>***</sup>	(69)	556 <sup>***</sup>	(64)	567 <sup>***</sup>	(68)
Student-months	-53	(47)	-81 <sup>+</sup>	(46)	-29	(49)	0	(67)	-144 <sup>*</sup>	(61)	-46	(70)
Constant	-28910 <sup>+</sup>	(14937)	-27109 <sup>+</sup>	(14994)	-27606 <sup>+</sup>	(14964)	3481	(22729)	25491	(22173)	14716	(23433)
N	1,519		1,639		1,519		2,109		2,248		2,109	
Sigma	12647 <sup>***</sup>	(541)	12905 <sup>**</sup>	(577)	12697 <sup>***</sup>	(575)	20754 <sup>***</sup>	(1117)	20742 <sup>***</sup>	(1075)	20799 <sup>***</sup>	(1121)
Pseudo-R2	0.0212		0.0205		0.0208		0.0121		0.0123		0.0119	
Left-censored obs.	220		249		219		109		127		109	

Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$ . (1) to (6) exclude university and college continuers and graduates, pse graduate with high school diploma continuers, high school graduates with other pse non-stated, and language not stated; not a full-time student for the last 12/6 months, Jan05-Dec05/July05-Dec05. Reference category for education status is HS diploma only and no HS diploma for age at HS diploma.

Table 8: OLS estimation of log hourly wage rate by educational levels and gender

Specification Sample	(1)		(2)		(3)		(1)		(2)		(3)	
	Females		Females		Females		Males		Males		Males	
					Lower education						Lower education	
College graduate	-0.177***	(0.03)	-0.189***	(0.03)			-0.163***	(0.04)	-0.165***	(0.04)		
PSE-trade	-0.228***	(0.05)	-0.239***	(0.05)	0.100 <sup>+</sup>	(0.05)	-0.164**	(0.05)	-0.167**	(0.06)	0.185***	(0.05)
PSE-part-HS	-0.277***	(0.04)	-0.271***	(0.04)	0.071	(0.05)	-0.285***	(0.05)	-0.286***	(0.05)	0.042	(0.04)
High school-only	-0.176***	(0.05)	-0.204***	(0.05)	0.133*	(0.05)	-0.169**	(0.06)	-0.182**	(0.06)	0.151**	(0.05)
High-School-other	-0.350***	(0.05)	-0.345***	(0.05)			-0.313***	(0.05)	-0.311***	(0.05)		
Dropout	-0.307***	(0.06)	-0.308***	(0.06)	0.038	(0.05)	-0.393***	(0.06)	-0.390***	(0.06)	-0.079*	(0.04)
Age	0.060***	(0.01)	0.053***	(0.01)	0.048 <sup>+</sup>	(0.02)	0.039**	(0.01)	0.037**	(0.01)	0.027	(0.02)
Atlantic Provinces	-0.159***	(0.03)	-0.165***	(0.03)	-0.220***	(0.04)	-0.198***	(0.03)	-0.200***	(0.03)	-0.225***	(0.04)
Québec	0.022	(0.05)	-0.011	(0.04)	-0.094	(0.07)	-0.079 <sup>+</sup>	(0.04)	-0.075	(0.05)	-0.172***	(0.05)
Man-Saskatchewan	-0.105**	(0.03)	-0.122***	(0.03)	-0.114*	(0.05)	-0.116***	(0.03)	-0.126***	(0.04)	-0.189***	(0.05)
Alberta	0.052	(0.04)	0.057	(0.04)	0.055	(0.06)	0.097**	(0.03)	0.098**	(0.03)	0.058	(0.04)
British Columbia	0.007	(0.04)	-0.008	(0.03)	-0.020	(0.05)	0.049	(0.04)	0.036	(0.04)	0.009	(0.06)
Children	-0.117***	(0.03)	-0.114***	(0.03)	-0.085*	(0.03)	0.047	(0.03)	0.050	(0.03)	0.015	(0.04)
Couple	-0.008	(0.08)	0.003	(0.08)	0.034	(0.09)	0.017	(0.08)	-0.003	(0.08)	0.018	(0.09)
Single	-0.093	(0.08)	-0.081	(0.08)	-0.004	(0.09)	-0.077	(0.08)	-0.098	(0.08)	-0.088	(0.09)
Citizen by birth	-0.004	(0.05)	0.001	(0.05)	0.078	(0.10)	-0.005	(0.05)	-0.020	(0.05)	-0.035	(0.07)
English	0.034	(0.04)	0.017	(0.03)	-0.075 <sup>+</sup>	(0.04)	-0.051	(0.04)	-0.047	(0.04)	-0.088*	(0.04)
French	-0.003	(0.04)	0.018	(0.04)	0.038	(0.07)	0.016	(0.04)	0.013	(0.04)	0.065	(0.05)
Visible-minority	-0.012	(0.05)	-0.015	(0.05)	-0.011	(0.08)	-0.049	(0.04)	-0.079	(0.05)	-0.114*	(0.06)
Urban	0.019	(0.03)	0.022	(0.03)	0.094*	(0.04)	0.020	(0.02)	0.027	(0.03)	0.028	(0.03)
Limitations-work	-0.061*	(0.02)	-0.054*	(0.03)	-0.059 <sup>+</sup>	(0.03)	-0.009	(0.03)	-0.010	(0.03)	-0.003	(0.03)
Social-support-scale	0.026*	(0.01)	0.026*	(0.01)	0.014	(0.02)	0.011	(0.01)	0.009	(0.01)	0.036**	(0.01)
Computer-skill	0.019	(0.01)	0.023 <sup>+</sup>	(0.01)	0.028	(0.02)	-0.006	(0.01)	-0.005	(0.01)	-0.015	(0.01)
Writing-skill	-0.007	(0.02)	-0.010	(0.02)	-0.017	(0.02)	0.005	(0.01)	0.011	(0.02)	0.015	(0.02)
Reading-skill	0.002	(0.02)	0.004	(0.02)	0.033	(0.02)	-0.040**	(0.01)	-0.035*	(0.02)	-0.019	(0.02)
Oral-skill	0.015	(0.01)	0.015	(0.01)	0.003	(0.02)	-0.023 <sup>+</sup>	(0.01)	-0.021	(0.01)	-0.003	(0.02)
Solving-prob.-skill	0.005	(0.02)	0.004	(0.02)	-0.008	(0.03)	0.036*	(0.02)	0.030 <sup>+</sup>	(0.02)	-0.003	(0.02)
Math-skill	0.030**	(0.01)	0.029**	(0.01)	0.034*	(0.01)	0.040***	(0.01)	0.037**	(0.01)	0.036**	(0.01)
Work-months	0.001	(0.00)	0.001	(0.00)	0.002	(0.00)	0.007***	(0.00)	0.007***	(0.00)	0.009***	(0.00)
Student-months	0.002 <sup>+</sup>	(0.00)	0.003*	(0.00)	0.002	(0.00)	-0.000	(0.00)	0.001	(0.00)	-0.001	(0.00)
Constant	1.054**	(0.39)	1.233**	(0.38)	0.826	(0.53)	1.820**	(0.37)	1.844**	(0.39)	1.853***	(0.45)
N	4,029		3,609		1,539		4,006		3,663		2,116	
Adj. R <sup>2</sup>	0.187		0.204		0.109		0.147		0.158		0.149	

Marginal effects; for discrete change of dummy variable from 0 to 1; Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

(1) to (3) exclude university and college continuers, pse graduate with high school continuers, and language not stated; (3) also excludes university and college graduates; (2) not a full-time student for the last 6 months, July05-Dec05; (3) not a full-time student for the last 12 months, Jan05-Dec05. Reference category for education status is university graduate (1) and (2); High-School-other (3).

