

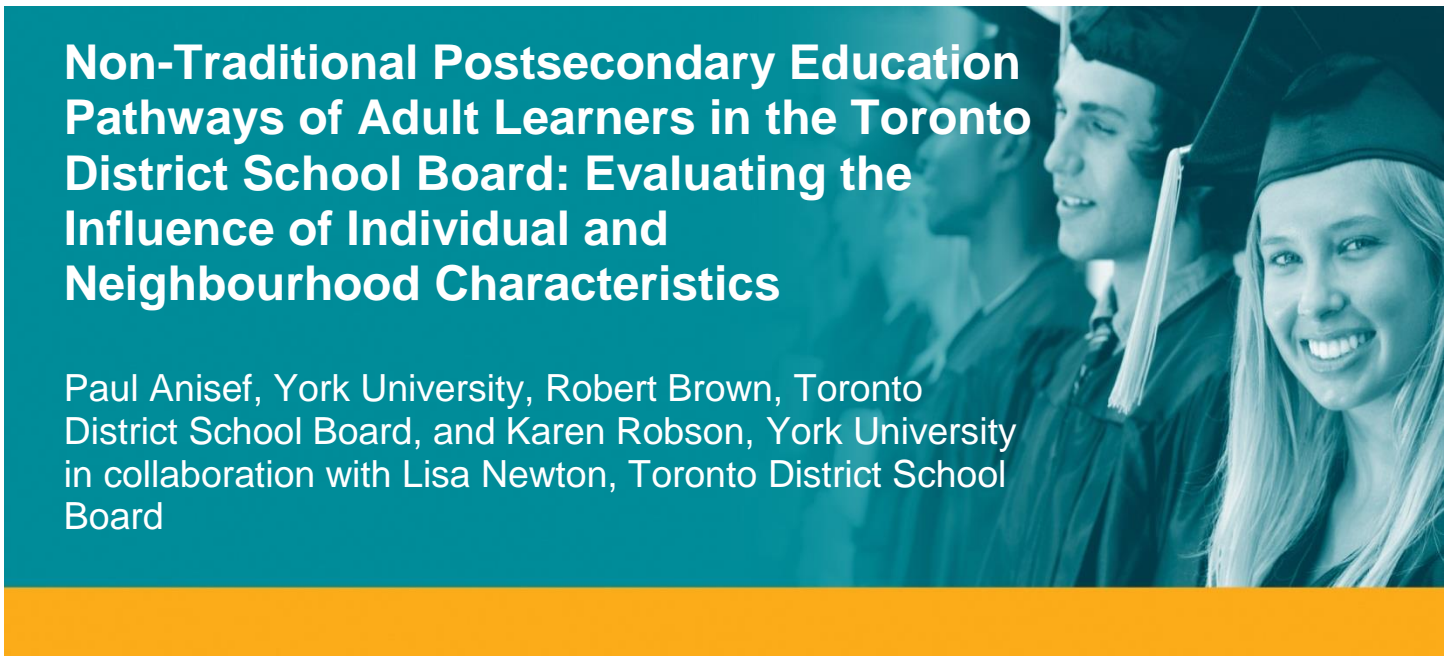


Higher Education
Quality Council
of Ontario

An agency of the Government of Ontario

Non-Traditional Postsecondary Education Pathways of Adult Learners in the Toronto District School Board: Evaluating the Influence of Individual and Neighbourhood Characteristics

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Published by

The Higher Education Quality Council of Ontario

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Cite this publication in the following format:

Anisef, P., Brown, R., & Robson, K. (2013). *Non-Traditional Postsecondary Education Pathways of Adult Learners in the Toronto District School Board: Evaluating the Influence of Individual and Neighbourhood Characteristics*. Toronto: Higher Education Quality Council of Ontario.



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Executive Summary

Though once considered a marginal aspect of education studies, the unique pathways of adult learners have become a research topic of interest in recent years. Existing studies have focused primarily on either adult learning at the postsecondary level or adult education programs for low-skilled immigrants. For the most part, continuing education has been overlooked as a strategy employed by native-born and immigrant adults for updating credentials towards accessing postsecondary education (PSE). Our research addresses this gap in the literature by investigating postsecondary outcomes for Canadian-born and immigrant adults who seek to upgrade their credentials through continuing education at the secondary level or at adult day schools through the Toronto District School Board (TDSB). Due to a dearth of research, it is difficult to assess how many individuals pursue this pathway as a route towards PSE, the factors affecting the PSE plans formulated by adult learners at the secondary level, and whether and how these pathways and outcomes differ for immigrants and non-immigrants. An extensive literature review led the researchers to conclude that adult learners in continuing education likely face multiple barriers in upgrading their skills and credentials when engaged in an effort to attain a postsecondary education. In addition to experiencing difficulties common to adult learners, such as financial and time constraints, immigrant adult students often contend with a secondary set of challenges that include grappling with a new academic culture, single parenthood, and serious language challenges that pose a risk to successful integration into Canadian society and the labour force.

The overarching research question examined in this study is: “What are the postsecondary education pathways pursued by adult learners enrolled in continuing education and its correlates?” In answering this broad question, we examined how these pathways differ between immigrants and non-immigrants and employed two datasets in responding to this and more specific research questions. The first dataset derives from the TDSB Continuing Education Survey, which gathered information from 640 students taking Grade 12 English in March 2011. The cross-sectional nature of this survey only allowed us to examine students’ PSE goals and plans. Thus, a second TDSB administrative dataset was employed in order to describe and analyze the PSE transitions made by these students. The TDSB Administrative Dataset consists of all adult students who attended any one of the five TDSB adult day schools at any time over four quadesters between September 2008 and June 2009. Overall, this population included 12,861 students.

Bivariate analyses of the datasets revealed that the PSE plans and actual pathways of students varied considerably. Over half of the students surveyed expected to attend college, while only one-quarter planned on going to university. No significant differences in PSE plans by region of origin were found. However, an analysis of the administrative dataset revealed that only 2% of students wrote back and confirmed that they would accept an offer of admission to an Ontario university. This group contained no students from the Caribbean and Latin America. Around 17% of students similarly wrote back and confirmed that they would attend an Ontario college. Stark confirmation variations were identified with respect to region of origin. Around 22% of African and Asian students confirmed college, compared to just 12% of non-English-speaking Europeans and 13% of Caribbean and Latin Americans. Thus, while region of origin exerts minimal influence on adult learners when making plans for PSE, these region of origin differences do surface and impact on their confirmation of PSE admission offers.

In order to tease out how differences in the living conditions of the immigrant groups may contribute to the different confirmation experiences of the groups examined in the administrative dataset, multivariate analysis was employed to control for various background factors. With respect to the multivariate analysis of the student survey, there are no particularly profound findings with regard to the outcome variables examined. In general, the predictors included in these models are not particularly strong determinants of the factors under consideration, with the most consistent predictors across models being age and having foreign postsecondary

education. With regard to the multivariate analysis of the administrative dataset, sex, age and arriving to Canada after age 14 were revealed as individual predictors in confirming offers of admission at an Ontario PSE institution. Females were more likely than males to confirm, as were younger people. Interestingly, arriving to Canada after age 14 was also found to be positively associated with PSE confirmations. In terms of neighbourhood characteristics, only the proportion of highly educated persons in a neighbourhood was significantly, but weakly, associated with PSE confirmations.

In conclusion, our findings comprise a preliminary step in understanding the non-traditional pathways chosen by adult learners in the TDSB. In order to provide the necessary supports, both at the secondary and postsecondary levels, that would facilitate greater access to and persistence in Ontario's higher education system, we need to learn much more about the life course structures and dynamics that impact on the education- and employment-related choices that adult learners make.

Introduction¹

Though at one time considered a marginal aspect of education studies, the unique pathways of adult learners have become a research topic of interest in recent years. Existing studies have focused primarily on adult learning at the postsecondary level or adult education programs for low-skilled immigrants, for the most part overlooking continuing education as a strategy employed by native-born and immigrant adults for updating credentials towards accessing postsecondary education. Our research addresses this gap in the literature by investigating postsecondary outcomes for Canadian-born and immigrant adults who seek to upgrade their credentials through continuing education at the secondary level or at adult day schools through the Toronto District School Board (TDSB).

Postsecondary attainment has become a provincial priority, brought to the forefront with the introduction of the “Open Ontario Plan” in 2009. An initiative of the Ontario Government, the Plan aims to raise postsecondary educational attainment up to 70% for those aged 25 to 64 years (Kerr, 2011). The current attainment rate of this age group is 62%. Harvey Weingarten, president and CEO of the Higher Education Quality Council of Ontario, noted that nearly three-quarters of new jobs will require some form of postsecondary education and that in order to satisfy labour market demands, Ontario will need to increase participation and attainment rates of under-represented groups of students who may not be enrolling in postsecondary education at equal rates (Mullins, 2010). Here Weingarten references the “widening achievement gap”² in educational outcomes along sociodemographic lines, an area of concern to many researchers and policy makers (TDSB Director’s Annual Report, 2004-2005; TDSB Achievement Gap Task Force, 2010; Rubenson et al., 2007; Myers & de Broucker, 2006).

Adults are key players in sustaining this gap in that they are often in need of skills upgrading but can face barriers to participation and success in postsecondary attainment. If Ontario is to meet its goal of a 70% postsecondary attainment rate, efforts must be extended to understanding and meeting the distinctive needs of adult learners, paying particular attention to adult immigrant learners, a significant group in this province. This review builds greater comprehension of these needs by compiling research findings on adult learners of all types: recent immigrants with high levels of education pursuing education at the secondary and postsecondary levels; low-skilled native learners; adult students in the workforce; and those pursuing education in order to find work, among other configurations.

