

**Demand for university continuing education in Canada:  
Patterns of participation by university graduates**

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**Abstract:** This paper analyses demand for and participation in university continuing education (UCE) by university graduates (holders of first or bachelors' degrees) in Canada. Participation in academic programs leading to second degrees, in further non-degree programs, and in university or non-university courses taken for career/job or personal reasons appears to be a common strategy embraced by university-educated Canadians. Through multivariate analysis of National Graduate Survey (NGS) data of the cohort of 1995, the authors examine the socio-demographic profile of participants and the determinants of respondents' choice for continuing education. The paper provides information and insights into demand, expressed and latent, of a target audience of UCE that will allow, together with other data such as the Adult Education and Training Survey (AETS) and institutional data, a more realistic assessment of participants' needs and program preferences.

**Prepared for the Canadian Association for University Continuing Education  
December 2008**

## Introduction

In all industrialized countries, continuing education and training has become a common characteristic of the workforce. In Canada, approximately a quarter of 25-to-64 year-olds participate in some forms of non-formal job-related continuing education training (OECD, 2007)<sup>1</sup>. This situates Canada among countries with a well-developed system of education and training by OECD standards after Sweden, Denmark, the United States, Finland, Switzerland and the United Kingdom (opus cit. Table C5 1a, p.353-354). The largest level of participation is observed among those with higher level of education. Thus, 35% of those with tertiary (post-secondary) education were engaged in continuing studies, as compared to 20% and 6% of upper-secondary and less than upper secondary graduates, respectively (p.353). Overall, Canada is among the countries with the highest level of education: in 2005, 23% of those aged 25 to 64 had a university education and 46% had completed post-secondary education (p.36).

Having said this much, it is fair to observe that Canada's adult learning system is not much of a "system". Rather it consists of a bewildering array of sponsors, including technical institutes, community colleges and universities, libraries, labour and religious organizations, community-based organizations, commercial organizations and businesses (Bélanger & Tuijnman, 1997) which are largely uncoordinated and partially in competition with each other. Although over the last few years the federal government and several of the provinces have initiated some new programs and mechanisms, the provincial adult learning systems remain complex, fragmented and incomplete (Myers & de Broucker, 2006).

There is neither a legal nor any clear definition of the term 'continuing education' (CE). Thus, terms such as further education, continuing studies, or adult education are often used interchangeably with continuing education. The term 'adult education' is probably the most encompassing, comprising vocational, social, recreational and self-developmental dimensions (Selman, Cooke, Selman & Dampier, 1998). University Continuing Education (UCE) is more specific and therefore more clearly defined. In principle, it means all forms of continuing education offered by a university, including not only single courses or entire programs but also

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<sup>1</sup> OECD differentiates 'formal' education that follows a structured ladder system and takes place in schools, colleges, universities and other educational institutions', caters to young learners, whereas 'non-formal' education, i.e. organized learning that takes place outside educational institutions and is addressed to all ages. UCE is a hybrid:

single events such as presentations, conferences, workshops etc. (Brooke & Waldron, 1994; Rohfeld, 1990; Titmus, Knoll & Wittpoth, 1993). In most instances however, the term is used more narrowly and means courses, programs and other offerings that are offered by special units within the university, called variably University Extension, Continuing Education Department, Continuing Studies, or other similar terms. UCE can be taken either for credit or non-credit, degree or non-degree, i.e. for the purpose of studying towards a second (or third) degree or of learning in non-credit bearing programs or events (e.g., workshops, seminars). For the purpose of this study, we shall use the broader term continuing education (CE) to describe participation by graduates in any educational program or single event at post-secondary level, no matter if it is organized by central Continuing Education units or mainstream departments.

The aim of this paper is to analyze graduate demand for, and participation in CE as well as graduates' attitudes towards work and education. We will show that students' demand for continuing education and training is primarily determined by demand from the labour market. Many well educated individuals adopt continuing learning strategies to increase their employment and career chances.

## **Background**

Labour markets are characterized by changing demands for knowledge and skills (Brown, Green & Lauder, 2001). Jobs are no longer defined by steady working conditions and skill (competence) requirements. Following the pace of a changing economy, job requirements are becoming more dynamic and require frequent updating, adaptation and continuing learning (Rubenson & Schuetze, 2000).