Table 9: OLS estimation of ln hourly wage rate by lower educational levels and gender

Specification	(1)		(2)		(3)		(1)		(2)		(3)	
Sample	Females		Females		Females		Males		Males		Males	
PSE-trade	0.12 <sup>+</sup>	(0.05)	0.10 <sup>+</sup>	(0.05)			0.19 <sup>***</sup>	(0.05)	0.18 <sup>***</sup>	(0.05)		
PSE-part-HS	0.08 <sup>+</sup>	(0.05)	0.07	(0.05)			0.05	(0.04)	0.04	(0.04)		
Dropout	0.05	(0.05)	0.04	(0.05)			-0.08 <sup>*</sup>	(0.04)	-0.08 <sup>*</sup>	(0.04)		
HS age 15-19 years					-0.01	(0.05)					0.07 <sup>+</sup>	(0.04)
HS age 20-26 years					0.05	(0.10)					0.06	(0.05)
HS age not stated					0.03	(0.08)					0.07	(0.06)
Age	0.04 <sup>*</sup>	(0.02)	0.05 <sup>*</sup>	(0.02)	0.06 <sup>**</sup>	(0.02)	0.01	(0.02)	0.03	(0.02)	0.04 <sup>+</sup>	(0.02)
Atlantic provinces	-0.22 <sup>***</sup>	(0.04)	-0.22 <sup>***</sup>	(0.04)	-0.2 <sup>***</sup>	(0.04)	-0.20 <sup>***</sup>	(0.04)	-0.21 <sup>***</sup>	(0.05)	-0.2 <sup>***</sup>	(0.05)
Québec	-0.03	(0.07)	-0.06	(0.08)	-0.05	(0.08)	-0.16 <sup>**</sup>	(0.05)	-0.16 <sup>**</sup>	(0.05)	-0.2 <sup>**</sup>	(0.05)
Man-Saskatchewan	-0.15 <sup>**</sup>	(0.05)	-0.13 <sup>*</sup>	(0.05)	-0.1 <sup>*</sup>	(0.06)	-0.19 <sup>***</sup>	(0.05)	-0.19 <sup>***</sup>	(0.05)	-0.2 <sup>***</sup>	(0.05)
Alberta	0.03	(0.06)	0.04	(0.06)	0.03	(0.06)	0.06	(0.04)	0.07	(0.04)	0.07 <sup>+</sup>	(0.04)
British Columbia	-0.06	(0.05)	-0.04	(0.05)	-0.05	(0.05)	0.01	(0.06)	0.02	(0.06)	0.03	(0.06)
Children	-0.10 <sup>**</sup>	(0.03)	-0.09 <sup>**</sup>	(0.04)	-0.09 <sup>*</sup>	(0.04)	0.00	(0.04)	0.02	(0.04)	0.01	(0.04)
Couple	0.00	(0.10)	0.01	(0.10)	-0.001	(0.10)	0.03	(0.10)	0.03	(0.10)	0.02	(0.10)
Single	-0.04	(0.10)	-0.01	(0.10)	-0.02	(0.10)	-0.08	(0.10)	-0.07	(0.10)	-0.08	(0.10)
Citizen by birth	0.18 <sup>+</sup>	(0.10)	0.15	(0.11)	0.2	(0.11)	-0.04	(0.06)	-0.03	(0.07)	-0.01	(0.07)
English	-0.05	(0.05)	-0.07	(0.05)	-0.07	(0.05)	-0.08 <sup>*</sup>	(0.04)	-0.08 <sup>*</sup>	(0.04)	-0.08 <sup>+</sup>	(0.04)
French	-0.05	(0.07)	-0.02	(0.07)	-0.04	(0.08)	0.04	(0.05)	0.07	(0.05)	0.06	(0.05)
Visible minority	0.04	(0.07)	0.02	(0.08)	0.01	(0.08)	-0.09 <sup>+</sup>	(0.05)	-0.11 <sup>+</sup>	(0.06)	-0.1 <sup>+</sup>	(0.06)
Urban	0.09 <sup>*</sup>	(0.04)	0.09 <sup>*</sup>	(0.04)	0.10 <sup>*</sup>	(0.04)	0.03	(0.03)	0.03	(0.03)	0.03	(0.03)
Limitations-work	-0.05	(0.03)	-0.06 <sup>+</sup>	(0.03)	-0.06 <sup>+</sup>	(0.03)	0.00	(0.03)	0.001	(0.03)	-0.00	(0.04)
Social-support-scale	0.03 <sup>+</sup>	(0.02)	0.03 <sup>+</sup>	(0.02)	0.04 <sup>+</sup>	(0.02)	0.04 <sup>**</sup>	(0.01)	0.04 <sup>**</sup>	(0.01)	0.04 <sup>**</sup>	(0.01)
Computer-skill	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)	-0.01	(0.01)	-0.01	(0.01)	-0.006	(0.01)
Writing-skill	-0.02	(0.02)	-0.01	(0.02)	-0.01	(0.02)	0.01	(0.02)	0.02	(0.02)	0.02	(0.02)
Reading-skill	0.04	(0.03)	0.04	(0.03)	0.04	(0.03)	-0.03	(0.02)	-0.02	(0.02)	-0.03 <sup>+</sup>	(0.02)
Oral-skill	0.01	(0.02)	0.00	(0.02)	-0.001	(0.02)	-0.01	(0.02)	-0.01	(0.02)	-0.008	(0.02)
Solving-prob.-skill	-0.02	(0.03)	-0.01	(0.03)	-0.01	(0.03)	0.002	(0.02)	-0.00	(0.02)	-0.00	(0.02)
Math-skill	0.03 <sup>+</sup>	(0.01)	0.03 <sup>+</sup>	(0.02)	0.03 <sup>+</sup>	(0.02)	0.04 <sup>**</sup>	(0.01)	0.04 <sup>**</sup>	(0.01)	0.04 <sup>*</sup>	(0.01)
Work-months	0.002	(0.00)	0.00	(0.00)	0.002	(0.00)	0.01 <sup>***</sup>	(0.00)	0.01 <sup>***</sup>	(0.00)	0.01 <sup>***</sup>	(0.00)
Student-months	0.00	(0.00)	0.00	(0.00)	0.003 <sup>+</sup>	(0.00)	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
Constant	1.00 <sup>+</sup>	(0.56)	0.8	(0.59)	0.6	(0.57)	2.17 <sup>***</sup>	(0.44)	1.82 <sup>***</sup>	(0.47)	1.4 <sup>**</sup>	(0.46)
N	1,445		1,342		1,342		2,082		1,957		1,957	
Adjusted R <sup>2</sup>	0.116		0.114		0.111		0.158		0.161		0.148	

Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$ . (1) to (3) exclude university and college graduates and continuers, pse graduate with high school continuers, high school graduates with other non-stated pse, and language not stated; (1) not a full-time student for the last 6 months, July05-Dec05; (2) and (3) non a full-time student for the last 12 months, Jan05-Dec05. Reference is High-School-other and dropout for age at high school diploma.

1,957  
0.148



Table 10: OLS estimations of monthly earnings when last worked at job by educational levels and gender