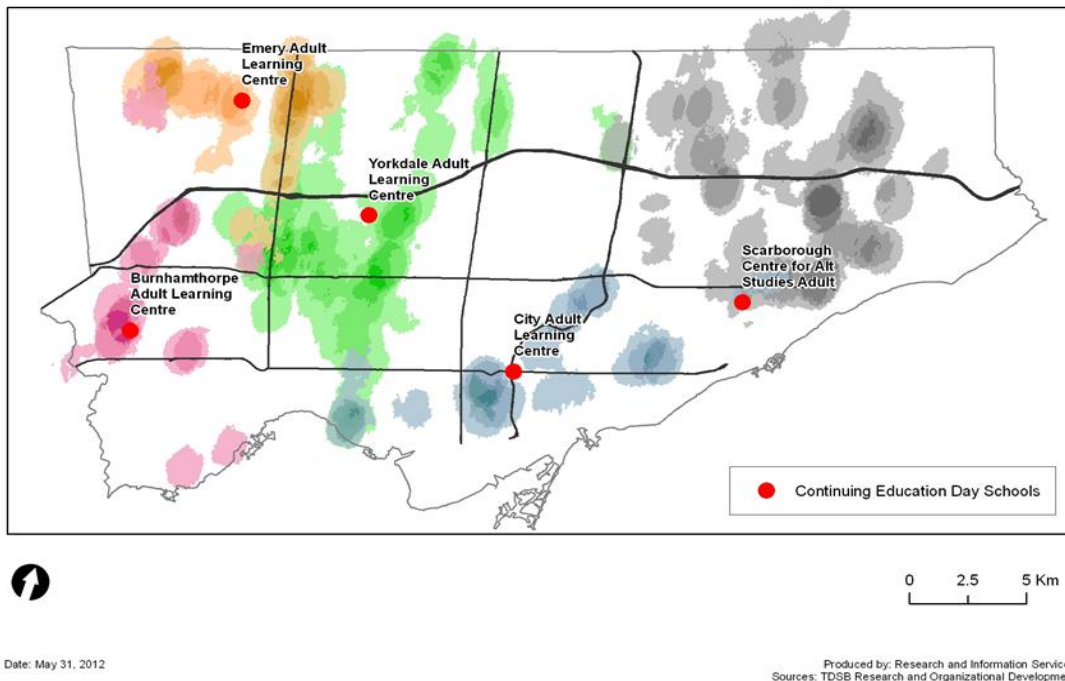
The overarching research question examined in this project is: “What are the postsecondary education pathways pursued by adult learners enrolled in continuing education and its correlates?” In answering this broad question, we also examine how adult education pathways differ between immigrants and non-immigrants. Two datasets are employed in responding to this broad question. The first derives from the TDSB Continuing Education Survey, which includes 640 students enrolled in Grade 12 English in March 2011. A second administrative dataset consists of approximately 13,000 students who were enrolled in a total of five adult day schools in 2008-2009. The map below displays the administrative dataset, geocoded according to adult students’ residential postal codes.³ As such, it reveals both the population density of adult students by their residential region of Toronto and also the broad geographic area that the five adult high schools cover.

¹ We wish to acknowledge the proofreading and editing of this report by Nikolina Postic.

² Achievement gap: “The focus of education reform efforts for the past decade ... is the gap between the quality of schooling that most middle-class kids get... and the quality of schooling available for most poor and minority children- and the consequent disparity in results” (Wagner, 2008).

³ We wish to acknowledge Cosmin Marmureanu for preparing this map.

Figure 1: Distribution of Adult Students within the TDSB in Continuing Education Adult Day Schools



Researchers tracked backwards to identify whether any of these students at the TDSB had also been registered as adult learners in 2007-2008 and tracked forward to identify whether these students registered again in 2009-2010. Of particular interest to our analysis of the survey dataset is to identify factors that predict the postsecondary goals of continuing education students. The administrative dataset will be employed to identify those factors that predict postsecondary educational choices made by continuing education students.

This report contains four sections. The first section provides a detailed and extensive review of literature regarding immigrant and native-born adult learners and the barriers they face in employing continuing education as a means of accessing postsecondary education. The second section presents descriptive statistics and graphics that relate to the survey and administrative datasets described above. The third section consists of three stages of multivariate analysis. In the first stage, we present multivariate, multinomial logistic regressions that predict PSE goals using immigrant status, age at arrival and foreign credentials, controlling for a host of demographic factors. We then move on to the second stage of analysis, in which administrative longitudinal data are employed to predict PSE choices of continuing education students using mixed or multilevel models. In the final stage of our multivariate analysis, we employ more sophisticated statistical techniques to “match” outcomes to the survey data by creating cases from the administrative dataset that are similar on various matching criteria, like age, sex, marital status and region of origin. We also examine the likely trajectory of students and merge this information into the survey dataset. This allows us to use the more detailed survey data in a proxy analysis of outcomes. The fourth and final section of this report consists of conclusions and recommendations.

Literature Review⁴

Defining Adult Learners

Though participants' education pathways can vary greatly, "adult learning" is commonly defined as "the process or the result of the attainment of knowledge and expertise by adults through practice, instruction, or experience. The definition usually restricts the population of learners to those who are no longer in their initial cycle of education" (Kerr, 2011, p. 3). Non-formal (structured, non-institutional) and informal (unstructured, daily experience-based) learning are sometimes included in the definition (Rubenson et al., 2007). However, these non-formal and informal categories of learning are not relevant to our proposed study of adult learners at the secondary level or in credit programs within TDSB adult day schools. As Kerr (2011) describes with reference to adult students at the postsecondary level, pathways through education diverge from those of the traditional student. Therefore, commonplace definitions of attrition and retention are not as useful for this group. This viewpoint is also expressed by Kasworm (2003, p. 6), who notes that adult students' "complex and competing lives...impact the[ir] abilities to be continuously enrolled." As an example, Kerr (2011) describes the adult student who enrolls in only one course at a time and nonetheless takes time off due to familial or workplace obligations. Beyond diverse pathways, the group of adult learners is heterogeneous with regards to characteristics such as immigrant status, country of origin, ethnicity, language spoken, income level and previous education level, which presents unique barriers and issues for each learner.

Though the importance of investigating and supporting adult learners is now apparent to researchers and policy makers in Ontario, it is a relatively recent field of research interest. Therefore, certain areas of this sector (such as adult learners enrolled in postsecondary education) have received greater attention than others, and data are not uniformly rich for all components of adult education (OECD, 2002). Kerr (2011), whose recent paper addresses many pertinent issues regarding adult education in Ontario at the postsecondary level, notes a lack of reliable longitudinal data on adult learning participation and outcomes. Our study contributes to a greater understanding of the pathways undertaken by adult learners.

Why is Adult Learning Important?

Looking beyond provincial interests, adult learning has become a national, if not global priority in recent years, with developed countries holding many shared concerns about training and education for adult citizens, particularly at the postsecondary level (Rubenson et al., 2007). Rapidly aging populations foretell slow workforce growth, resulting in labour shortages. The Standing Senate Committee on Social Affairs, Science and Technology report the following eye-opening statistics:

According to Human Resources and Skills Development Canada (HRSDC), approximately 5.5 million jobs will need to be filled in Canada by 2015 due to retirements (3.8 million) and job creation (1.7 million). Two-thirds of these jobs will require postsecondary education or be at the management level. The Canadian labour market will need approximately 1.4 million additional university graduates and slightly more than 2 million college or vocational school graduates by 2015. (SSCSAST, 2011, p. 12)

The potential for the existing workforce to meet these needs may be leveraged by providing opportunities for adults to build additional skills and knowledge (Rubenson et al., 2007; Saunders, 2007; Myers & de Broucker, 2006).

⁴ We would like to acknowledge the contribution of Jennifer S. Anisef in developing the literature review.

Our current knowledge-based economy is characterized by rapidly changing skill requirements. Livingstone (2005) draws attention to a trend towards inflated credential requirements for even simple clerical and unskilled manual jobs in Canada (while at the same time warning about the growing issue of over-qualification). Other research indicates that low-skill jobs are declining in number and that skills are becoming obsolete with increasing speed in this new labour market climate (Shek-wai Hui & Leckie, 2011). Therefore, learning must take place throughout the lifetime of an individual in order to support productivity, innovation and employment chances, as well as to ensure global competitiveness by building human capital (Rubenson et al., 2007; Government of Ontario, 2005; Kerr, 2011).

Connections between adults' educational attainment and equity and social inclusion are also drawn in the literature. Education reduces income disparity, with the less educated being more likely to experience relatively poor labour market outcomes, such as lower wages, higher likelihood of unemployment and lower status jobs (Rubenson et al., 2007; Myers & de Broucker, 2006; OECD, 2003). Research from the Ontario Secondary School Teachers' Federation (OSSTF, 2004a) shows that 50% of adults who pursue continuing education escape social assistance and 83% of adult day school graduates go on to jobs or further education. The performance gap⁵ is widened, however, by the fact that the least educated are less likely to participate in further education. University-educated Ontarians receive five times more education and training than those who have high school diplomas or less (Myers & de Broucker, 2006). Adults with lower levels of educational attainment stand to benefit just as much or even more from educational opportunities compared to those with higher levels of education in terms of self-reported wage and/or employment gains, particularly if a postsecondary certificate is obtained (Pinsent-Johnson, Howell & King, 2013; Kerr, 2011).

Augmenting the education level of a population also results in better-informed citizens, as well as personal and social returns, such as greater participation in and integration into one's community (Rubenson et al., 2007; Government of Ontario, 2005; Kerr, 2011; Myers & de Broucker, 2006; OECD, 2003). Rubenson (2007) indicates that higher participation rates in adult education in Nordic countries may be attributed to policy emphasis on social citizenship and rights, rather than the educational gains and labour market success of program participants, which can reinforce the performance gap referred to above. Higher educational attainment may even influence personal health, with 67% of Canada's postsecondary graduates considering themselves to be in "very good" or "excellent" health in 2005, compared to only 43% of those without a high school diploma (SSCSAST, 2011). Further research in this area should examine current inequities in terms of access and provision in order to ensure that these benefits are available to all potential adult learners (OECD, 2003).

Goals and Motivations of Adult Learners

As one might expect when considering the diversity of their backgrounds, adult learners are motivated to pursue education for varying reasons and towards different goals. The decision to enrol in higher education programs is informed by situational, dispositional and institutional factors, and choosing to pursue schooling is "a cognitive, emotional, and relational decision considered within the web of family, work, social, financial class, gender, institutional support, and program delivery considerations" (Stein & Wanstreet, 2006 in Pinsent-Johnson et al., 2013, p. 7). In his examination of adult education programs, Comings (2007) notes that adult learners' goals may change over time, impacting the configuration of their learning pathways. Furthermore, among other factors, previous education, skill levels, and the Human Development Index (HDI) ranking of the country of origin (for immigrant students) can influence orientation towards participation in schooling (Lum &

⁵ Performance gap: "The gap between what students are expected to do and what they can do. Over time, this gap grows larger and larger, and it is especially exacerbated in the later grades, when the academic growth of at-risk students plateaus. As a result of this performance gap, these students are unable to meet the demands of required courses in the content areas in high school, and their resulting failure can lead to discouragement and disengagement in school" (Deshler, 2005).