In this context, CE has become increasingly significant for individuals' employability and success in the labour market. To continue learning beyond initial education (school, college, university) is an important part of lifelong learning. The concept of lifelong learning is seen by many as the main instrument of knowledge-based economies – a major reason behind the rise of support for and proliferation of lifelong learning (Schuetze & Casey, 2007).

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it is 'formal' since it takes place in universities, and non-formal, since it is not always part of a consecutive laddering system.

Universities continue to be a major setting where, to use economic terminology, human capital is created and upgraded. University continuing education (UCE) is an important part of CE as universities are accepting the challenge of lifelong learning, an acceptance that is facilitated by the fact that UCE is an important source of revenue (Schuetze & Slowey, 2002).

CE and the participation in CE can be discussed from different perspectives. One of these puts the focus on the institution (in economic terms, the supply side), i.e. the organization and finance, the programs and the marketing thereof, and the development in the number of participants overall and according to programs, mode of study etc. Another perspective analyzes CE from an epistemological venture point, trying to determine what is (or should be) offered and learned in initial education and what must, or can better be learned at a later point in learners' lives. Still another perspective concentrates on the participants (the demand side), their characteristics and the reasons to engage in CE, or conversely, not to participate.

Most studies on UCE concentrate on the institutional side (in a wider sense) rather than on participants and reasons for, and patterns of, participation. That applies also to Canada where the majority of studies examine institutional issues or aspects (for example McLean 2007; Thompson & Archer 2003). The last comprehensive study on UCE in Canada is 15 years old (Brooke & Waldron, 1994). A survey series on UCE that Statistics Canada had conducted in the 1990s was discontinued as reporting by the universities was uneven and there seemed to be little demand for these data from the research community besides from the universities themselves. Although institutional data on CE provide useful information on participant numbers, program offerings and organizational issues, the patterns and conditions of participation are essential in understanding the demand for CE. Both the Adult Education and Training Survey (AETS) and National Graduates Survey (NGS) contain useful data about CE, not just on participation in general but also about how universities respond to learners' needs, what barriers are experienced by graduates, and to what extent UCE is seen as a viable component of lifelong learning.

A model of adult education participation in learning activities that focuses on individual learner characteristics is Cross' (1981) classical Chain-of-Response (COR) model. It distinguishes individual, situational, and dispositional categories that describe incentives and barriers to participation and choice. Individual factors are usually demographic variables and other factors that characterize personal status (for example, immigrant and employment status).

Situational factors describe life circumstances that favour or hinder participation (for example, marital status, dependent children, and the availability of resources such as financial support). Dispositional factors are psychological predispositions that influence an individual's decision to participate or not to participate such as self esteem and confidence.

In addition to these three categories, there are also institutional factors which enhance or, conversely, negatively affect participation. Examples are the type of programs or course, their duration, the type of instruction employed, the availability of part-time and distance studies (see Schuetze & Slowey, 2002). These factors are relevant in models that describe institutional choices. The COR opportunity structures typology has been used as the basis of many studies of the decision on participation in adult education (for example Adamuti-Trache & Sweet, 2008; Rubenson, 2001; Sweet, Adamuti-Trache & Anisef, 2005). It will also be applied in the following analysis.

### **Research design**

In this study, we analyze patterns of CE in relation to work and labour market outcomes of university graduates of the 1995 cohort within five years after graduation. We also look into where graduates went for their continuing learning and evaluate the particular role UCE plays for their decision. By analyzing several attributes of participants in UCE (for example gender, age, employment situation) and contrast to those who choose non-university continuing education (NUCE) the study seeks to determine the demand potential for UCE and to identify barriers and incentives for participation.

### **Research questions**

The study addresses the following questions:

- (1) Which CE programs are in demand and what role do universities play in responding to this demand?
- (2) Who participates in UCE? What are the attributes of participants in terms of gender, age, family obligations? What are participants' job and career profiles? Who does not participate?
- (3) Which factors favour or, conversely, hinder participation in UCE versus NUCE?