Specification	(1)		(2)		(3)		(1)		(2)		(3)	
Sample	Females 6 months		Females 12 months		Females lower education 12 months		Males 6 months		Males 12 months		Male lower education 12 months	
College graduate	-461 <sup>***</sup>	(89)	-485 <sup>***</sup>	(95)			-383 <sup>**</sup>	(121)	-428 <sup>**</sup>	(134)		
PSE-trade	-637 <sup>***</sup>	(137)	-634 <sup>***</sup>	(141)	134	(129)	-276	(198)	-363 <sup>+</sup>	(214)	599 <sup>***</sup>	(181)
PSE-part-HS	-664 <sup>***</sup>	(114)	-657 <sup>***</sup>	(119)	96	(104)	-622 <sup>***</sup>	(132)	-670 <sup>***</sup>	(147)	256 <sup>*</sup>	(128)
High-School-other	-786 <sup>***</sup>	(140)	-779 <sup>***</sup>	(146)			-788 <sup>***</sup>	(151)	-830 <sup>***</sup>	(165)		
Dropout	-813 <sup>***</sup>	(153)	-820 <sup>***</sup>	(159)	-53	(117)	-924 <sup>***</sup>	(184)	-974 <sup>***</sup>	(194)	-141	(120)
Age	113 <sup>**</sup>	(37)	89 <sup>*</sup>	(37)	39	(53)	67	(45)	50	(47)	15	(57)
Atlantic Provinces	-268 <sup>***</sup>	(73)	-274 <sup>***</sup>	(75)	-348 <sup>***</sup>	(89)	-395 <sup>***</sup>	(105)	-380 <sup>***</sup>	(114)	-334 <sup>*</sup>	(149)
Québec	-32	(111)	-34	(107)	-321 <sup>+</sup>	(181)	-333 <sup>**</sup>	(113)	-307 <sup>*</sup>	(119)	-507 <sup>**</sup>	(156)
Man-Saskatchewan	-169 <sup>*</sup>	(83)	-208 <sup>*</sup>	(87)	-164	(111)	-239 <sup>*</sup>	(103)	-272 <sup>*</sup>	(107)	-346 <sup>*</sup>	(140)
Alberta	159	(113)	168	(119)	194	(171)	574 <sup>***</sup>	(123)	586 <sup>***</sup>	(131)	526 <sup>**</sup>	(161)
British Columbia	-227 <sup>*</sup>	(100)	-266 <sup>**</sup>	(99)	-264 <sup>*</sup>	(118)	14	(135)	-33	(146)	-31	(167)
Children	-332 <sup>***</sup>	(68)	-331 <sup>***</sup>	(70)	-271 <sup>***</sup>	(78)	73	(120)	105	(124)	46	(144)
Couple	-344	(247)	-332	(255)	-216	(206)	-21	(355)	-115	(369)	-51	(384)
Single	-503 <sup>*</sup>	(251)	-483 <sup>+</sup>	(259)	-328	(206)	-331	(352)	-413	(365)	-356	(378)
Citizen by birth	-163	(136)	-147	(144)	-3	(215)	-139	(122)	-194	(125)	-241	(167)
English	38	(88)	31	(84)	-253 <sup>*</sup>	(116)	-96	(94)	-62	(100)	-118	(130)
French	-74	(91)	-79	(91)	102	(162)	49	(129)	106	(124)	204	(136)
Visible-minority	111	(136)	106	(143)	73	(209)	-195	(120)	-205	(127)	-447 <sup>**</sup>	(151)
Urban	93	(64)	90	(66)	135	(91)	-63	(89)	-43	(93)	-20	(114)
Limitations-work	-195 <sup>**</sup>	(68)	-184 <sup>**</sup>	(70)	-211 <sup>*</sup>	(83)	-124	(110)	-141	(115)	101	(131)
Social-support-scale	55 <sup>+</sup>	(31)	51	(32)	44	(42)	60 <sup>+</sup>	(34)	66 <sup>+</sup>	(35)	122 <sup>**</sup>	(44)
Computer-skill	66 <sup>*</sup>	(31)	77 <sup>*</sup>	(32)	130 <sup>**</sup>	(40)	-64 <sup>+</sup>	(37)	-81 <sup>*</sup>	(38)	-130 <sup>**</sup>	(44)
Writing-skill	5	(45)	0	(47)	7	(48)	-11	(52)	14	(55)	-3	(65)
Reading-skill	-15	(48)	-5	(50)	24	(64)	-102 <sup>+</sup>	(53)	-99 <sup>+</sup>	(56)	-36	(61)
Oral-skill	68 <sup>*</sup>	(33)	78 <sup>*</sup>	(35)	24	(41)	-59	(50)	-48	(53)	-57	(65)
Solving-prob.-skill	-1	(43)	-9	(45)	-31	(65)	75 <sup>+</sup>	(46)	82 <sup>+</sup>	(48)	18	(57)
Math-skill	89 <sup>***</sup>	(25)	78 <sup>**</sup>	(26)	52	(34)	166 <sup>***</sup>	(37)	129 <sup>***</sup>	(38)	117 <sup>**</sup>	(45)
Work-months	0	(3)	2	(3)	4	(6)	13 <sup>***</sup>	(3)	14 <sup>***</sup>	(3)	17 <sup>***</sup>	(4)
Student-months	0	(3)	2	(3)	3	(4)	-4	(3)	0	(3)	-4	(5)
Constant	-433	(1054)	56	(1061)	417	(1469)	1698	(1244)	2209 <sup>+</sup>	(1326)	2490	(1557)
N	3,764		3,369		1,327		3,808		3,478		1,943	
Adjusted-R <sup>2</sup>	0.169		0.184		0.115		0.107		0.111		0.117	

Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$ . (1) to (3) exclude university and college continuers, pse graduate with high school continuers, high school graduate with other non-stated pse, and language not stated; (1) not a full-time student for the last 6 months, July05-Dec05; (2) and (3) not a full-time student for the last 12 months, Jan05-Dec05. Reference category for education status is university graduate and HS diploma for lower education samples.

Table 11: Marginal effects of Probit estimations of employer or career or total training by level of education and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	Female Employer		Male Employer		Female Career		Male Career		Female both training		Male both training	
College graduate	-0.045	(0.04)	0.009	(0.04)	-0.026	(0.02)	-0.006	(0.03)	-0.074 <sup>+</sup>	(0.04)	-0.019	(0.05)
PSE-trade	-0.111 <sup>**</sup>	(0.06)	-0.006	(0.07)	-0.048 <sup>**</sup>	(0.02)	-0.072 <sup>****</sup>	(0.02)	-0.135 <sup>**</sup>	(0.06)	-0.075	(0.07)
PSE-part-HS	-0.093 <sup>+</sup>	(0.05)	0.021	(0.05)	-0.050 <sup>**</sup>	(0.02)	-0.013	(0.03)	-0.101 <sup>+</sup>	(0.05)	0.005	(0.05)
High-School-other	-0.164 <sup>***</sup>	(0.06)	-0.010	(0.06)	-0.062 <sup>**</sup>	(0.03)	-0.019	(0.03)	-0.186 <sup>***</sup>	(0.06)	-0.044	(0.06)
Dropout	-0.121 <sup>+</sup>	(0.07)	-0.035	(0.07)	-0.066 <sup>**</sup>	(0.03)	-0.024	(0.04)	-0.188 <sup>***</sup>	(0.07)	-0.072	(0.07)
Age	0.012	(0.02)	-0.004	(0.02)	0.002	(0.01)	0.012	(0.01)	0.010	(0.02)	0.003	(0.02)
Atlantic Provinces	0.001	(0.04)	-0.005	(0.04)	-0.032 <sup>+</sup>	(0.02)	-0.043 <sup>***</sup>	(0.02)	-0.017	(0.04)	-0.026	(0.04)
Québec	-0.131 <sup>***</sup>	(0.05)	-0.086 <sup>+</sup>	(0.05)	0.006	(0.03)	-0.074 <sup>****</sup>	(0.02)	-0.096 <sup>+</sup>	(0.05)	-0.127 <sup>***</sup>	(0.05)
Man-Saskatchewan	0.003	(0.04)	0.089 <sup>**</sup>	(0.04)	-0.008	(0.02)	0.003	(0.02)	0.004	(0.04)	0.093 <sup>**</sup>	(0.04)
Alberta	-0.009	(0.04)	0.068	(0.04)	0.035	(0.03)	0.083 <sup>**</sup>	(0.04)	0.005	(0.04)	0.127 <sup>***</sup>	(0.04)
British Columbia	0.028	(0.05)	0.015	(0.05)	0.086 <sup>***</sup>	(0.03)	-0.000	(0.03)	0.085 <sup>+</sup>	(0.05)	0.014	(0.05)
Children	-0.071 <sup>**</sup>	(0.04)	-0.008	(0.04)	-0.032 <sup>+</sup>	(0.02)	-0.002	(0.02)	-0.081 <sup>**</sup>	(0.04)	0.003	(0.04)
Couple	0.084	(0.08)	-0.058	(0.11)	0.196 <sup>**</sup>	(0.08)	-0.054	(0.05)	0.147 <sup>+</sup>	(0.08)	-0.091	(0.12)
Single	0.054	(0.09)	-0.150	(0.12)	0.194 <sup>**</sup>	(0.08)	-0.047	(0.06)	0.132	(0.09)	-0.174	(0.12)
Citizen by birth	-0.053	(0.06)	0.019	(0.06)	0.007	(0.03)	0.005	(0.03)	-0.009	(0.06)	0.038	(0.06)
English	-0.041	(0.04)	-0.039	(0.04)	0.005	(0.02)	-0.044 <sup>+</sup>	(0.02)	-0.022	(0.04)	-0.068 <sup>+</sup>	(0.04)
French	0.045	(0.05)	-0.014	(0.05)	-0.019	(0.03)	0.001	(0.03)	0.043	(0.05)	0.002	(0.05)
Visible-minority	0.003	(0.06)	-0.102 <sup>+</sup>	(0.05)	-0.010	(0.03)	-0.048 <sup>**</sup>	(0.02)	0.002	(0.06)	-0.110 <sup>+</sup>	(0.06)
Urban	0.009	(0.03)	0.037	(0.03)	-0.012	(0.02)	-0.047 <sup>**</sup>	(0.02)	0.022	(0.03)	0.026	(0.03)
Limitations-work	0.003	(0.04)	-0.012	(0.04)	0.044 <sup>**</sup>	(0.02)	-0.021	(0.02)	0.044	(0.04)	-0.011	(0.04)
Social-support-scale	0.022	(0.02)	0.056 <sup>****</sup>	(0.01)	0.001	(0.01)	0.012	(0.01)	0.036 <sup>**</sup>	(0.02)	0.048 <sup>****</sup>	(0.01)
Computer-skill	-0.023	(0.01)	-0.015	(0.01)	-0.010	(0.01)	0.016 <sup>+</sup>	(0.01)	-0.022	(0.01)	-0.010	(0.01)
Writing-skill	-0.011	(0.02)	0.013	(0.02)	0.004	(0.02)	-0.005	(0.01)	-0.019	(0.02)	0.024	(0.02)
Reading-skill	0.017	(0.02)	-0.043 <sup>**</sup>	(0.02)	-0.013	(0.01)	-0.014	(0.01)	0.008	(0.02)	-0.047 <sup>**</sup>	(0.02)
Oral-skill	0.022	(0.02)	0.025	(0.02)	0.004	(0.01)	0.017 <sup>+</sup>	(0.01)	0.016	(0.02)	0.042 <sup>**</sup>	(0.02)
Solving-prob.-skill	0.062 <sup>***</sup>	(0.02)	0.037 <sup>**</sup>	(0.02)	0.017	(0.01)	-0.004	(0.01)	0.072 <sup>****</sup>	(0.02)	0.025	(0.02)
Math-skill	-0.006	(0.01)	-0.018	(0.01)	0.001	(0.01)	0.010	(0.01)	-0.006	(0.01)	-0.009	(0.01)
Work-months	0.002	(0.00)	0.003 <sup>**</sup>	(0.00)	0.000	(0.00)	-0.001	(0.00)	0.001	(0.00)	0.003 <sup>**</sup>	(0.00)
Student-months	0.001	(0.00)	0.002 <sup>**</sup>	(0.00)	0.000	(0.00)	0.000	(0.00)	0.000	(0.00)	0.003 <sup>**</sup>	(0.00)
N	3,527		3,643		3,708		3,736		3,527		3,643	
Pseudo-R2	0.0454		0.0443		0.0460		0.0516		0.0481		0.0519	