Grabke, 2012; Adamuti-Trache, 2011). The OECD's 2003 comparative review of international adult learning policies, for example, shows that many low-educated or low-skilled individuals believe their skills to be good or excellent, and thus do not require upgrading.

Increasing employability and employment-related training are frequently cited reasons for adults' pursuit of further education at all levels (Lum & Grabke, 2012; Adamuti-Trache & Sweet, 2010; Adamuti-Trache, 2011; Dæhlen & Ure, 2009; OECD, 2003; Livingstone, 2005; SSCSAST, 2011; Girard, 2010). Of particular relevance to this review is the OECD finding that most adult learning is short in duration and focuses on professional or career upgrading, rather than formal postsecondary education: less than 20% of adult students train to obtain a university degree or college or vocational diploma (OECD, 2003). Older adults, particularly those over fifty, are less likely to participate in adult education, as the returns to further training later in their careers is not perceived as worth the investment. Pursuing post-compulsory education may entail changing employers, the loss of seniority and or benefits, a shorter remaining working life and, more generally, smaller financial gains from their investment when compared to younger students (Ibid.).

In their Norwegian study of learning motivations for low-skilled adults in continuing education, Dæhlen and Ure (2009) detect ambivalence towards schooling for those who feel obligated to pursue educational upgrading for employment reasons rather than due to an inner drive or desire. This could also be the case for more educated adults, though it may be particularly true for low-skilled adult learners, who can have negative associations with schooling resulting from difficult past experiences. Lack of confidence can be another factor in non-participation in training at the secondary level for adult learners with lower levels of education (Pinsent-Johnson et al., 2013). This may also inhibit the pursuit of schooling at the higher levels. Further training can enhance an adult student's self-image and lead to greater success in the labour market (OECD, 2003).

Many adult learning theories acknowledge the role of life transitions in students' decision to enrol in further education and in their motivation to learn. Immigration can be qualified as a significant life transition, characterized by disruptions that motivate the pursuit of further training (Adamuti-Trache & Sweet, 2010). Many immigrants' decision to pursue training at the secondary and postsecondary level is heavily informed by difficulties encountered in attempting to have foreign credentials recognized in the Canadian labour market. In response to this recurrent barrier, immigrant adults frequently decide to pursue vocational training (particularly unskilled immigrants) or language courses as a means to raise the rate of return of human capital earned abroad, which can result in higher wages (Girard, 2010). Country of origin, immigrant category, age at migration, length of time in the host country, pre-migration schooling and occupation are all factors that can inform post-migration investments in education, with greater investments seen from immigrants who hail from regions that suffer from low initial skill transferability (Ibid.)

Adamuti-Trache (2011, p. 65) recognizes the role of the individual in the decision-making process of highly educated immigrants, referencing Shanahan's notion of bounded agency, "a dynamic interplay between agency and social context." In her secondary analysis of the Longitudinal Survey of Immigrants to Canada (LSIC), Adamuti-Trache finds that immigrants' responses to postsecondary educational opportunities are affected by pre-migration and structural factors, as well as their individual dispositions. Clearly, arriving at the decision to pursue further education is a complex and multifaceted process worthy of further investigation.

Adults as a Vulnerable Group

As an at-risk group, adults require particular supports as they transition to PSE. On the 2003 International Adult Literacy and Skills Survey (IALSS), approximately nine million Canadian adults (42%) performed below Level 3 on the prose and document literacy scales, the internationally accepted minimum considered essential for success in today's economy and society (Canadian Council on Learning, 2010). Low literacy levels are related to poor achievement levels overall, as demonstrated by the results of the 2005 International Study of Reading Skills (ISRS). A large proportion of adults who demonstrated the lowest levels of literacy in

this study had low levels of education, earnings below \$25,000 per year and, notably, a first language other than English or French (Canadian Council on Learning, 2010).

Adult immigrants, both recent and long-term, are particularly vulnerable in that they constitute the majority of those who scored the lowest literacy level on the IALSS, with only approximately 30% of immigrants achieving a Level 3 or higher (Hayes, 2009). In 2007, Statistics Canada released a special edition report on immigrants' perspectives and showed that 26% listed "learning official language" or a "language barrier" as their greatest difficulty since arriving in Canada four years earlier. Financial and time constraints were the most frequently cited barriers to language training, as articulated in the Adult Education and Training Survey conducted by Statistics Canada (Peters, 2004).

In addressing the issue of women in adult education, the literature presents a mixed picture of whether women constitute an at risk group with regards to participation rates. While some studies report no substantial gender differences in participation in adult learning in Canada (OECD, 2003), others indicate that women, specifically immigrants and visible minorities, are less likely or less able to invest in education (Chiswick & Miller, 1994, ctd. in Girard, 2010; Livingstone & Scholtz, 2006). A 2007-2008 survey of adult students taking courses in the TDSB showed that, overall, 65% of continuing education students were female, compared to 48% in TDSB day schools. Gender was split for students aged 21 and younger. Those above 21 were more likely to be female and less likely to speak English at home, possibility due to immigrant status (Brown, 2008).

Participation and retention rates for adult females may vary according to status and background. Through their analysis of the 2007 Longitudinal Survey of Immigrants to Canada and a review of the literature in this area, Anisef et al. (2012) show that immigrant women are more likely than immigrant men to experience isolation, deficiency of local knowledge, family obligations, cultural barriers and lower levels of education. All of these factors can act as obstacles to learning one of Canada's official languages. Those women characterized as SOLP – speaking an official language poorly – tend to be older, visible minorities, migrate as family class or refugees, and be from regions in Asia and the Middle East (Ibid.). These findings on language proficiency suggest that age, immigrant class, race and country of origin may be factors in participation and success in adult education for immigrant women, and that the vulnerability of women with regards to participation in education cannot be generalized.

Maxwell (2010) warns that the social and economic impact of low literacy among working age adults will become even more apparent in the next decade, which will show decelerating labour market growth, economic growth stalled by select labour shortage, and the creation of an underclass through greater income disparity. Workforce projections predict that there will be nine million low literacy adults in the workforce in 2031, accounting for 40% of the working age population (Canadian Council on Learning, ctd. in Ibid.). The literacy-challenged adults described above are underrepresented in the pathway to postsecondary education. This is an area that warrants greater investigation, focusing on those who do not speak an official language fluently, in order to encourage higher rates of participation in adult education and a more literate and skilled workforce in Ontario.

Barriers and Needs of Adult Learners

Adult learners may encounter distinct barriers in their pursuit of postsecondary attainment through continuing education, which requires greater understanding in order to work towards better outcomes for this group and the province. Significantly more adults (33%) aged 25 to 64 than youth (19%) reported family responsibilities as a reason for not pursuing further learning activities (Statistics Canada ASETS, 2008, ctd. in Kerr, 2011). In a study of adult newcomer learners in Manitoba, Magro and Ghorayshi (2010) found that women in particular experience challenges in pursuing academic goals while they bear the responsibility for mothering and other domestic activities.

Adult learners are more likely than traditional students to report conflicts with work schedules as a barrier to participation in studies (Kerr, 2011). Being too busy at work was the primary reason (59%) reported by respondents of the Adult Education and Training Survey (AETS) for not pursuing adult education and training (OECD, 2002). Unfortunately, these jobs that present a barrier to skills upgrading may not afford much opportunity for upward mobility. Magro and Ghorayshi (2010) report that many newcomers in their study hold low-paying jobs that do not present opportunities to develop literacy skills and are characterized by frequent layoffs and underemployment, which tend to erode feelings of competence and confidence. Cuban's (2010) report on women's migration and adult education states that skilled migrant women, despite being health care professionals and possessing a university/professional education from their country of origin, face many "paper walls" when they attempt to access further or higher education, attend English-language classes, or generally advance their careers in a new country. Cuban documents that professionally qualified migrant women remain stuck in jobs significantly below their qualifications without opportunities to advance, resulting in their becoming "deskilled."

Comparatively, employees of large firms in white-collar positions and in high-skilled professions are far more likely to engage in learning activities. Employers tend to seek high returns on their investments in the education of their employees and therefore focus their energies on individuals who already have a high base level of education and enjoy relatively elevated professional status. Lower-skilled or older workers, those in smaller companies and those on temporary contracts tend not to be tapped for educational advancement, thus reproducing pre-existing inequalities (OECD, 2003).

As touched on in the discussion above, literacy can be a significant barrier to participation in adult learning. Participation rates differ greatly between those with the lowest and highest levels of literacy in Canada (Rubenson et al., 2007). In Ontario, adults with literacy rates at Level 3 or higher on the Adult Literacy and Lifeskills Survey (ALLS) literacy scale are nearly three times as likely to participate in adult learning as compared to those who rank low on the literacy scale (Kerr, 2011). Rubenson et al. (2007, p. 36) draw attention to the cruel irony of the circumstance: "those most in need to enhance their basic capabilities in order to be able to compete in a labour market are the most excluded from the learning society." Adult populations that are deprived of institutional knowledge, such as newcomers who lack social and community networks, are at risk of not having access to information about opportunities to meet their educational goals (Government of Ontario, 2005; Magro & Ghorayshi, 2010).

Adult learners are also affected by the likelihood of not having attended formal courses for a number of years. They may feel insecure about their academic abilities and have low or unstable academic self-concepts, which could also lead to inadequate learning strategies (Skaalvik & Skaalvik, 2005). Studies in adult education that focus on these problems are scarce. A Colleges Ontario⁶ report (2008), which compares direct-entry PSE students and delayed-entry PSE students (i.e., over 21 years of age without previous PSE and only high school upgrading) indicates that the delayed-entry segment had the lowest employment rate both two and five years after graduation when compared with the other entry pathways. This report also found that non-direct entrants were more likely to be using college financial aid services, peer tutoring services, special skills services, counseling services and disability services when compared with direct entrants. Creating profiles of non-direct entrants provides valuable insight for recruitment strategies, admissions processes, anticipation of student needs and services and programming decisions, not only at the adult high school level but also with regard to PSE participation.

⁶ This report includes data for Ontario college applicants, registrants and students for the 2007-2008 academic year. Data on college applicants were obtained from the 2007 College Applicant Survey – CAS (Ontario Ministry of Training, Colleges and Universities; MTCU) and delivered by the Ontario College Application Service (OCAS). Data for college applicants were obtained by matching 2007 OCAS registration information with CAS respondents.