### **Data and research sample**

We use data from the 1995 cohort of Canadian post-secondary graduates surveyed both two and five years after graduation: National Graduates Survey Canada, Survey (NGS) of 1995 Graduates in 1997) and again in 2000. The NGS draws from a large sample of post-secondary graduates (the total cohort is 97,250) and provides micro data containing detailed information about respondents' demographic characteristics, major field of study or specialization, current employment and occupational status, and participation (or not) in continuing education. The analysis of these two NGS databases provides valuable insights into the lifelong learning aspect of continuing education.

Participation in CE is measured by formal education events that occur any time within five years after university graduation. The sample consists of respondents holding a bachelor or first professional degree who held no other previous degree. The full graduate population satisfying these 2 requirements corresponds to 97,250 graduates. There is a clear dominance of traditional age students: 71% were 24 years or younger at the time of graduation, 22% were between the age of 25 to 34, and only 5% and 2% of graduates were in the age range 35-44 and above 45 years of age, respectively. The gender distribution is quite uneven: the sample contains 39% male and 61% female graduates, which reflects the characteristics of the 1995 university graduate population. Data are analyzed by applying survey weights.

### **Variables and research methods**

CE participation is defined by enrolment in at least one educational event (i.e., program or course) at post-secondary level within 5 years after graduating from university. We differentiate CE participation by institution (i.e., university – UCE, and non-university – NUCE), and UCE participation by program (i.e., second degree – SD, and non-degree – ND). Since some respondents have engaged in more than one CE activity (for example took a non-degree university program but also a course at some other, non-university institution such as a private training institute), they can be found under different categories.

Also, respondents often indicate multiple reasons to continue education for each program or course. Reasons are classified in two major categories: either related to jobs or further education (e.g., get or keep a job, get a better job or better pay, prerequisite for further education, part of a degree, diploma, certificate), or general interest (e.g., personal interest and

development). Finally, a single two-category variable describing either job/education related or general reasons was computed giving priority to the former category if at least one job/education related activity was reported within five years.

Several explanatory variables are used to describe CE participant and non-participant profiles and to model the likelihood of CE participation, following the before mentioned model of participation in post-secondary education by adults:

- Individual factors (gender, age group at graduation, employment status, job characteristics such as job type and permanency)
- Situational factors (marital status, dependent children, financial support for CE)
- Dispositional factors (perception of relation between job and education, perception of over-qualification, job satisfaction, planning for graduate study).

Employment, job and family data are based on the 2000 interviews, five years after graduation. Plans for graduate study and financial support offered for CE refer to the entire time interval.

Existing data offers many avenues to explore. Descriptive statistics are used to show CE participants versus non-participant (NP) profiles. Finally, a logistic regression model tests the likelihood of participation in continuing education. The analysis uses consistently the survey weights; and findings are presented for the entire population in compliance with NGS data rounding requirements.

## Findings

In this section, we present first the data for participation and non-participation rates of the cohort that graduated in 1995 (Table 1a), as well as participants' choice of university continuing education (either for the purpose of obtaining a second degree or pursuing non-degree education) versus non-university education (Table 1b). We then show how family status and having children influences participation and institutional and program choice (Tables 2a and 2b). Thirdly, we explore how employment status and attitudes toward jobs and education, and the link between the two, has a bearing on participation (Tables 3a and 3b). Finally we shall use a logistic regression model to show how different participant characteristics influence the choice of institutions and programs. We suggest that the results of this regression model can be used for institutional planning, programming and marketing purposes beyond the particular cohort.

### Participation in continuing education

The total cohort consists of 97,250 graduates of whom about 30 percent were above 25 years of age at the time of their graduation (Table 1a). More than two thirds of the under 25 year olds (68%) have engaged in some organized continuing education activity. This ratio is higher than the proportion of older graduates of whom only a bit more than half (56%) participated. This difference which is somewhat surprising at first can probably explained by the fact that the older graduates presumably had some work related training and experience prior to their studies which would give them some of the 'extra-curricular competences' that employers tend to look for. There is almost no difference in participation rates between male and female participants in the lower age group. By contrast, in the older group, men are much more active in CE than women (61% as compared with 53%). That, again, may seem somewhat odd at first glance since women outnumber men in almost all other educational activities. However, the care of dependent children may provide at least part of the explanation.