Marginal effects for discrete change of dummy variable from 0 to 1; Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$ , <sup>\*\*\*\*</sup>  $p < 0.001$ .

(1) to (6) excludes university and college continuers, pse graduate with high school continuers, high school graduates with other non-stated pse, and language not stated; not a full-time student for the last 12 months, Jan05-Dec05. Reference category for education status is university graduate.

Table 12: Marginal effects of Probit estimations of employer or career or total training by lower level of education and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	Female Employer		Male employer		Female career		Male career		Female all		Male all	
PSE-trade	0.055	(0.06)	-0.009	(0.07)	-0.001	(0.03)	-0.064****	(0.02)	0.044	(0.06)	-0.059	(0.07)
PSE-part-HS	0.069	(0.05)	0.025	(0.04)	0.003	(0.02)	-0.003	(0.02)	0.074	(0.05)	0.036	(0.04)
Dropout	0.021	(0.06)	-0.014	(0.05)	-0.008	(0.03)	-0.007	(0.03)	-0.019	(0.06)	-0.016	(0.05)
Age	0.002	(0.03)	-0.011	(0.02)	0.008	(0.01)	0.017	(0.01)	0.004	(0.03)	0.009	(0.02)
Atlantic Provinces	-0.001	(0.06)	-0.014	(0.05)	-0.010	(0.02)	-0.034 <sup>+</sup>	(0.02)	-0.016	(0.06)	-0.014	(0.05)
Québec	-0.107	(0.08)	-0.111 <sup>+</sup>	(0.07)	0.160**	(0.08)	-0.103****	(0.02)	-0.011	(0.09)	-0.169**	(0.07)
Man-Saskatchewan	0.100	(0.06)	0.027	(0.05)	0.029	(0.04)	0.013	(0.03)	0.100	(0.06)	0.044	(0.05)
Alberta	0.043	(0.06)	0.023	(0.05)	0.043	(0.04)	0.065	(0.04)	0.073	(0.07)	0.101 <sup>+</sup>	(0.06)
British Columbia	0.056	(0.07)	0.059	(0.06)	0.112**	(0.05)	0.040	(0.04)	0.145**	(0.07)	0.088	(0.07)
Children	0.030	(0.05)	-0.072	(0.05)	-0.031	(0.02)	-0.011	(0.02)	0.011	(0.05)	-0.068	(0.05)
Couple	0.129	(0.10)	-0.043	(0.13)	0.089	(0.06)	-0.047	(0.04)	0.192 <sup>+</sup>	(0.10)	-0.072	(0.13)
Single	0.206**	(0.10)	-0.129	(0.13)	0.134 <sup>+</sup>	(0.07)	-0.056	(0.06)	0.301***	(0.10)	-0.168	(0.13)
Citizen by birth	0.080	(0.09)	0.078	(0.07)	0.020	(0.03)	0.044**	(0.02)	0.077	(0.10)	0.110	(0.07)
English	-0.050	(0.06)	-0.013	(0.05)	0.049**	(0.02)	-0.102***	(0.03)	-0.016	(0.06)	-0.070	(0.06)
French	0.151 <sup>+</sup>	(0.09)	-0.007	(0.06)	-0.053**	(0.02)	0.023	(0.04)	0.073	(0.09)	0.015	(0.07)
Visible-minority	0.106	(0.12)	-0.133**	(0.07)	-0.032	(0.03)	-0.048**	(0.02)	0.068	(0.11)	-0.143**	(0.07)
Urban	0.031	(0.05)	0.032	(0.03)	-0.016	(0.03)	-0.037 <sup>+</sup>	(0.02)	0.011	(0.05)	0.035	(0.04)
Limitations-work	-0.011	(0.04)	0.014	(0.04)	0.020	(0.02)	-0.022	(0.02)	0.031	(0.05)	0.007	(0.04)
Social-support-scale	0.006	(0.02)	0.060****	(0.02)	0.015	(0.01)	0.004	(0.01)	0.022	(0.02)	0.048***	(0.02)
Computer-skill	0.002	(0.02)	-0.016	(0.02)	-0.013	(0.01)	0.013	(0.01)	0.002	(0.02)	-0.011	(0.02)
Writing-skill	0.004	(0.03)	0.023	(0.02)	-0.002	(0.02)	-0.015	(0.01)	-0.018	(0.03)	0.034	(0.03)
Reading-skill	0.041	(0.03)	-0.054**	(0.02)	-0.002	(0.02)	-0.008	(0.01)	0.052	(0.03)	-0.062**	(0.03)
Oral-skill	0.020	(0.02)	0.029	(0.02)	0.002	(0.01)	0.011	(0.01)	0.019	(0.03)	0.046**	(0.02)
Solving-prob.-skill	0.020	(0.03)	0.062***	(0.02)	0.019	(0.01)	0.004	(0.01)	0.030	(0.03)	0.043 <sup>+</sup>	(0.02)
Math-skill	0.010	(0.02)	-0.018	(0.02)	-0.003	(0.01)	0.011	(0.01)	0.002	(0.02)	-0.001	(0.02)
Work-months	0.003 <sup>+</sup>	(0.00)	0.004**	(0.00)	0.000	(0.00)	-0.001	(0.00)	0.003	(0.00)	0.003 <sup>+</sup>	(0.00)
Student-months	0.000	(0.00)	0.003	(0.00)	0.001	(0.00)	0.001	(0.00)	0.001	(0.00)	0.004**	(0.00)
N	1,383		2,043		1,518		2,109		1,383		2,043	
Pseudo-R2	0.048		0.0614		0.0839		0.0800		0.0583		0.0678	

Marginal effects for discrete change of dummy variable from 0 to 1; Standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$ , <sup>\*\*\*\*</sup>  $p < 0.001$ .