Adult Immigrant Learners and Canadian Postsecondary Education

Ontario is a core settlement area for newcomers to Canada, who constitute an adult learner group of particular interest. Over 42% (118,113) of permanent residents settled in Ontario in 2010, with nearly 80% of Ontario-bound immigrants settling in Toronto (Citizenship and Immigration Canada, 2010). Postsecondary education is a pathway pursued more often by recent adult immigrants aged 25 to 54 (14%) than Canadian-born adults of the same age (6%), according to a 2007 study by Gilmore and Le Petit (ctd. in Rollin, 2011). In 2007, Statistics Canada released a report detailing immigrants' perspectives on their first four years in Canada. Approximately 7,700 immigrants were tracked over three waves of the Longitudinal Survey of Immigrants to Canada (LSIC). Nearly 10% reported that they liked the educational opportunities in Canada, and 25% listed access to education as their top reason for wishing to settle permanently in Canada (Statistics Canada, 2007).

Overall, immigrants have higher levels of education than Canadian-born citizens, a fact largely due to an immigration policy that seeks to recruit highly educated individuals (SSCSAST, 2011). The proportion of immigrants to Canada holding postsecondary degrees has increased significantly over time, with 61% of working age immigrants having PSE credentials in 2001, up from 48% in the 1970s and 1980s (Adamuti-Trache, 2011). These educated newcomers are expected to contribute to the country's economic growth and to augment Canada's competitiveness in the global marketplace; however, many face difficulties related to labour market integration (Ibid.). A total of 11% of LSIC respondents listed "getting credentials recognized" as the greatest difficulty encountered within their first four years of arriving in Canada. Nearly half of those aged between 25 and 44 reported "foreign experience not being accepted" as a difficulty when seeking employment (LSIC, 2007). The shift in immigration source countries from Europe to regions with greater structural disparities in their educational systems (such as Asia, the Middle East and Latin America) has intensified many of these issues (Adamuti-Trache & Sweet, 2010). Other barriers to integration include: lack of local experience; cultural disparities in customs, values, and attitudes; language barriers; weak social networks; and differences in the quality of education received in country of origin. These factors can both encourage enrolment and impact the experience of adult immigrants in continuing education (Rollin, 2011; Anisef et al., 2008; Lum & Grabke, 2012).

The literature on post-migration settlement paints a somewhat bleak picture of the employment conditions encountered by immigrants after their arrival to Canada. Barriers encountered largely relate to the low returns that foreign education nets in the Canadian labour market when compared to credentials earned in Canada (Girard, 2010). New immigrant women are frequently underemployed in low-wage jobs that do not utilize their prior skills and training, and earnings are significantly lower than for comparably educated Canadians, a condition that persists for many years after arrival (Adamuti-Trache & Sweet, 2010). The 2007 LSIC showed that only 48% of employed respondents classified as skilled worker principal applicants (aged 25 to 44) found a job in their intended occupation within two years of arrival to Canada. Frustrated attempts to have pre-migration experience accepted serves as a motivator towards pursuing education. Fifty-one per cent of LSIC respondents that failed to have their previous experience recognized were actively pursuing education (Ibid.).

Postsecondary credentials earned in Canada are a particularly effective means of enhancing adult immigrants' position in the labour market. While research on the returns of host-country credentials in Canada is somewhat limited, existing literature does point to the benefits of pursuing university education in Canada (Adamuti-Trache, 2011; Adamuti-Trache & Sweet, 2010). Girard (2010) notes that post-migration education, whether it is language or vocational training for low-skilled immigrants, contributes to success in securing employment and higher wages, though gender and race can impact returns. Of note is the fact that many adult immigrant learners enrol in programs in a field other than their pre-migration training. It is possible that they never intended to work or study in their original field or that this shift is influenced by difficulties in securing employment in their original area of work (Ibid.).

Labour market challenges faced by immigrants, in tandem with the language barriers discussed previously, suggest that the hurdles immigrants encounter are multifaceted, when these problems overlap and are experienced simultaneously. Furthermore, these individuals may experience the difficulties common to adult learners while also grappling with issues faced by new immigrants. In their discussion of barriers to adult immigrant student engagement in postsecondary education, Lum and Grabke (2012) describe a PSE system organized for the most part around the needs of locally educated younger students with no dependents and far fewer cultural challenges. Their study finds that adult immigrant students can experience social isolation, related ignorance about student services, inadequate language skills and unease with regards to the institutional culture and collaborative learning styles common in Canadian university settings.

As is evident in the above discussion, the rate of participation in postsecondary education is significant for adult immigrants. More research is needed, however, to explore education and training options for less educated immigrants who may face barriers to PSE entry. Gaining a better understanding of this group's needs and pathways to PSE through targeted research could ultimately facilitate faster integration of new Canadians into the economy, thereby enhancing our capacity to meet labour market needs.

Focus on Continuing Education

While there is little direct research on mature students in the continuing education system, with most adult learner literature largely focused on the postsecondary experience, there are some data available on continuing education in the Canadian context. Participation in this system has expanded significantly over the past few decades, from 4% in 1961 to more than 45% in 2004 (Livingstone & Scholtz, 2006). However, in 2001, Statistics Canada (ctd. in Ibid.) found that Canadian participation rates were significantly lower than those in several other areas, particularly Scandinavia. In Nordic countries, participation in education continues significantly for learners into their mid-fifties, with 35% of adults aged 56 to 65 engaged in educational activities as compared to 15% of Canadian adults in the same age bracket (Rubenson, 2007).

Our research is specifically concerned with adult learners seeking to upgrade their credentials via Ontario's continuing education system. The Ministry of Education in Ontario provides funding to school boards for continuing education credit programs and services for adult learners who are pursuing an Ontario Secondary School Certificate or an Ontario Secondary School Diploma (OSSD) (The Council of Ministers of Education, 2008). Over fifty school boards in Ontario deliver secondary school programming to support adult learning. Many school boards also offer adult literacy and English or French second language programs to adults who require language and literacy training before entering a secondary program (Pinsent-Johnson et al., 2013).

Data collected by the Ontario Association of Continuing Education School Board Administrators (CESBA) in 2007 showed that 134,861 adults participated in a range of school board adult education programs that could lead to PSE; 59,686 adult learners were enrolled in a secondary program, and 59,652 learners were in language programs (Pinsent-Johnson et al., 2013). Moreover, 15,521 adult students were enrolled in literacy programs (IMS Activity Report, 2006-2007, ctd. in Ibid.). A 2010 CESBA survey presented evidence of 10,000 adult secondary school graduates that year. Whether or not these adult learners went on to pursue PSE is unknown (Ibid.).

The Toronto District School Board (TDSB) is Canada's largest school board, and the fifth largest in North America. Certificate programs are delivered in the areas of computing, health care, cosmetology and business. In 2007-2008, 41,074 credits were earned by students and 1,441 OSSDs were awarded, with an additional 134 students recognized as Ontario Scholars (TDSB, 2011). Enrolment in the TDSB's five adult day schools (which include three adult learning centres) in 2007-2008 was approximately 14,000, with 76% of students aged 22 years and older.

Immigrants represent a significant proportion of adult learners in TDSB's continuing education programs, with

78.8% of students who attended adult day schools during the 2008-2009 school year born outside of Canada (Brown, 2011a). Brown and Newton's 2012 Demographic Snapshot of the continuing education population in TDSB paints a portrait of ethnic and linguistic diversity, showing 95 different first languages other than English and 146 different countries of birth other than Canada. The top countries of origin are Sri Lanka, China, Afghanistan and Nigeria, and the top three languages spoken are Tamil, Spanish and Mandarin (Ibid.).

According to a survey of TDSB continuing education programs conducted in March 2011, the majority of students were born outside of Canada, with the highest proportion being those aged 31 years and older.⁷ It should also be noted that students 31 and older were also most likely to speak a first language other than English (Brown, 2011b). In addition, the majority of this older cohort was female (77.5%), married (60.9%), and had children (72%). The survey findings also indicate that nearly half of the 288 respondents (all ages) with children reported being single parents, with 75% of this cohort being women. Over half of the single parents reported difficulty with obtaining daycare while in school, a statistic indicative of challenges reported by adult students discussed above.

Summary and Conclusion

Adult learners, particularly immigrants, represent a sizeable number of students who participate in continuing education programs at the secondary level and in adult day schools in the TDSB. Due to a dearth of research, it is difficult to assess how many pursue this pathway as a route towards PSE, the factors affecting PSE participation by adult learners at the secondary level, and whether and how trajectories and outcomes differ for immigrants and non-immigrants. In this review, we have examined existing literature on adult learners, which encompasses mature students at a variety of skill levels, possessing different educational and citizenship backgrounds, and pursuing diverse educational paths.

In assessing the available research, we can conclude that continuing education students likely face multiple barriers in upgrading their skills and credentials in an effort to attain a postsecondary education. In addition to experiencing difficulties common to adult learners, such as financial and time constraints, immigrant adult students often contend with a secondary set of challenges that include grappling with a new academic culture, single parenthood, and serious language challenges that pose a risk to successful integration in Canadian society and the labour force.

As revealed in the TDSB survey discussed above, attaining Canadian postsecondary credentials is a common motivator for adult immigrant students enrolled in continuing education courses at the secondary level. Though newcomers to Canada have higher levels of education overall than do the Canadian-born, they often find that foreign education is not valued as highly as that earned in Canada, and thus risk becoming deskilled in the Canadian workforce. Often frustrated by attempts to obtain professional employment based on credentials earned abroad, significant numbers of newcomers opt to pursue Canadian schooling to improve their employment opportunities. The success of this cohort is essential to meeting provincial postsecondary attainment rate targets. In order to support adult students in fulfilling their potential, the unique pathways and roadblocks that they experience must be understood and mitigated.

⁷ This survey comprises one of two datasets being employed in this study of adult students in the TDSB's continuing education programs; detailed descriptive statistics are reported in Tables 1 and 2 of this report.

Descriptive Statistics

The overarching research question that we examine in this study is: “What are the postsecondary education pathways pursued by adult learners enrolled in continuing education and its correlates?” In answering this broad question, we examine how these pathways differ between immigrants and non-immigrants. We employ two datasets in responding to this and more specific research questions.