Table 1b presents the distribution of participants across different institutions (universities vs. non-university) and for those attending university, between different programs (degree vs. non-degree). Since graduates enroll in more than one institution or form of continuing education, we report the number of participants and the corresponding percentages out of the total number of graduates in each age-gender group. In other words, we disentangle the

information about participants in by showing the UCE and NUCE participation (that will not add up to the total number of CE participants), and also separate the UCE participation into UCE\_SD (second degree) and UCE\_ND (non-degree) which again will not add up in terms of counts and percentages due to graduates being engaged in more than one educational activities over 5 years. For instance, Table 1b shows that 49% of all graduates under 25 enroll in UCE and 33% in NUCE, while for the older graduates the corresponding percentages are 38% and 28%, respectively.

		Total	Non-participants		Participants	
		$N_{tot}$	N	%	N	%
<b>Age &lt;25</b>	<b>All</b>	68,910	22,200	32	46,710	68
	<b>Male</b>	26,930	8,350	31	18,580	69
	<b>Female</b>	41,980	13,850	33	28,130	67
<b>Age &gt;25</b>	<b>All</b>	28,340	12,430	44	15,910	56
	<b>Male</b>	11,170	4,360	39	6,810	61
	<b>Female</b>	17,170	8,070	47	9,100	53

		Total	UCE		UCE_SD		UCE_ND		NUCE	
		$N_{tot}$	N	%	N	%	N	%	N	%
<b>Age &lt;25</b>	<b>All</b>	68,910	33,730	49	21,480	31	15,970	23	22,470	33
	<b>Male</b>	26,930	14,000	52	8,890	33	6,730	25	8,620	32
	<b>Female</b>	41,980	19,730	47	12,590	30	9,240	22	13,850	33
<b>Age &gt;25</b>	<b>All</b>	28,340	10,760	38	6,850	24	4,930	17	7,860	28
	<b>Male</b>	11,170	4,580	41	2,900	26	2,010	18	3,570	32
	<b>Female</b>	17,170	6,180	36	3,950	23	2,920	17	4,290	25

**Abbreviations:**

CE = Continuing education;

SD = Second degree university program/course;

ND = Non-degree university program/course;

UCE = University continuing education (comprising SD and ND UCE)

NUCE = Non-university continuing education.

The overall participation in UCE is sizeable, with larger proportions of graduates enrolled in second-degree programs and for-credit courses that can be counted later towards a degree.

Differences between participation rates of males and females are minimal, but differences are larger between younger and older graduates. Second-degree participation remains quite high even for women above 25 years of age (23%). In contrast, non-degree programs offered by universities are slightly less in demand ranging between 17% for the older age group and 23% for the older.

The large participation in NUCE where one third of younger graduates and 28 % of the older graduates are enrolled is remarkable. It can probably be assumed that the bulk of these were enrolled in courses and programs that offered more practical and job specific know-how. This seems to be a growing trend since several studies have shown that a substantial number of university graduates with a first degree enrolled in courses and programs in community colleges and technical institutes in order to learn additional employment relevant skills.

**The influence of family and work**

The scope of this section is to show the influence of family and job-related factors on the decision to participate as well as the choice of institution. Participation in continuing education is related to graduates’ family situation (Table 2a). Larger proportions of non-participants compared to CE participants are married (53 % of married male graduates and 63% of married female graduates do not participate, compared to 53 and 46 % respectively who do participate) . More importantly perhaps are dependent children: 32% of all non-participants have dependent children whereas only 21% of participants are in this category. As can be expected, these percentages vary strongly by gender. 38 % of female respondents who do not participate in CE have children as compared to 23 % of the males.

	<b>All graduates</b>		<b>Non-participants</b>		<b>Participants</b>	
	<b>Male (N=38,100)</b>	<b>Female (N=59,150)</b>	<b>Male (N=12,710)</b>	<b>Female (N=21,920)</b>	<b>Male (N=25,390)</b>	<b>Female (N=37,230)</b>
	%	%	%	%	%	%
<b>Married</b>	48	57	53	63	46	53
<b>Dependent children</b>	21	28	23	38	20	23

Table 2b shows in more detail the impact of family status and dependent children on participation in CE. While there is only a slight difference in parenthood status among participants across all types of programs, there is a marked difference between programs with regard to participants with children. Whereas 25% of NUCE participants, both women and men, have dependent children, only 15% of men and 18% of women in SD programs are parents. However, these proportions are higher for ND participants. Family responsibilities are still an impediment to participation in continuing education and, as pointed out above, the proportion of female non-participants who are parents (38%) is significantly larger than the proportion of male non-participants with children (23%).