(1) to (6) excludes university and college continuers, pse graduate with high school continuers, high school graduates with other not-stated pse, language not stated; not a full-time student for the last 12 months (Jan05-Dec05). Reference category for education status is high school diploma only.

Table 13A: Marginal effects of Probit estimations of volunteer activities by education level, age at high school diploma and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	All		All		Females		Females		Males		Males	
College graduate	-0.120****	(0.02)			-0.136****	(0.03)			-0.110****	(0.03)		
PSE-trade	-0.155****	(0.03)			-0.145****	(0.05)			-0.162****	(0.04)		
PSE-part-HS	-0.148****	(0.02)			-0.170****	(0.04)			-0.132****	(0.03)		
High school-only	-0.105****	(0.03)			-0.094 <sup>+</sup>	(0.05)			-0.123****	(0.04)		
High-School-other	-0.139****	(0.03)			-0.113**	(0.05)			-0.161****	(0.04)		
Dropout	-0.140****	(0.03)			-0.123**	(0.06)			-0.148****	(0.04)		
HS age 15-19 years			0.006	(0.03)			-0.029	(0.05)			0.028	(0.04)
HS age 20-26 years			0.006	(0.05)			0.051	(0.09)			-0.030	(0.06)
HS age not stated			-0.028	(0.05)			-0.017	(0.09)			-0.046	(0.05)
Age	0.018 <sup>+</sup>	(0.01)	0.031***	(0.01)	0.022	(0.02)	0.035**	(0.01)	0.015	(0.01)	0.028**	(0.01)
Male	-0.049***	(0.02)	-0.057****	(0.02)								
Atlantic provinces	-0.043***	(0.02)	-0.042**	(0.02)	-0.024	(0.03)	-0.016	(0.03)	-0.067**	(0.03)	-0.065**	(0.03)
Québec	-0.112****	(0.03)	-0.120****	(0.03)	-0.095**	(0.04)	-0.100**	(0.04)	-0.127****	(0.03)	-0.131****	(0.03)
Man-Saskatchewan	0.071***	(0.02)	0.072***	(0.02)	0.090***	(0.03)	0.096***	(0.03)	0.049	(0.03)	0.050	(0.03)
Alberta	0.035	(0.03)	0.034	(0.03)	0.066 <sup>+</sup>	(0.04)	0.071 <sup>+</sup>	(0.04)	0.008	(0.04)	0.003	(0.03)
British Columbia	0.071**	(0.03)	0.070**	(0.03)	0.072 <sup>+</sup>	(0.04)	0.075 <sup>+</sup>	(0.04)	0.071 <sup>+</sup>	(0.04)	0.066	(0.04)
Children	0.026	(0.02)	0.012	(0.02)	0.009	(0.03)	-0.010	(0.03)	0.022	(0.03)	0.015	(0.03)
Couple	0.036	(0.06)	0.053	(0.06)	0.086	(0.08)	0.113	(0.08)	-0.031	(0.10)	-0.014	(0.10)
Single	0.053	(0.06)	0.063	(0.06)	0.113	(0.08)	0.134 <sup>+</sup>	(0.08)	-0.031	(0.11)	-0.019	(0.10)
Citizen by birth	0.013	(0.03)	0.017	(0.03)	0.050	(0.05)	0.050	(0.05)	-0.016	(0.05)	-0.011	(0.05)
English	-0.059***	(0.02)	-0.062***	(0.02)	-0.023	(0.03)	-0.029	(0.03)	-0.095***	(0.03)	-0.092***	(0.03)
French	-0.040	(0.03)	-0.044	(0.03)	-0.088**	(0.04)	-0.102**	(0.04)	0.009	(0.05)	0.013	(0.05)
Visible minority	-0.021	(0.03)	-0.020	(0.03)	-0.054	(0.05)	-0.057	(0.05)	0.009	(0.05)	0.018	(0.05)
Urban	-0.057***	(0.02)	-0.055***	(0.02)	-0.060**	(0.03)	-0.061**	(0.03)	-0.060**	(0.03)	-0.054**	(0.03)
Limitations-work	0.062***	(0.02)	0.059***	(0.02)	0.049	(0.03)	0.045	(0.03)	0.079***	(0.03)	0.076***	(0.03)
Social-support-scale	0.038****	(0.01)	0.042****	(0.01)	0.031**	(0.01)	0.036***	(0.01)	0.044****	(0.01)	0.047****	(0.01)
Work-months	0.002**	(0.00)	0.002**	(0.00)	0.000	(0.00)	0.001	(0.00)	0.003***	(0.00)	0.003***	(0.00)
Student-months	0.002**	(0.00)	0.004****	(0.00)	0.001	(0.00)	0.004****	(0.00)	0.002 <sup>+</sup>	(0.00)	0.004****	(0.00)
N	9,131		9,131		4,623		4,623		4,508		4,508	
Pseudo R2	0.0522		0.0422		0.0466		0.0379		0.0573		0.0496	

Marginal effects for discrete change of dummy variable from 0 to 1; standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$ , <sup>\*\*\*\*</sup>  $p < 0.001$ .

(1) to (6) excludes university and college continuers, pse graduate with high school continuers, and language not stated. Reference category for education status is university graduate and no high school diploma for age at high school graduation.

Table 13B: Marginal effects of Probit estimations of volunteer activities by lower education level, age at high school diploma and gender