TDSB Continuing Education Survey

The first dataset derives from the TDSB Continuing Education Survey, where 640 students taking Grade 12 English in March 2011 were surveyed. Preliminary analysis of the data revealed that approximately three-quarters of these students were foreign-born. Being enrolled in Grade 12 English is an important milestone, whose completion is required for university or college admission. The respondents were asked various demographic questions, including their age, marital status, number of dependent children, household income and the number of years they had lived in Canada. Information about their first language, whether or not they were enrolled in an ESL program, amount of time in adult education and foreign credentials (in terms of their highest level of education attained) was also collected. The data also provide information on the respondent’s employee status and the type of work in which they engaged both in and outside of Canada. Finally, this dataset also provides information on the postsecondary educational goals of the respondents, as well as several attitudinal items around their experiences in the continuing education system.

In particular, the TDSB Continuing Education Survey data allow us to examine the correlates of the different goals indicated by students enrolled in continuing education courses. In the following analyses, we respond to the following questions: “How do the PSE goals of immigrants and non-immigrants differ?” and “How do demographic factors impact differently upon the PSE goals of immigrants and non-immigrants?” Answering these two questions is the first step in addressing our overarching research question regarding the different PSE pathways chosen by continuing education students.

Table 1 displays descriptive information regarding the variables used in the analyses in this report from the Continuing Education Survey. Different information is displayed for variables depending on its level of measurement. For example, the *region* variable is a nominal variable where each category of the variable (i.e., Canada/US, Caribbean and Latin America, etc.) is a quality rather than a numeric value. As such, both the number of people who identified as being in particular categories of that variable (N) and size of N as a percentage of the total sample size are reported. Other variables where categories of responses represented quantities, such as *Number of Children*, report the mean, standard deviation and range. These figures give us an indication of the average value of the variable in the dataset and the dispersion of the variable across cases.

Region is a derived variable which was recoded from an open-ended question into six regions: Canada/US, Caribbean and Latin America, Africa, Europe, Asia⁸ and South Asia. All respondents who did not identify their region of birth as Canada were foreign-born, including the three Americans who were placed into the Canada category. As is evident from the Table, the largest regional groups in descending order are: Asians, Canadians/Americans, Africans, South Asians, Caribbean/Latin Americans and Europeans.

⁸ Asia is defined as all areas of Asia except for southern Asia, including eastern, southeast, central and west Asia. These areas are combined due to low numbers in the survey dataset. In the harmonized analysis that follows, “Middle East” is separated from the “South Asian” category, in order that the survey data be more comparable with the administrative data in the regressions. However, retaining “Middle East” (N=36) as its own category proved untenable for these analyses, insofar as the cell size would be very small. The category “Europe” was also small (N=27). However, it was not logically possible to collapse these respondents into any other larger category.

Gender was dummy or contrast coded so that female was equal to one and male was equal to zero. The sample was over two-thirds female (67.25%). Similarly, *marital status* was contrast coded so that married and common-law unions were combined into one category equal to one and all others were coded zero. As is evident from the Table, just over one-third of respondents (36.26%) reported being married or in a common-law union.

Age was derived from five grouped categories originally employed in the survey and subsequently reclassified into two groups: 21 to 30 and over 30. As displayed in the Table, nearly two-thirds of respondents were between 21 and 30 years of age.

Household composition was measured by three variables: *Number of Kids*, *Kid Under 4* and *Number Persons in Home*. *Number of Kids* was measured by asking the respondent about the number of children living in their home, with four response categories provided: none, one, two and three or more children). Just over half of respondents (54%) had no children in their home. Of those with children in their home, 19% had one child, 15% had two and 11% had three or more. A variable was derived in order to assess whether the respondent lived in a home with children who were not in school full time at the time of the survey, labeled “Kid Under 4.” Around 16% of all respondents (including those without children) had a child less than four years of age living in their household. Household size was assessed through a survey question asking about the total number of all persons in the respondent’s home, which was top-coded at six persons. The average household size was 3.48 persons, with a standard deviation of 1.50.

Property ownership was assessed through a derived variable measuring the type of dwelling in which an individual lived, as well as its tenure. Property owners made up around 15% of the sample.

Time in Canada was assessed through a grouped variable that consisted of the following categories: less than 1 year, 1-3 years, 4-5 years, 6-10 years and more than 10 years. In the Table, the largest group of respondents, at 35% of the sample, belonged to the “more than 10 years” category. Nearly 7% were new immigrants (less than one year), while 32% had been in Canada between 1 and 3 years. The remaining respondents had been in Canada between 4 and 5 years (13.42%) and between 6 and 10 years (13.10%). *Citizenship* was also derived from a variable asking the respondent about his or her status in Canada. The sample was comprised of nearly half citizens (48.40%) and non-citizens (51.60%).

Whether or not the respondent spoke English as his or her first language was derived from a survey question asking about the respondent’s first language. Those who indicated English (34.5%) were coded one and all others (65.5%) were coded zero.

Two measures of highest level of education were considered from the survey data. The first was whether the respondent indicated that “high school” was his or her highest level of education in Canada. *High School* was coded one if he or she selected this option, comprising nearly three-quarters of respondents (72.84%). As well, *Foreign University Experience* was assessed through a derived variable in which the respondent was asked about various educational experiences he or she may have from other countries. University experience was dummy coded, with around 20% of respondents indicating they had foreign university experience. The survey items do not assess whether the respondents have actually completed the highest level of educational experience they have indicated, however.

Two measures of economic resources were considered: whether the respondent was *Unemployed* and their *Income*. Unemployment was assessed through a variable asking the respondent about his or her current labour market activity. Those that self-reported “unemployed” were coded one, which was about one-third (35.78%) of the sample. Household income was assessed from self-reports by respondents to grouped categories on the survey questionnaire item “My annual household income is approximately (1) less than

\$19,999; (2) \$20,000-\$29,999; (3) \$30,000-\$39,999; (4) \$40,000-\$59,000 and (5) \$60,000 and higher.” The largest category of response was “less than \$19,999”, with almost 60% of respondents selecting this category. The percentage of respondents in each category of income decreased as the income categories themselves increased. Thus, 16.3% of respondents answered that their household incomes were in the next highest category, 11.11% were in the third category, 8% were in the fourth category and 7% were in the highest income category.

Respondents were asked about their plans after completing their current course. They were asked if they planned to apply to college, university, continue with adult education, complete their OSSD, or if they were unsure. Multiple answers were permitted. The most common response (54.95%) was to apply to college, with university being a much distant second choice by one-quarter of respondents. A total of 6.5% of the sample indicated that they expected to apply to both college and university. Around 15% intended to complete their OSSD, while around 14% were going to continue in adult education. Just below 8% were unsure.

A large portion of the survey asked students about their experiences at school with adult continuing education, as well as possible challenges they confronted outside of school that may have impacted upon their experiences in school. For both topics, four-point Likert items, ranging from strongly agree (1) to strongly disagree (4), were employed. A fifth category of “don’t know” was also available. In these analyses, those who replied “don’t know” to individual questions were treated as missing.

In terms of *Experiences*, most students indicated a level of agreement (scores of 1 or 2) with the various statements enquiring about their experiences in continuing education. For example, it allowed them to meet OSSD requirements (1.58), prepare for postsecondary education (1.69), that the homework was manageable (1.97), that they had the necessary skills to complete the course (1.95) and had adequate teacher support (1.95). Items that leaned towards “disagreement” were around experiences of test difficulty (2.62), experiencing a language barrier (2.71) and liking the class size (2.28). The item on test difficulty was reverse scored – therefore, the respondents generally disagreed (2.63) that the tests were too difficult.

In terms of possible *Challenges* experienced by the respondents, lower scores would indicate agreement that these items were regarded as challenges, except for the item on internet access, which was reverse coded. Higher scores (except for the internet access question) would indicate a disagreement that such items were challenges. Internet access was found to be the most challenging item for respondents, with an average score of 1.68, followed by ease of transportation to the course. This was found to be the biggest challenge with a mean of at 1.96, followed by the ability to maintain a work-family balance (2.08).

Table 1: Description of Variables in the Survey Analyses

| Variable | Survey Question | N | % | Mean | S.D. | Range |
|-------------------------------|--|-----|-------|------|------|-------|
| Region of Birth | Derived from open-ended question and recoded into six regions | | | | | |
| Canada/US | | 119 | 20.62 | | | |
| Caribbean and Latin American | | 83 | 14.38 | | | |
| Africa | | 106 | 18.37 | | | |
| Europe | | 27 | 4.68 | | | |
| Asia | | 139 | 24.09 | | | |
| South Asia | | 103 | 17.85 | | | |
| Gender | Contrast coded so that 1=female, 0=male | | | | | |
| Female | | 421 | 67.25 | | | |
| Male | | 205 | 32.75 | | | |
| Marital Status | Various marital statuses collapsed into two categories of 1=married or common-law and 0=all others | | | | | |
| Married or common-law | | 227 | 36.26 | | | |
| All others | | 399 | 63.74 | | | |
| Age | 5 grouped categories collapsed into 2 (21 to 30 and over 30) | | | | | |
| 21 to 30 | | 390 | 64.14 | | | |
| Over 30 | | 218 | 35.86 | | | |
| Number Children | Number of children living in respondent's home | 614 | | | | |
| | No children | 334 | 54.40 | | | |
| | 1 child | 117 | 19.06 | | | |
| | 2 children | 95 | 15.47 | | | |
| | 3 or more children | 68 | 11.07 | | | |
| Children Under 4 | Derived if respondent indicated living with any child under the age of 4 | | | | | |
| Yes | | 99 | 15.81 | | | |
| No | | 527 | 84.19 | | | |
| Number Persons in Home | Total number of people living in respondent's home, top-coded at 6 | | | 3.48 | 1.50 | 1-6 |
| Property Owner | Derived from whether or not respondent owned dwelling | | | | | |
| Not an owner | | 534 | 85.30 | | | |
| Owner | | 92 | 14.70 | | | |

| | | | | | | |
|--------------------------------|---|-----|-------|------|------|-----|
| Time in Canada | Grouped variable consisting of less than 1 year, 1-3 years, 4-5 years, 6-10 years, and more than 10 years | | | | | |
| | Less than 1 year | 42 | 6.97 | | | |
| | 1-3 years | 192 | 31.84 | | | |
| | 4-5 years | 81 | 13.43 | | | |
| | 6-10 years | 79 | 13.10 | | | |
| | More than 10 years | 209 | 34.66 | | | |
| Citizen | Derived from 6 category variable asking respondent about citizenship status | | | | | |
| | Canadian citizen | 303 | 48.40 | | | |
| | Not Canadian citizen | 326 | 51.60 | | | |
| English First Language | Derived from survey question asking respondent's first language | | | | | |
| | English native | 216 | 34.50 | | | |
| | Not English native | 410 | 65.50 | | | |
| High School | Measures whether respondent has Canadian high school as highest level of education | | | | | |
| | Has high school | 456 | 72.84 | | | |
| | Does not have high school | 170 | 27.16 | | | |
| Foreign University | Measures whether respondent has foreign university education as highest level of education | | | | | |
| | Has foreign university | 117 | 18.69 | | | |
| | Does not have foreign university | 509 | 81.31 | | | |
| Unemployed | Derived from employment status. Dummy coded to indicate self-reported as unemployed. | | | | | |
| | Unemployed | 224 | 35.78 | | | |
| | Not unemployed ⁹ | 402 | 64.22 | | | |
| Annual Household Income | Grouped categories: <19,999, 20k-29k, 30k-39k, 40k-59k, 60k+ | | | 1.91 | 1.28 | 1-5 |
| | Less than \$19,999 | 311 | 57.59 | | | |
| | \$20,000-\$29,999 | 88 | 16.30 | | | |
| | \$30,000-\$39,999 | 60 | 11.11 | | | |
| | \$40,000-\$59,999 | 42 | 7.78 | | | |
| | \$60,000 or more | 39 | 7.22 | | | |