<b>Table 2b: Family status of CE participants by institutional and program choice</b>								
	<b>UCE</b>		<b>UCE_SD</b>		<b>UCE_ND</b>		<b>NUCE</b>	
	<b>Male (N=18,580)</b>	<b>Female (N=25,910)</b>	<b>Male (N=11,790)</b>	<b>Female (N=16,540)</b>	<b>Male (N=8,740)</b>	<b>Female (N=12,160)</b>	<b>Male (N=12,190)</b>	<b>Female (N=18,140)</b>
	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
<b>Married</b>	44	52	42	50	45	54	51	54
<b>Dependent children</b>	16	21	15	18	17	24	25	25

That the Canadian labour market is gendered is well known (see for example Fortin & Huberman; 2002; Shannon & Kidd, 2001), and the NGS data reflect that. Table 3a provides several employment measures and job-related attitudes which support the argument that women are not equitably treated when it comes to employment, full time or permanent jobs. Because the number of respondents who respond to various survey questions used in Table 3a and belong to various CE categories is variable, we do not indicate these totals in the table. Instead, we provide the actual number and what percent of the total valid responses it represents. For instance, there are 34,890 men employed in 2000 and they represent 92% of all men who gave valid responses regarding employment. The 12,040 and 22,850 employed men represent 95% of the male non-participants, and 90% of male participants in CE, respectively.

Table 3a shows that fewer female graduates are employed and hold a full-time job. More women than men feel overqualified for their job (27% compared to 22%), and fewer are satisfied with their job and income. Of the women who participate in CE, 85% do so for job-related

reasons, a percentage that is slightly higher than that of men. There is strong evidence then the great majority of participants, both men and women, continue learning for job and career related reasons, a phenomenon known also from other surveys, for example the AETS.

		Total		Non-participants		Participants	
		N	%	N	%	N	%
Employed	Male	34,890	92	12,040	95	22,850	90
	Female	52,640	89	19,770	90	32,880	88
Full-time job	Male	33,140	95	11,600	96	21,540	94
	Female	46,020	87	17,400	87	28,630	87
Permanent job	Male	27,850	89	9,440	90	18,410	89
	Female	42,200	86	16,280	89	25,920	84
Feel overqualified	Male	6,810	22	2,420	23	4,390	21
	Female	13,070	27	5,320	29	7,750	25
Job & education are related	Male	24,150	77	8,440	81	15,710	76
	Female	38,050	77	14,340	76	24,160	78
Satisfied with job	Male	29,630	95	9,860	94	19,770	95
	Female	44,640	91	16,770	92	27,870	90
Satisfied with income	Male	25,630	82	8,710	83	16,920	82
	Female	38,400	78	14,460	79	23,940	78
Job-related reasons for CE	Male	NA	NA	NA	NA	20,960	83
	Female	NA	NA	NA	NA	31,510	85

While some data provide clear evidence for the labor market related reasons for participation in CE, others are more ambiguous. Thus the difference between participants and non-participants in CE with regard to employment, full time and permanent employment status, although relatively small is significant. While 95 % of male non-participants are employed, only 90 % who participate are in this category (the corresponding numbers are 90 % for female non-participants vs. 88 of participants). Eighty nine percent of women who do not participate in CE are holding a permanent job, but only 84 women participating in CE do, and it can be probably assumed that this gap in employment status is the rationale for participation in CE. On the other hand, 95% of CE male participants are satisfied with their jobs compared to 94% of non-participants, and 78%

of female participants think that their education and job are related, compared to 76 % of non-participants. The conclusion is therefore that employability and labour market success is an important factor for participation in CE, but this relation is not always straightforward or linear.

Table 3b examines the same categories but only among CE participants differentiating between the various institutions and programs. It shows that employment rates are very similar for women and men enrolled in UCE, while they are lower for women participating in NUCE. Gender differences in job permanency and part-time work are visible within all continuing education categories.