Specification	(1)		(2)		(3)		(4)		(5)		(6)	
Sample	All		All		Females		Females		Males		Males	
PSE-trade	-0.050	(0.04)			-0.070	(0.05)			-0.037	(0.05)		
PSE-part-HS	-0.039	(0.03)			-0.084 <sup>+</sup>	(0.04)			-0.002	(0.03)		
High school-only	-0.017	(0.04)			-0.027	(0.06)			-0.008	(0.05)		
High-School-other												
Dropout	0.020	(0.01)			0.023	(0.02)			0.020	(0.02)		
HS age 15-19 years			-0.013	(0.05)			0.075	(0.09)			-0.080 <sup>+</sup>	(0.05)
HS age 20-26 years			0.022	(0.05)			0.093	(0.10)			-0.031	(0.05)
HS age not stated			0.017	(0.01)			0.019	(0.02)			0.018	(0.02)
Male	-0.081 <sup>****</sup>	(0.02)	-0.078 <sup>****</sup>	(0.02)								
Atlantic provinces	-0.038	(0.03)	-0.039	(0.03)	-0.019	(0.05)	-0.013	(0.05)	-0.060 <sup>**</sup>	(0.03)	-0.059 <sup>+</sup>	(0.03)
Québec	-0.117 <sup>***</sup>	(0.04)	-0.117 <sup>***</sup>	(0.04)	-0.198 <sup>****</sup>	(0.06)	-0.195 <sup>***</sup>	(0.06)	-0.072	(0.05)	-0.062	(0.05)
Man-Saskatchewan	0.070 <sup>**</sup>	(0.03)	0.071 <sup>**</sup>	(0.03)	0.053	(0.05)	0.059	(0.05)	0.083 <sup>+</sup>	(0.04)	0.084 <sup>**</sup>	(0.04)
Alberta	0.030	(0.04)	0.032	(0.04)	0.036	(0.06)	0.041	(0.06)	0.027	(0.04)	0.026	(0.04)
British Columbia	0.027	(0.04)	0.027	(0.04)	0.005	(0.06)	0.009	(0.06)	0.038	(0.05)	0.033	(0.05)
Children	-0.002	(0.03)	-0.001	(0.03)	0.004	(0.04)	-0.000	(0.04)	-0.022	(0.04)	-0.022	(0.04)
Couple	0.028	(0.07)	0.027	(0.07)	0.077	(0.09)	0.087	(0.09)	-0.025	(0.10)	-0.028	(0.10)
Single	0.039	(0.07)	0.038	(0.07)	0.109	(0.09)	0.118	(0.09)	-0.038	(0.11)	-0.039	(0.11)
Citizen by birth	-0.021	(0.05)	-0.025	(0.05)	-0.005	(0.08)	-0.009	(0.08)	-0.025	(0.07)	-0.034	(0.07)
English	-0.064 <sup>+</sup>	(0.03)	-0.064 <sup>+</sup>	(0.03)	-0.038	(0.05)	-0.037	(0.05)	-0.078 <sup>+</sup>	(0.04)	-0.075 <sup>+</sup>	(0.04)
French	-0.047	(0.04)	-0.041	(0.04)	-0.029	(0.07)	-0.034	(0.07)	-0.034	(0.05)	-0.028	(0.05)
Visible minority	-0.015	(0.05)	-0.016	(0.05)	-0.107	(0.07)	-0.106	(0.07)	0.065	(0.07)	0.070	(0.07)
Urban	-0.048 <sup>+</sup>	(0.03)	-0.051 <sup>**</sup>	(0.03)	-0.017	(0.04)	-0.022	(0.04)	-0.070 <sup>**</sup>	(0.03)	-0.070 <sup>**</sup>	(0.03)
Limitations-work	0.038 <sup>+</sup>	(0.02)	0.039 <sup>+</sup>	(0.02)	0.014	(0.04)	0.017	(0.03)	0.057 <sup>**</sup>	(0.03)	0.061 <sup>**</sup>	(0.03)
Social-support-scale	0.033 <sup>***</sup>	(0.01)	0.032 <sup>***</sup>	(0.01)	0.013	(0.02)	0.015	(0.02)	0.046 <sup>****</sup>	(0.01)	0.044 <sup>****</sup>	(0.01)
Work-months	0.001	(0.00)	0.001	(0.00)	0.000	(0.00)	0.000	(0.00)	0.002	(0.00)	0.002	(0.00)
Student-months	0.003 <sup>***</sup>	(0.00)	0.003 <sup>***</sup>	(0.00)	0.003 <sup>**</sup>	(0.00)	0.002 <sup>+</sup>	(0.00)	0.003 <sup>***</sup>	(0.00)	0.003 <sup>***</sup>	(0.00)
N	4,394		4,394		1,920		1,920		2,474		2,474	
Pseudo R2	0.0348		0.0336		0.0393		0.0400		0.0387		0.0414	

Marginal effects for discrete change of dummy variable from 0 to 1; standard errors in parentheses: <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$ , <sup>\*\*\*\*</sup>  $p < 0.001$ .

(1) to (6) excludes university and college graduates and continuers, PSE graduate with high school continuers, and language not stated. Reference category for education status is high diploma only and no high school diploma for age at high school graduation.

Table 14: Odds ratio of ordered logit of frequency of volunteer activities by education levels and gender

Specification	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Females	Females	Males	Males	Females	Females	Males	Males
	Lower education							
College graduate	-0.585**** (0.14)		-0.541**** (0.16)					
PSE-trade	-0.689*** (0.24)		-0.918*** (0.32)		-0.318 (0.28)		-0.175 (0.31)	
PSE-part-HS	-0.753**** (0.21)		-0.724**** (0.19)		-0.319 (0.22)		-0.044 (0.20)	
High school-only	-0.411+ (0.24)		-0.631** (0.25)		-0.084 (0.28)		-0.003 (0.30)	
High-School-other	-0.583** (0.24)		-0.872**** (0.23)					
Dropout	-0.567** (0.28)		-0.865*** (0.29)		0.0596 (0.26)		0.057 (0.22)	
HS age 15-19 years		-0.154 (0.23)		0.153 (0.20)		-0.217 (0.23)		0.042 (0.22)
HS age 20-26 years		0.171 (0.36)		-0.221 (0.30)		0.332 (0.40)		-0.606+ (0.35)
HS age not stated		-0.068 (0.42)		-0.300 (0.30)		0.415 (0.47)		-0.230 (0.32)
Age	0.083 (0.06)	0.146** (0.06)	0.072 (0.07)	0.141** (0.07)	0.129 (0.10)	0.113 (0.10)	0.140 (0.10)	0.133 (0.10)
Atlantic provinces	-0.048 (0.14)	-0.015 (0.14)	-0.265+ (0.15)	-0.260+ (0.15)	-0.055 (0.23)	-0.022 (0.23)	-0.389+ (0.21)	-0.382+ (0.21)
Québec	-0.479*** (0.17)	-0.503*** (0.17)	-0.676**** (0.18)	-0.696**** (0.18)	-1.068*** (0.33)	-1.042*** (0.33)	-0.448 (0.28)	-0.393 (0.28)
Man-Saskatchewan	0.390*** (0.13)	0.413*** (0.13)	0.320** (0.15)	0.324** (0.15)	0.263 (0.21)	0.291 (0.21)	0.480** (0.22)	0.494** (0.21)
Alberta	0.217 (0.14)	0.233+ (0.14)	0.0545 (0.17)	0.0340 (0.17)	0.0810 (0.22)	0.101 (0.23)	0.131 (0.25)	0.129 (0.25)
British Columbia	0.368** (0.17)	0.374** (0.17)	0.382** (0.19)	0.364+ (0.19)	0.113 (0.27)	0.129 (0.28)	0.173 (0.26)	0.147 (0.26)
Children	0.112 (0.13)	0.024 (0.13)	0.115 (0.16)	0.086 (0.17)	0.090 (0.19)	0.0572 (0.19)	-0.123 (0.22)	-0.124 (0.22)
Couple	0.402 (0.36)	0.489 (0.37)	-0.253 (0.60)	-0.234 (0.59)	0.403 (0.50)	0.416 (0.49)	-0.396 (0.75)	-0.402 (0.75)
Single	0.509 (0.37)	0.565 (0.38)	-0.272 (0.59)	-0.286 (0.59)	0.517 (0.51)	0.510 (0.50)	-0.510 (0.74)	-0.507 (0.74)
Citizen by birth	0.243 (0.21)	0.249 (0.21)	-0.097 (0.25)	-0.061 (0.24)	0.080 (0.39)	0.057 (0.38)	-0.136 (0.38)	-0.174 (0.37)
English	-0.068 (0.12)	-0.096 (0.12)	-0.426**** (0.14)	-0.407**** (0.15)	-0.108 (0.22)	-0.113 (0.22)	-0.366+ (0.22)	-0.345 (0.22)
French	-0.383+ (0.20)	-0.453** (0.21)	0.0990 (0.24)	0.122 (0.25)	-0.123 (0.35)	-0.184 (0.35)	-0.185 (0.28)	-0.139 (0.28)
Visible minority	-0.190 (0.23)	-0.202 (0.23)	-0.007 (0.22)	0.0378 (0.22)	-0.542 (0.43)	-0.546 (0.42)	0.286 (0.33)	0.313 (0.32)
Urban	-0.242** (0.11)	-0.240** (0.11)	-0.249** (0.12)	-0.217+ (0.12)	-0.040 (0.18)	-0.0585 (0.18)	-0.370** (0.16)	-0.367** (0.16)
Limitations-work	0.166 (0.12)	0.138 (0.12)	0.381*** (0.13)	0.371*** (0.13)	0.033 (0.15)	0.046 (0.15)	0.350** (0.17)	0.375** (0.16)
Social-support-scale	0.119** (0.06)	0.150**** (0.06)	0.195**** (0.06)	0.209**** (0.06)	0.0737 (0.08)	0.091 (0.09)	0.259**** (0.08)	0.251*** (0.08)
Work-months	0.000 (0.00)	0.002 (0.00)	0.013*** (0.00)	0.011** (0.00)	-0.003 (0.01)	-0.002 (0.01)	0.011 (0.01)	0.009 (0.01)
Student-months	0.007 (0.00)	0.017*** (0.00)	0.010** (0.00)	0.021**** (0.00)	0.019*** (0.01)	0.016*** (0.01)	0.021** (0.01)	0.019*** (0.01)
N	4,622	4,622	4,507	4,507	1,919	1,919	2,473	2,473
Pseudo R2	0.0287	0.0240	0.0370	0.0327	0.0261	0.0278	0.0263	0.0288

Standard errors in parentheses: +  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , \*\*\*\*  $p < 0.001$ . (1) to (8) excludes university and college continuers, pse graduate with high school continuers, and language not stated. Reference category for education is university graduate and no high school diploma for age at high school diploma. For low education levels, reference is high school diploma only.