⁹ Includes employed part time, full time temporary, full time permanent, at home parents, social assistance recipients and those on worker's compensation.

| | | | | | | |
|--|---|-----|-------|------|------|-----|
| Educational Plans | Respondent asked to check all future educational plans after current course (able to check more than one answer) | | | | | |
| College | | 344 | 54.95 | | | |
| University | | 157 | 25.08 | | | |
| Adult Ed | | 86 | 13.74 | | | |
| OSSD | | 95 | 15.18 | | | |
| Unsure | | 49 | 7.83 | | | |
| Experiences at School and with Adult Continuing Education | All items asked on Likert-type scale ranging 1 to 5 where 1=strongly agree and 4= strongly disagree and 5=don't know or unsure. The answer of 5 was recoded to 'missing in these analyses.' | | | | | |
| This course will allow me to meet my graduation requirements for an OSSD diploma. | | 525 | | 1.58 | 0.81 | 1-4 |
| Strongly agree | | 303 | 57.71 | | | |
| Agree | | 166 | 31.62 | | | |
| Disagree | | 30 | 5.71 | | | |
| Strongly disagree | | 26 | 4.95 | | | |
| This course has prepared me for postsecondary studies. | | 554 | | 1.69 | 0.74 | 1-4 |
| Strongly agree | | 243 | 43.86 | | | |
| Agree | | 257 | 46.39 | | | |
| Disagree | | 34 | 6.14 | | | |
| Strongly disagree | | 20 | 3.61 | | | |
| The amount of homework is manageable. | | 567 | | 1.97 | 0.80 | 1-4 |
| Strongly agree | | 160 | 28.22 | | | |
| Agree | | 293 | 51.68 | | | |
| Disagree | | 85 | 14.99 | | | |
| Strongly disagree | | 29 | 5.11 | | | |
| I have found the test(s), exam(s), or assignments difficult. (Reverse coded) ¹⁰ | | 540 | | 2.62 | 0.85 | 1-4 |
| Strongly agree | | 54 | 10.00 | | | |
| Agree | | 176 | 32.59 | | | |
| Disagree | | 233 | 43.15 | | | |
| Strongly disagree | | 77 | 14.26 | | | |

¹⁰ This item was reverse coded, meaning that high numeric values on this particular item have a different meaning than with the other items in this section. For this item, high scores mean the respondent is disagreeing that tests were difficult. For other similar items in this section, high scores would mean the respondent is agreeing with liking an aspect of the course.

| | | | | | | |
|--|--|-----|-------|------|------|-----|
| I have all the skills I need to complete this course. | | 550 | | 1.95 | 0.83 | 1-4 |
| Strongly agree | | 171 | 31.09 | | | |
| Agree | | 271 | 49.27 | | | |
| Disagree | | 73 | 13.27 | | | |
| Strongly disagree | | 35 | 6.36 | | | |
| The level of teacher support has met my expectations. | | 557 | | 1.95 | 0.85 | 1-4 |
| Strongly agree | | 176 | 31.60 | | | |
| Agree | | 269 | 48.29 | | | |
| Disagree | | 74 | 13.29 | | | |
| Strongly disagree | | 38 | 6.82 | | | |
| The teacher has used a variety of teaching methods to meet my needs. | | 546 | | 1.94 | 0.86 | 1-4 |
| Strongly agree | | 180 | 32.97 | | | |
| Agree | | 259 | 47.44 | | | |
| Disagree | | 68 | 12.45 | | | |
| Strongly disagree | | 39 | 7.14 | | | |
| I like the time of day that my class is offered/begins. | | 574 | | 1.78 | 0.81 | 1-4 |
| Strongly agree | | 237 | 41.29 | | | |
| Agree | | 261 | 45.47 | | | |
| Disagree | | 44 | 7.67 | | | |
| Strongly disagree | | 32 | 5.57 | | | |
| I like the class size. | | 560 | | 2.28 | 1.00 | 1-4 |
| Strongly agree | | 135 | 24.11 | | | |
| Agree | | 222 | 39.64 | | | |
| Disagree | | 116 | 20.71 | | | |
| Strongly disagree | | 87 | 15.54 | | | |
| My work is affected by a language barrier. (reverse coded) | | 508 | | 2.71 | 1.02 | 1-4 |
| Strongly agree | | 70 | 13.78 | | | |
| Agree | | 148 | 29.13 | | | |
| Disagree | | 151 | 29.72 | | | |
| Strongly disagree | | 139 | 27.36 | | | |
| The cost of the course was reasonable. | | 546 | | 1.68 | 0.75 | 1-4 |
| Strongly agree | | 251 | 45.97 | | | |
| Agree | | 236 | 43.22 | | | |
| Disagree | | 42 | 7.69 | | | |
| Strongly disagree | | 17 | 3.11 | | | |

| | | | | | | |
|---|---|-----|-------|------|------|-----|
| The courses I needed to take were available to me. | | 561 | | 1.92 | 0.86 | 1-4 |
| Strongly agree | | 195 | 34.76 | | | |
| Agree | | 256 | 45.63 | | | |
| Disagree | | 72 | 12.83 | | | |
| Strongly disagree | | 38 | 6.77 | | | |
| The pathway I needed to take, to reach graduation, was explained. | | 535 | | 2.01 | 0.86 | 1-4 |
| Strongly agree | | 156 | 29.16 | | | |
| Agree | | 259 | 48.41 | | | |
| Disagree | | 79 | 14.77 | | | |
| Strongly disagree | | 41 | 7.66 | | | |
| My choices or options for courses were explained to me. | | 555 | | 2.02 | 0.87 | 1-4 |
| Strongly agree | | 159 | 28.65 | | | |
| Agree | | 267 | 48.11 | | | |
| Disagree | | 86 | 15.50 | | | |
| Strongly disagree | | 43 | 7.75 | | | |
| Possible Challenges Outside of School | All items asked on Likert-type scale ranging 1 to 5 where 1=strongly agree and 4= strongly disagree and 5=don't know or unsure. The answer of 5 was recoded to 'missing in these analyses.' | | | | | |
| I am able to balance course work with family responsibilities | | 539 | | 2.08 | 0.78 | 1-4 |
| Strongly agree | | 112 | 20.78 | | | |
| Agree | | 302 | 56.03 | | | |
| Disagree | | 93 | 17.25 | | | |
| Strongly disagree | | 32 | 5.94 | | | |
| I am able to balance course work with job responsibilities. | | 456 | | 2.20 | 0.84 | 1-4 |
| Strongly agree | | 87 | 19.08 | | | |
| Agree | | 229 | 50.22 | | | |
| Disagree | | 103 | 22.59 | | | |
| Strongly disagree | | 37 | 8.11 | | | |
| I have internet access in my home. | | 560 | | 1.68 | 0.83 | 1-4 |
| Strongly agree | | 282 | 50.36 | | | |
| Agree | | 207 | 36.96 | | | |
| Disagree | | 40 | 7.14 | | | |
| Strongly disagree | | 31 | 5.54 | | | |

| | | | | | | |
|---|--|-----|-------|------|------|-----|
| I have an adequate support system outside of class. | | 513 | | 2.38 | 0.96 | 1-4 |
| Strongly agree | | 102 | 19.88 | | | |
| Agree | | 190 | 37.04 | | | |
| Disagree | | 147 | 28.65 | | | |
| Strongly disagree | | 74 | 14.42 | | | |
| The distance to school is convenient for me. | | 555 | | 2.19 | 0.97 | 1-4 |
| Strongly agree | | 144 | 25.95 | | | |
| Agree | | 233 | 41.98 | | | |
| Disagree | | 105 | 18.92 | | | |
| Strongly disagree | | 73 | 13.15 | | | |
| It is easy for me to find transportation to class. | | 557 | | 1.96 | 0.83 | 1-4 |
| Strongly agree | | 165 | 29.62 | | | |
| Agree | | 288 | 51.71 | | | |
| Disagree | | 65 | 11.67 | | | |
| Strongly disagree | | 39 | 7.00 | | | |
| It is easy for me to arrange daycare. | | 247 | | 2.31 | 0.96 | 1-4 |
| Strongly agree | | 49 | 19.84 | | | |
| Agree | | 109 | 44.13 | | | |
| Disagree | | 52 | 21.05 | | | |
| Strongly disagree | | 37 | 14.98 | | | |

Table 2 presents the bivariate analyses of region of origin with other variables under consideration. Region of origin was used as the independent variable of interest in these analyses, as our focus is on the outcomes of continuing education students of immigrant status.