<b>Table 3b:</b>									
<b>Employment status and job attitudes according to mode of participation in CE</b>									
		<b>UCE</b>		<b>UCE_SD</b>		<b>UCE_ND</b>		<b>NUCE</b>	
		<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Employed									
	Male	16,480	89	9,880	85	8,120	94	11,270	93
	Female	22,890	88	13,990	85	11,210	93	16,290	89
Full-time job									
	Male	15,460	94	9,030	91	7,930	98	10,740	96
	Female	19,760	87	11,610	84	9,900	88	14,220	87
Permanent job									
	Male	12,930	86	7,340	80	6,870	94	9,350	92
	Female	17,780	82	10,210	76	9,190	88	13,370	88
Feel overqualified									
	Male	3,020	20	1,970	22	1,370	19	2,350	24
	Female	5,260	24	2,830	21	3,050	29	4,060	27
Job & education are related									
	Male	11,750	78	6,990	74	5,900	80	7,110	70
	Female	17,220	79	10,810	80	8,090	77	11,670	77
Satisfied with job									
	Male	14,320	95	8,670	95	6,960	95	9,660	96
	Female	19,840	91	12,660	94	9,270	89	13,520	89
Satisfied with income									
	Male	12,340	83	7,400	81	6,050	83	8,320	81
	Female	16,880	78	10,710	80	8,010	77	11,760	78
Job-related reasons for CE									
	Male	15,550	84	9,440	81	7,790	90	10,340	85
	Female	22,840	88	14,610	89	10,640	88	15,210	84

**Abbreviations:**

CE = Continuing education;

SD = Second degree university program/course;

ND = Non-degree university program/course;

UCE = University continuing education (comprising UCE\_SD and UCE\_ND)

NUCE = Non-university continuing education.

Indeed, regardless of CE participation or choice of program, larger proportions of women feel overqualified for their present job. Table 3b shows that gender differences are strong regarding the correlation of over-qualification and participation in ND as 29% of women and only 19% of men participants that are likely engaged in programs and courses to explore new career options. Since women are in general more likely to believe that their job and education are related, they indicate in larger proportion continuing education for job-related reasons.

Generally, the analysis of motivation to continue education shows the overwhelming indication of job-related reasons. When asked whether at least one educational activity was pursued for reasons related to increasing job and career opportunities, 83% of male and 85% of female CE participants gave a positive response (Table 3a). However, table 3b shows some variation across the CE sectors, ranging from 81% to 90% of men enrolled in SD and ND activities, respectively who declared job-related goals. Women enrolled in UCE are the most likely to do so for job-related purposes (88%), regardless the type of activity (SD or ND), while men enrolled in UCE express same reasons if participate in ND activities (90%).

This brief presentation shows that the graduates' demand for formal continuing education and training appears to be related to individuals' goal to maximize their chances to succeed in the labour market. The role of university continuing education (UCE) in supporting this goal is comparable to that fulfilled by other post-secondary institutions, although NUCE participation is lower than UCE participation (Table 1b). However, for a sample consisting of baccalaureate graduates, the fact that one third attend CE activities in non-university institutions and up to 85% of them do so for job-related reasons, and this happens within 5 years after university graduation, raises questions about the relevance and efficiency of university undergraduate instruction. This general statement cannot be substantiated in more detail here, for example by looking in different fields of study (see Adamuti-Trache, Hawkey, Schuetze & Glickman, 2006) as well as different institutions.

### **Basis for continuing education participation**

A series of logistic regression analyses were performed on enrolment as the outcome variable and a set of predictors selected from the previously discussed individual, dispositional, and situational factors. Full-models in which all variables are included are examined for the likelihood to enroll in UCE\_SD, UCE\_ND and NUCE activities. Predictors are demographic and

family characteristics, as well as job and career related variables describing either circumstances in which continuing education occurs, or perceptions of these conditions. Table 4 presents the results of this analysis using odds ratios.

A brief inspection of the three models shows that participation in second-degree university programs model is the best explained by the set of predictors (18%). Meanwhile only 3% and 2% of variation in the outcome is explained for the models describing participation in non-degree and non-university activities, respectively. Although all models are statistically significant, it is notable that the SD model is better supported by the set of predictors that support a job/career related argument. Discrepancy is in part due to age and gender differences in participant samples for each of the three CE sectors (cf. Table 1), which situate respondents differently with respect to the labour force and life events.