Table A1: Characteristics and labour outcomes by education levels, age at high school diploma and gender, YITS, 2005

	University graduate		College graduate		PSE-trade	
	Females	Males	Females	Males	Females	Males
Characteristics						
Age	25.1	25.1	25.1	25.1	25.2	25.0
Atlantic Provinces	0.09	0.08	0.06	0.08	0.14	0.13
Québec	0.23	0.19	0.26	0.31	0.15	0.13
Man-Saskatchewan	0.05	0.06	0.05	0.05	0.10	0.07
Alberta	0.09	0.11	0.11	0.11	0.17	0.19
British Columbia	0.13	0.11	0.10	0.11	0.10	0.21
Children	0.09	0.06	0.25	0.15	0.35	0.18
Couple	0.39	0.27	0.46	0.34	0.37	0.25
Single	0.58	0.72	0.50	0.64	0.59	0.70
Citizen by birth	0.89	0.85	0.92	0.91	0.94	0.96
English only	0.57	0.63	0.61	0.59	0.71	0.73
French only	0.06	0.03	0.11	0.10	0.08	0.04
Visible-minority	0.12	0.18	0.09	0.08	0.05	0.10
Urban	0.88	0.91	0.90	0.84	0.85	0.80
Limitations-work	0.06	0.05	0.09	0.07	0.14	0.10
Social-support-scale	0.47	0.09	0.22	-0.11	0.07	-0.38
Computer-skill	3.78	4.09	3.65	3.73	3.31	3.76
Writing-skill	4.08	3.93	3.76	3.48	3.48	3.26
Reading-skill	4.24	4.12	4.03	3.72	3.75	3.53
Oral-skill	3.90	3.75	3.59	3.53	3.45	3.53
Solving-prob.-skill	3.77	3.95	3.56	3.79	3.53	3.75
Math-skill	3.16	3.74	2.94	3.43	2.81	3.32
Work-months	36.5	33.3	37.4	37.3	37.0	36.2
Student-months	41.5	42.9	23.9	25.6	17.1	18.8
Labour outcomes						
Had job Dec05	0.95	0.91	0.92	0.93	0.89	0.85
Ln hourly wage \$	2.85	2.91	2.62	2.82	2.54	2.80
Monthly wage \$	2,615	2,942	2,016	2,785	1,709	2,888
Earnings \$	29,462	35,474	25,086	35,248	18,716	33,475
Employment insurance	0.10	0.09	0.19	0.15	0.12	0.13
EI income \$	494	289	1,043	608	709	598
Social assistance	0.01	0.03	0.01	0.01	0.04	0.02
Social assis. Income \$	46	5	38	65	271	6
Employer training	0.50	0.40	0.42	0.41	0.34	0.40
Career training	0.16	0.16	0.12	0.13	0.09	0.07
Any training	0.57	0.50	0.47	0.47	0.42	0.42
Volunteering	0.50	0.45	0.33	0.29	0.32	0.21
Volunteering scale	1.36	1.25	0.83	0.78	0.80	0.59
Observations	1,483	919	1,325	1,177	279	216
Weighted observations	131,245	93,270	117,993	113,441	21,599	22,966

Table A1 continued

	PSE-part-HS		HS un-stated PSE		High-School-only		High school dropout	
	Females	Males	Females	Males	Females	Males	Females	Males
Characteristics								
Age	25.0	25.0	25.1	25.0	25.0	24.9	24.8	25.0
Atlantic Provinces	0.08	0.07	0.06	0.07	0.08	0.08	0.06	0.05
Québec	0.26	0.28	0.29	0.37	0.18	0.23	0.34	0.33
Man-Saskatchewan	0.06	0.07	0.07	0.05	0.09	0.09	0.08	0.06
Alberta	0.13	0.10	0.15	0.13	0.23	0.16	0.16	0.17
British Columbia	0.16	0.12	0.13	0.07	0.16	0.12	0.12	0.10
Children	0.37	0.15	0.19	0.17	0.44	0.19	0.67	0.31
Couple	0.46	0.27	0.41	0.24	0.50	0.32	0.53	0.28
Single	0.47	0.69	0.57	0.69	0.46	0.64	0.41	0.64
Citizen by birth	0.90	0.90	0.86	0.90	0.94	0.91	0.93	0.93
English only	0.58	0.59	0.55	0.47	0.73	0.68	0.60	0.57
French only	0.12	0.06	0.16	0.10	0.13	0.12	0.23	0.20
Visible-minority	0.12	0.14	0.16	0.10	0.06	0.08	0.11	0.07
Urban	0.83	0.81	0.89	0.84	0.74	0.70	0.69	0.67
Limitations-work	0.12	0.08	0.08	0.04	0.19	0.13	0.22	0.13
Social-support-scale	0.13	-0.23	-0.05	-0.10	-0.13	-0.41	-0.41	-0.54
Computer-skill	3.49	3.63	3.53	3.71	3.09	3.03	2.53	2.73
Writing-skill	3.66	3.53	3.77	3.56	3.46	3.12	3.37	2.88
Reading-skill	3.89	3.75	3.88	3.94	3.73	3.45	3.65	3.31
Oral-skill	3.46	3.49	3.51	3.75	3.39	3.38	3.23	3.38
Solving-prob.-skill	3.55	3.71	3.60	3.85	3.45	3.65	3.22	3.53
Math-skill	2.79	3.33	3.02	3.52	2.62	3.15	2.61	3.04
Work-months	36.2	37.0	33.7	35.0	35.5	38.4	30.7	35.4
Student-months	18.1	18.9	24.8	14.9	6.2	6.7	5.6	5.1
Labour outcomes								
Had job Dec05	0.85	0.91	0.91	0.92	0.87	0.92	0.79	0.87
Ln hourly wage \$	2.48	2.66	2.62	2.75	2.37	2.68	2.35	2.59
Monthly wage \$	1,750	2,461	1,975	2,661	1,522	2,478	1,383	2,349
Earnings \$	18,159	29,529	22,785	32,771	17,479	31,859	10,928	25,799
Employment insurance	0.21	0.16	0.13	0.17	0.14	0.19	0.24	0.17
EI income \$	942	563	602	604	849	845	1,186	860
Social assistance	0.05	0.02	0.03	0.03	0.09	0.03	0.15	0.10
Social assis. Income \$	195	172	312	9	448	135	884	539
Employer training	0.35	0.40	0.44	0.39	0.29	0.37	0.29	0.32
Career training	0.09	0.11	0.07	0.12	0.09	0.10	0.06	0.09
Any training	0.44	0.46	0.47	0.47	0.37	0.41	0.33	0.36
Volunteering	0.28	0.25	0.35	0.28	0.34	0.21	0.31	0.21
Volunteering scale	0.77	0.58	0.87	0.79	0.74	0.48	0.78	0.46
Observations	553	715	301	238	649	995	252	471
Weighted observations	60,311	71,813	31,655	23,756	63,372	101,899	28,378	56,650