In Table 2, various bivariate analytic techniques were employed between the *Region* variable and other variables under consideration. In the rows of Table 2, mean values of the variables under consideration by each category of *Region* are displayed. The bivariate tests employed were all one-way analyses of variance (ANOVA). A one-way analysis of variance tests whether there are mean differences in scores on a dependent variable by a nominal independent variable with more than two categories. The dependent variables are reported in the rows of Table 2. The independent variable in all cases is *Region*. For example, in the row for *Female* it can be seen that 50% of Canadian/US respondents were female, compared to 74% of Caribbean and Latin Americans, 72% of Africans, 70% of Europeans, 67% of Asians and 69% of South Asians. The value in the column titled "Sig" is the statistical significance of these differences of *Female* by *Region*. In this case, the analysis of variance test employed to measure this relationship revealed that these mean differences were statistically significant. The significance value tells the reader that at least one of the mean group differences were significant from one another. Which groups were statistically significantly different from each other can be deduced by looking at the raw percentages in each column. In the example of gender and region, therefore, we can surmise that there are significantly fewer females of Canada/US origin (50%) compared to all the other groups examined. As can be seen in Table 2, there were statistically different regional variations in all the background variables in this analysis except for *Kid Under 4*. Figure 1 graphically depicts many of the statistically significant background variable differences by *Region* from this Table.

Generally speaking, the gender balance of students was less equal (favouring females) in the immigrant origin student groups compared to the Canadian/US group. Also, the Canadian/US group was significantly

younger than other groups in this study, and fewer were likely to be married or in common-law relationships. Household sizes were larger among students of Asian and South Asian origin, while Asians and South Asians were more likely to be homeowners compared to students of other origins.

African and South Asian students had spent the shortest time in Canada and were least likely to have citizenship, while Caribbean and Latin American students were considerably more likely to have English as a first language compared to other groups (apart from students from Canada/US).¹¹

Having high school as the highest level of education was most common among students from Canada and Asia, and least common among students from the Caribbean and Latin America. Foreign university education, however, was most common among Asians (32%) and South Asians (30%).

In terms of unemployment, students from Asia and Canada/US self-reported the highest level of unemployment at 45% and 40%, respectively. Africans had the lowest level of self-reported unemployment at 27%.

Canadian/US students reported having the highest incomes, with an average of 2.28 on the five-point income scale. This was considerably higher than Africans (1.51), Asians (1.81) and South Asians (1.84).

In terms of future plans, there were no statistically significant differences in the proportions of students from different regions of origin in terms of their plans for college, university, adult education or OSSD. Marginally more Asian students reported being “unsure” as compared to Africans.

As noted above, *Experiences* and *Challenges* were also measured by several indicators in the TDSB Continuing Education Survey. The *Experiences* of students that were found to have statistically significant differences by region are graphically displayed in Figure 2. Along the horizontal axis for each graph is the extent to which respondents replied that they strongly agreed (1), agreed (2), disagreed (3) or strongly disagreed (4). The longer the horizontal bar, the more group members indicated disagreement with the statement.

Respondents of different origins had differing opinions of their satisfaction with the variety of teaching methods used in their courses, with Africans being slightly more likely to disagree (2.07) than Europeans (1.73) and South Asians (1.67). The least satisfaction with class size was reported by Europeans (2.55), which was statistically different from the most satisfied group, African students (2.14). Students most likely to report having experienced a language barrier as an impediment to their learning originated from Europe (2.33) and South Asia (2.29).

Students from Canada/US were least likely to agree (1.90) that the cost of the course was “reasonable”, compared to Europeans and Asians (both of whom had mean scores of 1.54). In terms of courses available, students from Canada/US were least likely to agree that the courses they desired were available (2.08), while Africans were most satisfied with course availability (1.69).

In terms of *Challenges* faced by students, there were four statistically significant differences in responses by *Region of Origin*, which are graphically depicted in Figure 3. The first was the availability of the internet at home, which was the most difficult challenge for students from Africa (1.89) and least problematic for students from the Caribbean and Latin America (1.46). African and Asian students also had significantly higher reported levels of disagreement with the statement that they had adequate social supports compared to

¹¹ It should be noted that students from the English-speaking Caribbean countries were grouped together with students from the non-English speaking Caribbean and Latin American countries due to small sample sizes.

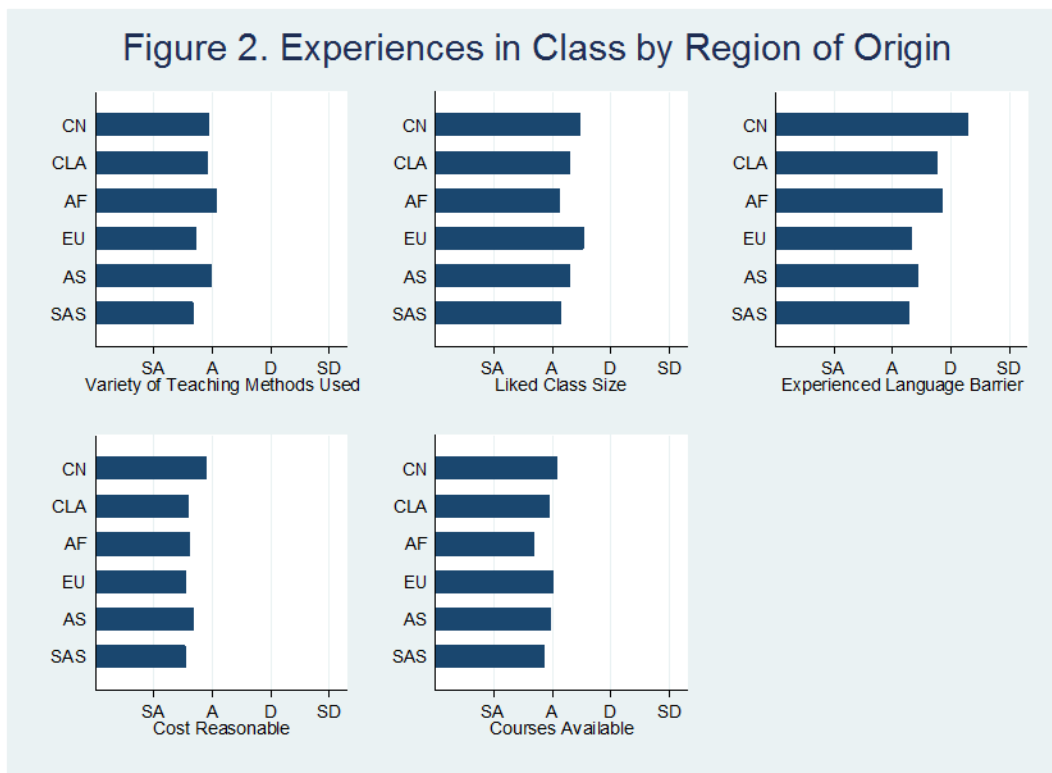
students from Canada and the US. Asian and South Asian students were less likely to find the distance to their continuing education classes to be a convenient distance for them, and were similarly least likely to agree that they had access to convenient transportation to their classes.

Table 2: Bivariate Survey Analyses of Region of Origin with Other Variables

| | Region of Origin | | | | | | Sig |
|-----------------------------------|------------------|-----------------------------|--------|--------|------|------------|-----|
| | Canada/US | Caribbean and Latin America | Africa | Europe | Asia | South Asia | |
| Background Characteristics | | | | | | | |
| Female | 0.50 | 0.74 | 0.72 | 0.70 | 0.67 | 0.69 | *** |
| Age (21 to 30) | 0.84 | 0.61 | 0.55 | 0.70 | 0.63 | 0.64 | *** |
| Married | 0.16 | 0.27 | 0.28 | 0.52 | 0.41 | 0.55 | *** |
| Number Kids | 1.61 | 2.04 | 1.96 | 1.63 | 1.77 | 1.79 | * |
| Kid under 4 | 0.18 | 0.16 | 0.21 | 0.19 | 0.11 | 0.12 | |
| Number Persons in Home | 3.28 | 3.36 | 3.02 | 3.22 | 3.73 | 3.99 | *** |
| Home Owner | 0.09 | 0.07 | 0.04 | 0.11 | 0.20 | 0.23 | *** |
| Time in Canada | 4.86 | 3.58 | 2.90 | 3.56 | 3.04 | 2.56 | *** |
| Citizen | 0.97 | 0.42 | 0.31 | 0.44 | 0.40 | 0.27 | *** |
| English First Language | 0.88 | 0.48 | 0.25 | 0.19 | 0.12 | 0.10 | *** |
| High School Education | 0.68 | 0.49 | 0.54 | 0.52 | 0.64 | 0.54 | * |
| Foreign University Education | 0.00 | 0.14 | 0.10 | 0.26 | 0.32 | 0.30 | *** |
| Unemployed | 0.40 | 0.32 | 0.27 | 0.37 | 0.45 | 0.32 | * |
| Income | 2.28 | 2.03 | 1.51 | 2.15 | 1.81 | 1.84 | *** |
| Future Plans | | | | | | | |
| College | 0.52 | 0.63 | 0.63 | 0.44 | 0.57 | 0.50 | |
| University | 0.32 | 0.24 | 0.23 | 0.33 | 0.22 | 0.23 | |
| Adult Ed | 0.14 | 0.14 | 0.14 | 0.15 | 0.17 | 0.09 | |
| OSSD | 0.16 | 0.11 | 0.18 | 0.22 | 0.13 | 0.17 | |
| Unsure | 0.07 | 0.05 | 0.02 | 0.07 | 0.12 | 0.09 | + |
| Experiences in Class | | | | | | | |
| Meet OSSD Requirements | 1.69 | 1.53 | 1.49 | 1.54 | 1.66 | 1.52 | |
| Prepared for PSE | 1.83 | 1.56 | 1.66 | 1.65 | 1.67 | 1.71 | |
| Homework Manageable | 1.84 | 1.84 | 2.01 | 1.84 | 1.99 | 2.05 | |
| Tests Difficult (reverse coded) | 2.73 | 2.61 | 2.70 | 2.78 | 2.46 | 2.66 | |
| Have Skills | 1.81 | 2.01 | 2.04 | 1.83 | 1.98 | 1.80 | |
| Teacher Support | 1.95 | 1.86 | 1.95 | 1.85 | 2.05 | 1.83 | |
| Variety Teaching Methods | 1.95 | 1.93 | 2.07 | 1.73 | 1.98 | 1.67 | * |
| Like Time | 1.90 | 1.82 | 1.72 | 1.85 | 1.69 | 1.72 | |
| Class Size | 2.48 | 2.31 | 2.14 | 2.55 | 2.31 | 2.16 | + |
| Language Barrier (reverse coded) | 3.29 | 2.76 | 2.87 | 2.33 | 2.45 | 2.29 | *** |
| Cost Reasonable | 1.90 | 1.60 | 1.62 | 1.54 | 1.67 | 1.54 | ** |
| Courses Available | 2.08 | 1.94 | 1.69 | 2.00 | 1.97 | 1.86 | * |
| Pathway Explained | 2.11 | 2.08 | 1.96 | 1.92 | 2.03 | 1.90 | |
| Choices Explained | 2.08 | 2.09 | 1.90 | 1.78 | 2.05 | 2.08 | |