The effect of *individual factors* on participation shows a strong age effect – older graduates are significantly less likely to continue further education, although the effect is stronger for participants in SD as compared to NUCE. Gender effects are also significant, women being about 30% less likely to participate in SD continuing education. The employment status five years after graduation is a significant predictor only for participation in SD and non-university activities, with opposite effects that show that those employed are likely to enroll in NUCE and those unemployed or not in the labour force are more likely to continue SD activities. Working full-time is likely to increase the likelihood of ND participation by 60% while decreasing the likelihood to enroll in SD activities by 60%. Consistent with job type effect, job permanency (i.e., hired permanently with no specified term) contributes by a factor of three to decreasing the likelihood of continuing education in SD, but has a positive effect on the participation in ND and NUCE.

Among the *situational factors*, family obligations have varying effects on participation in different CE sectors. Although being married and having dependent children both decrease by 40% the likelihood to pursue second degree UCE (cf. Table 1b this path is chosen by younger graduates), the effects are less consistent for the other two CE sectors. For instance, ND participants are also younger graduates (see Table 1b) who are possibly married but unlikely to have children. The ‘dependent children’ factor appears to have similar negative impact on ND participation, while the effect of being married is more neutral: attending non-degree activities that are less demanding than SD programs is not that much affected by marital status. However,

the NUCE participant group has a much larger number of older graduates, so the group displays more diverse family situations (e.g., separated, divorced, single parents). Participation in NUCE is likely to be increased by a factor of two if respondents have dependent children. Compared to the other two CE choices, dependent children may be older and also NUCE activities could be less demanding in terms of duration and difficulty.

<i>Models (odds ratio)</i>		<b>UCE_SD</b>	<b>UCE_ND</b>	<b>NUCE</b>
<i>Variables</i>	<i>Ref group</i>			
<i>Individual</i>				
Age	Age<25	.6**	.7**	.8**
Gender	Male	.7**	.9**	.9**
Employment in 2000	Unemployed	.6**	1.0	1.7**
Job type	PT	.4**	1.6**	.9
Job permanency	Temporary	.3**	1.3**	1.2**
<i>Situational</i>				
Marital status	No	.6**	1.1*	.6**
Dependent children	No	.6**	.6**	2.2**
Funding PSE:				
Parents/spouse	No	1.1*	1.0	.8**
Student loans	No	1.6**	1.0	.9*
Employment	No	.9*	1.0	1.1**
Scholarships	No	1.0	1.0	1.0
<i>Dispositional</i>				
Feel overqualified	No	0.8**	1.3**	1.1*
Job-educ are related	No	.6**	1.4**	.7**
Job satisfaction	Dissatisfied	3.0**	.7**	.8**
Graduate study plans	No	3.2**	1.0	1.0
<i>Constant</i>		.6**	.2**	.3**
<b>Model summary R<sup>2</sup></b>		<b>.18</b>	<b>.03</b>	<b>.02</b>

\* p<0.05, \*\* p<0.001

Other situational factors of interest are related to financial funding of previous and current post-secondary education (PSE), information provided for all respondents. These factors indicate funding strategies adopted by respondents in relation to their PSE, and possible financial support or burdens. To note that, compared to other predictors, funding factors matter actually

only for participation in SD programs: those with student loans and access to other funding were likely to continue their education in SD programs.

*Dispositional factors* also play different roles in predicting participation in each CE sector. In the SD model, those who are satisfied with their job and are planning graduate studies are 3 times more likely to continue further education, although they participate particularly when the current job does not correlate well with their education and they do not feel overqualified in their jobs. These are individuals who are perhaps in an intermediate stage of their professional career and continue or plan to continue advanced study programs. The other two models are quite similar with respect to most dispositional factors. The likelihood to participate is increased if respondents are less satisfied with their jobs and feel overqualified, which suggests that these individuals are in search of a new job and/or career change. However, those who perceive that the current job does not relate to education are likely to enroll in ND rather than in NUCE activities. This suggests that participation in ND programs and courses is perceived as an exploratory strategy, while NUCE is a pragmatic choice that responds to immediate job demands.