Table A1 end

	HS age 15-19		HS age 20-26		HS age not stated		No HS	
	Females	Males	Females	Males	Females	Males	Females	Males
Characteristics								
Age	25.1	25.1	25.1	25.0	25.1	24.9	24.8	24.9
Atlantic Provinces	0.09	0.08	0.04	0.08	0.04	0.06	0.06	0.05
Québec	0.23	0.24	0.32	0.37	0.24	0.25	0.33	0.34
Man-Saskatchewan	0.06	0.07	0.07	0.08	0.04	0.04	0.07	0.06
Alberta	0.12	0.13	0.13	0.11	0.25	0.14	0.17	0.16
British Columbia	0.13	0.12	0.14	0.07	0.17	0.18	0.11	0.11
Children	0.21	0.12	0.40	0.16	0.46	0.11	0.63	0.26
Couple	0.45	0.31	0.42	0.31	0.49	0.27	0.49	0.27
Single	0.53	0.68	0.56	0.68	0.48	0.71	0.46	0.69
Citizen by birth	0.92	0.90	0.90	0.85	0.88	0.83	0.94	0.93
English only	0.63	0.65	0.64	0.60	0.69	0.72	0.61	0.58
French only	0.09	0.07	0.26	0.17	0.15	0.15	0.22	0.22
Visible-minority	0.10	0.10	0.08	0.15	0.13	0.27	0.10	0.07
Urban	0.83	0.82	0.75	0.77	0.81	0.78	0.73	0.68
Limitations-work	0.10	0.07	0.17	0.15	0.13	0.11	0.21	0.13
Social-support-scale	0.29	-0.12	-0.29	-0.42	-0.19	-0.58	-0.41	-0.52
Computer-skill	3.60	3.68	3.15	3.03	3.19	3.39	2.65	2.84
Writing-skill	3.83	3.55	3.33	3.11	3.64	3.11	3.35	2.92
Reading-skill	4.04	3.78	3.70	3.45	3.90	3.42	3.68	3.33
Oral-skill	3.65	3.55	3.35	3.56	3.41	3.41	3.29	3.37
Solving-prob.-skill	3.62	3.79	3.51	3.62	3.55	3.74	3.25	3.57
Math-skill	2.97	3.43	2.72	3.22	2.63	3.23	2.60	3.06
Work-months	37.2	37.2	29.5	33.2	33.4	34.2	31.8	35.9
Student-months	26.8	24.5	19.4	17.2	13.2	10.9	6.2	6.3
Labour outcomes								
Had job Dec05	0.92	0.92	0.86	0.87	0.89	0.86	0.81	0.87
Ln hourly wage \$	2.66	2.80	2.44	2.65	2.44	2.68	2.37	2.61
Monthly wage \$	2,129	2,751	1,758	2,335	1,627	2,389	1,431	2,376
Earnings \$	24,868	34,904	16,946	24,026	15,940	28,898	11,600	26,863
Employment insurance	0.15	0.14	0.14	0.28	0.16	0.20	0.24	0.18
EI income \$	807	513	554	1,302	880	971	1,339	923
Social assistance	0.02	0.01	0.17	0.05	0.10	0.02	0.13	0.10
Social assis. Income \$	103	61	918	336	332	116	767	539
Employer training	0.42	0.41	0.28	0.36	0.38	0.27	0.28	0.33
Career training	0.12	0.13	0.14	0.11	0.05	0.08	0.08	0.08
Any training	0.48	0.47	0.37	0.44	0.41	0.32	0.34	0.37
Volunteering	0.38	0.32	0.41	0.20	0.29	0.19	0.31	0.21
Volunteering scale	0.99	0.82	0.98	0.44	0.69	0.36	0.82	0.48
Observations	3,920	3,502	145	224	117	171	279	512
Weighted observations	348,401	341,044	17,139	25,222	14,383	21,499	32,944	60,877

Source: Authors' calculation from YITS weighed data. Notes: 1. for high school diploma age, the statistics exclude university, college and PSE graduates with high school continuers, and high school graduates with other PSE non-stated programs. Respondents with a non-stated language are excluded.

Table A2: Occupation code and industry code for eligible jobs in percentage by educational levels and gender –females | males

	University graduate	University continuer	College graduate	College continuer	PSE trade	PSE grad. con. HS	PSE partial HS	HS & other PSE	High school only	Dropout
Two digit occupation code (SOC 1991)										
1.Management	4 7	2 5	3 5	3 5	3 6	3 6	5 5	5 5	4 5	3 3
2.Business, Finance, Administration	19 14	19 15	25 10	21 14	25 14	25 14	23 13	27 10	20 8	6 10
3.Natural and Applied Sciences	7 28	4 9	4 19	3 18	3 11	3 11	3 13	2 9	* 4	* 1
4.Health	12 2	5 3	13 1	11 3	9 1	9 1	9 *	9 2	2 1	3 *
5.Social Science, Educ., Government	27 15	34 28	7 4	14 4	9 7	9 7	1 2	13 4	* *	* *
6.Art, Culture, Recreation and Sport	7 5	8 5	6 6	5 7	4 3	4 3	5 4	4 5	3 2	2 2
7.Sales and Service	16 16	15 14	29 17	36 20	33 23	33 23	38 13	23 20	45 19	43 16
8.Trades, Transport and Equipment Operator	2 4	3 4	2 23	* 14	1 17	1 17	4 30	* 21	7 30	7 33
9.Primary Industry	1 2	1 2	2 4	* 2	1 5	1 5	* 4	3 8	2 9	2 10
10.Processing, Manufacturing, Utilities	1 1	1 3	2 7	1 8	3 6	3 6	3 10	5 5	6 15	6 14
11.Unclassified	* *	- -	- *	- -	* *	* *	- -	* *	- 1	* *
12.No eligible job	5 6	8 12	7 6	8 5	9 7	9 7	10 5	9 7	11 7	27 12
Two digit industry code (NAICS 1997)										
1.Agriculture	1 1	* *	2 2	* *	* 1	* 1	* -	3 5	1 3	1 6
2.Forestry, Fishing, Oil and Gas	1 2	* *	1 2	* *	* 3	* 3	* 3	3 4	3 5	* 4
3.Utilities	1 1	* *	* 1	- *	* 1	* 1	- *	- *	* *	- -
4.Construction	1 4	4 2	2 11	* 8	1 9	1 9	2 16	3 7	2 16	* 15
5.Manufacturing	4 8	8 5	4 14	4 20	5 9	5 9	5 17	6 11	8 19	6 16
6.Trade	10 9	1 10	14 12	22 10	17 13	17 13	18 22	8 18	19 19	18 18
7.Transportation, Warehousing	1 3	1 *	2 3	* *	2 2	2 2	4 3	3 3	3 5	* 5
8.Finance, Insurance, Real Estate, Leasing	6 10	8 6	6 5	7 9	7 5	7 5	5 *	4 7	7 2	5 2
9.Professional, Scientific and Technical Services	11 19	11 13	9 10	5 12	6 7	6 7	7 7	7 7	3 3	- 2
10.Management, Administration, Other Support	3 3	1 5	6 5	5 3	10 8	10 8	5 7	4 2	6 5	5 4
11.Education Services	21 10	28 25	4 3	10 5	7 9	7 9	2 3	12 4	2 *	* -
12.Health Care, Social Assistance	19 5	11 4	21 3	18 3	13 3	13 3	15 *	16 2	8 3	12 3
13.Information, Culture, Recreation	7 7	6 6	5 7	4 7	6 8	6 8	5 6	4 3	8 5	1 3
14.Accommodation, Food Services	4 2	4 4	6 7	8 5	9 9	9 9	6 2	11 5	12 5	11 6
15.Other Services	4 2	4 2	7 5	4 4	5 4	5 4	13 4	3 2	8 3	8 4
16.Public Administration	5 10	4 2	3 7	4 8	3 3	3 3	2 2	4 9	* 1	* *
17.Unclassified	* *	* -	1 *	* -	* *	* *	* *	- *	* 1	- 2
18.No eligible job	5 6	10 14	7 6	11 6	9 7	9 7	13 9	7 8	11 7	32 10
Weighted number of observations: Females	133,191	45,588	120,158	27,644	62,403	62,403	21,845	32,493	63,862	29,094
: Males	94,383	33,026	114,694	23,683	74,165	74,165	23,061	24,107	103,049	57,477

Source: Authors' calculation from YITS cycle 4 weighted data. Notes: 1. Eligible job is last job occupied by December 2005. 2. \* indicates an insufficient number of observations; percentage has been added to missing. Due to rounding, percentage may not add to 100.