## **Summary and Conclusion**

What does emerge from the NGS data with regard to the questions we asked in the beginning?

First, it should be noted that, although quite useful for UCE analysts and planners, NGS data do not provide a full picture of the demand for, and participation in University Continuing Education (the same is true for the AETS which has not been analyzed here). It is therefore deplorable that an earlier survey by Statistics Canada on continuing education activities delivered by universities was discontinued in the second half of the 1990s, partly due to unsatisfactory reporting by universities themselves.

Nonetheless, there are a number of relevant conclusions that can be drawn from NGS data with respect to our questions.

### 1. Demand and participation

Although potential demand for CE is by definition larger than expressed demand, participation data are actually much more reliable than data from more general demand surveys, especially when they are broken down, as is the case with the NGS, by personal characteristics of the participants. Overall, more than two third (68 percent) of under 25 year olds of the 1995 cohort had participated in at least one CE activity within five years of graduation, and more than half (56 percent) of those aged 25 and above. This is a clear indication that ‘lifelong learning’ is no longer an utopian and elusive concept but a reality for the majority of the workforce, at least the qualified segment of it.

Most of the participants went back to university, the larger share into second degree programs, the smaller one enrolling in non-degree programs. A minority went for CE to non-university programs, i.e. to colleges, institutes or specialized training institutions. This comparison is somewhat skewed however since non-university institutions cannot offer second degree programs. When comparing only the number of participants enrolling in university non-degree programs and courses with those going to non-university institutions for their CE, non-university CE is in greater demand than university-based programs.

These numbers can be interpreted in several ways. One interpretation is that second degree studies are not really ‘continuing’ but often part of initial education as a second degree is the prerequisite for a number of qualified jobs. For example, a BEd is in many jurisdictions, prerequisite for becoming a teacher, and a LLB is required for applying to the Bar. Another interpretation suggests that undergraduate education, especially in liberal arts programs, does not sufficiently prepare students for the realities of the workplace and that therefore graduates need to pick up more workplace relevant skills and know-how in order to satisfy employers’ demands. As most UCE programs do not offer such workplace relevant course, graduates turn to colleges, institutes or specialized training institutions for their CE in order to acquire additional skills to make them more successful in the labour market..

## 2. Participants, their characteristics and motivation

The data show that family and jobs still have ‘long arms’ which influence participation. Other factors like age and gender that determine participation are related to family and jobs.

Overall, more men than women participate in continuing education (Table 1a). This is true for all three types of programs distinguished here, except participation in NUCE where younger women slightly dominate (Table 1b) indicating the difficulty for young women to find a job without additional job-relevant education. The over-representation of men in CE activities is somewhat surprising given the general trend that proportionally more women than men go to university.

In both age categories, below and above 25 years, women participated less than men which points to two factors that seem to determine participation, family responsibilities and employment status. However, family responsibilities and having especially dependent children do no longer seem to keep women out of CE as more women as well as more women with independent children than men are found among participants (Table 2 a). It is difficult to conclude from the data whether the long arm of the family for women has become shorter than before, or the specific difficulties women encounter in a still gendered labour market are the main driver of this development.

A number of indications point to the latter. Among the participants in CE, more women than men cite job-related reasons for enrolling in CE. More women than men feel over-qualified for their present job and fewer are satisfied with their job and income (Table 3 a).

## 3. Factors influencing participation

NGS data were summarized by defining a number of individual, situational and dispositional factors that explain participation in CE. As can be seen from Table 4, the respondents’ labour market situation, both in objective and subjective terms, and funding are the two single most important determinants in all CE categories. While the central importance of funding is not

surprising, the dominant role of employment related factors probably is. However, it must be borne in mind that the data look only into the first five years after graduation when finding a satisfactory job with promising career prospect is the major preoccupation of young people starting their working life. In comparison, gender, age and family status, although still essential, are of secondary importance and even having to care for dependent children does not seem to be a major obstacle to participation (although this might be different had we looked at single parents).

Our study provides a snapshot of the factors of participation in CE for one particular group of well qualified people, i.e. those with a first university degree. We have identified some of their essential characteristics and discussed factors that determine their participation, both in general and with regard to three different tracks of CE. The essential question for UCE planners will be to analyze their programs, especially the ND offerings, in light of the demand from this group.

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