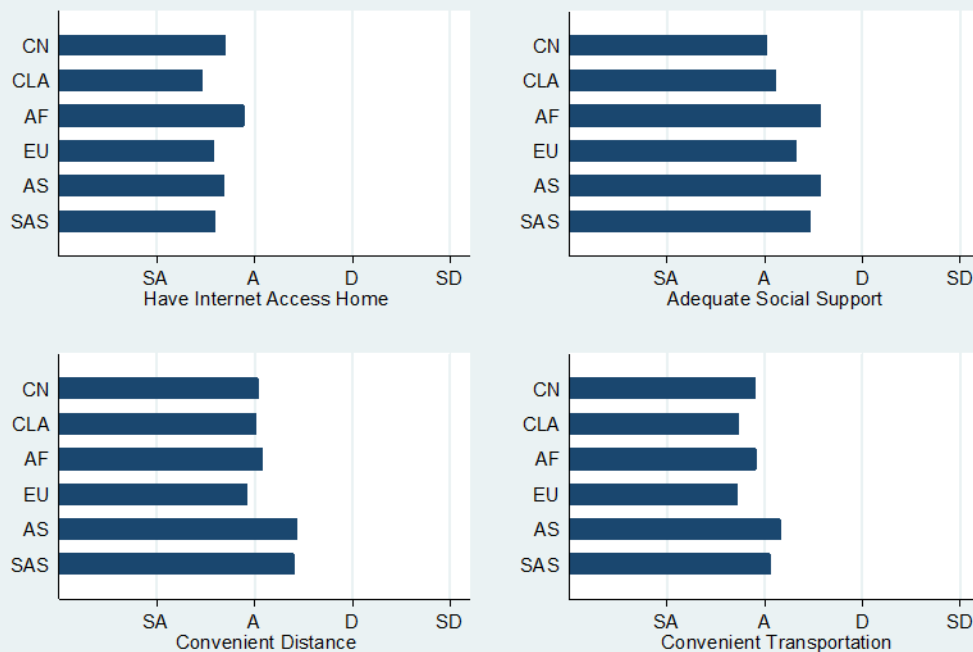
| | Region of Origin | | | | | | Sig |
|----------------------------------|------------------|-----------------------------|--------|--------|------|------------|-----|
| | Canada/US | Caribbean and Latin America | Africa | Europe | Asia | South Asia | |
| Challenges Outside School | | | | | | | |
| Work Family Balance | 2.13 | 2.04 | 2.15 | 2.17 | 1.99 | 2.09 | |
| Job School Balance | 2.27 | 2.11 | 2.23 | 2.42 | 2.10 | 2.16 | |
| Internet at Home (reverse) | 1.70 | 1.46 | 1.89 | 1.58 | 1.69 | 1.59 | * |
| Adequate Supports | 2.02 | 2.11 | 2.57 | 2.32 | 2.58 | 2.46 | *** |
| Convenient Distance | 2.04 | 2.01 | 2.09 | 1.91 | 2.43 | 2.40 | *** |
| Easy Transportation | 1.91 | 1.73 | 1.91 | 1.72 | 2.16 | 2.06 | *** |
| Easy Daycare | 2.32 | 2.23 | 2.33 | 2.11 | 2.36 | 2.45 | |

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$



Legend: CN=Canadian, CLA=Caribbean/Latin American, AF=African, EU=European, AS=Asian, SAS=South Asian

Figure 3. Challenges Outside Class by Region of Origin



Legend: CN=Canadian, CLA=Caribbean/Latin American, AF=African, EU=European, AS=Asian, SAS=South Asian

The TDSB Administrative Dataset

The cross-sectional nature of the TDSB Continuing Education Survey only allows us to examine what students said they wanted to do, not what they actually did. In order to examine actual behaviour, we employ a second dataset that provides detailed information relating to the transitions to PSE that are made by continuing education students. The TDSB Administrative Dataset consists of all adult students who attended any one of the five TDSB adult day schools at any time over four quadmesters between September 2008 and June 2009. Overall, there were 12,861 students who attended these adult day schools. However, given the high rate of mobility among these students, less than half actually attended at any one period of time. Where available, information on students was provided through TDSB's student information system. In addition, data regarding applications to universities and colleges over the period from 2009 to 2011 was added to the dataset. Variables derived from the 2006 Federal Census were also linked to the dataset in order to provide contextual information regarding the neighbourhoods in which these students lived.

Table 3 displays descriptive information from the administrative dataset, using a format similar to Table 1. *Region* is a derived variable from the countries of birth in the TDSB student information system and is consistent with the survey measurement of this concept. The six regions are as similar as possible to those

employed in the Continuing Education Survey: English Speaking (Canada/US/Ireland/England)¹², Caribbean/Latin America, Europe, Asia and South Asia. The TDSB dataset also includes an additional category of Middle East. As the analysis of the Continuing Education Survey revealed, less than one-quarter of adult students (22%) are born in English-speaking countries (mostly Canada). *Gender* was dummy or contrast coded so that female was equal to one and male to zero. Subsequent analysis revealed that the adult student population was close to two-thirds female (65%).

Age was derived from the student's year of birth and indicates an average age of 30 among adult students. *Years in Canada* since arrival was calculated by taking the difference between 2008 and the student's date of arrival to Canada. Students had been in Canada for an average of seven years as of 2008, although there was wide variation among adult students, ranging from newly arrived to those that had been in Canada for over six decades. *Age When Arrived in Canada* was calculated by taking the difference between the student's age and their years in Canada, with two-thirds (67%) having arrived after the age of 14.

Postsecondary Pathways

Information in the administrative dataset was linked to six sources of information: applications to Ontario universities and similar applications to Ontario colleges, over the 2009, 2010 and 2011 application cycles.¹³ Applications to Ontario postsecondary institutions go through the Ontario Universities Application Centre (OUAC) and the Ontario College Application Service (OCAS). Students normally apply in the spring of a given year to attend a postsecondary institution starting in September. The data are divided into three distinct "phases":

- **Applications:** Students apply to programs in Ontario universities and/or community colleges.
- **Confirmations:** Students write back confirming an Ontario university or community college offer of admission.
- **Registrations:** Students enrol as a student in an Ontario university or community college. The TDSB receives information about applications and confirmations, but not registrations.

As indicated, university applications and confirmations are collected by OUAC, while college applications and confirmations are collected by OCAS. For each application cycle, information on TDSB applications and confirmations is sent to TDSB's Organizational Development/Research and Information Services using a standardized format. The information is then linked to the Secondary Success Indicator dataset for the year in question, a dataset of information on all students in the regular school year. OUAC (university) application and acceptance data are linked through the students' TDSB (Trillium) number. OCAS (community college) application and acceptance data have a multiple link matching method, involving the students' TDSB (Trillium) number, Ontario Education Number (OEN) and an alphanumeric number of common information. It should be noted that most students in the regular day school system apply as "direct" applicants (101's in OUAC). This, however, is not necessarily the case for adult learners in continuing education. If these students send their information through the TDSB, they will be treated as "direct" applicants. If, however, they choose to apply separately and not go through the TDSB, they are treated as "indirect" applicants or 105's. In fact, the descriptors reported in the previous section reveal that a reasonable number of adult learners applied to OUAC as direct applicants. In the case of OCAS, the TDSB chooses to link all applicants, whether OCAS classifies them as direct or indirect, in order to minimize classification error.

¹² Unlike with the survey dataset, there was a small group of students from the UK and Ireland in the administrative data (N=17). Because language is a major barrier for many immigrants, it seemed most sensible to combine students from English-speaking European countries with Canada/US (samples sizes were too small to warrant separate analyses) rather than with the other European countries.

¹³ The TDSB process does not include applications outside Ontario and also does not include applications to Ontario universities from part-time students ('105').

Results were organized as confirming an offer of admission to an Ontario university (2%), confirming an offer of admission from an Ontario college (17%), applying to an Ontario postsecondary institution over the three years but not confirming (8%), and those who did not apply to an Ontario postsecondary institution in the period ranging from 2009 to 2011 (73%).

Statistics Canada Census Variables

A number of factors based on information from the 2006 Federal Census were employed to describe the local neighbourhoods in which the adult students lived. These factors were identified after matching students' postal codes to their Dissemination Area (DA) within the 2006 Census. The factors employed in our analysis include:

Median Family Income (the median of self-reported family income for 2005);

Proportion of Lone Parents (with children living at home, out of all parents with children living at home);

Proportion of Adults with High Education (those with a bachelor's degree or higher, out of all adults living in the DA);

Proportion of Adults with Low Education (those with less than a high school education, out of all adults living in the DA);

Proportion of Single Detached Houses (those living in single detached houses, out of all those in occupied housing);

Average Number of Children (average number of children per census family, in the DA); and

Unemployment Rate (proportion of those unemployed in the DA with respect to all persons 15 years of age or older in the week prior to the Census, May 16 2006).

Table 3: Description of Variables in the TDSB Administrative Dataset

| Variable | | N | % | Mean | S.D. | Range |
|--|--|-------|-------|---------|----------|-----------|
| Region | Derived country of birth and recoded into seven regions | | | | | |
| English Speaking | | 2,778 | 21.61 | | | |
| Caribbean and Latin America | | 1,877 | 14.60 | | | |
| Africa | | 2,039 | 15.86 | | | |
| Europe | | 674 | 5.24 | | | |
| Asia | | 2,031 | 15.80 | | | |
| South Asia | | 2,172 | 16.89 | | | |
| Middle East | | 1,287 | 10.01 | | | |
| Gender | Contrast coded so that 1=female, 0=male | | | | | |
| Female | | 8,323 | 64.72 | | | |
| Male | | 4,538 | 35.28 | | | |
| Postsecondary Pathways | Application information from Ontario universities and colleges for the 2009-2011 application cycles | | | | | |
| Confirm University in Ontario | | 280 | 2.18 | | | |
| Confirm College in Ontario | | 2,203 | 17.13 | | | |
| Apply to Postsecondary but did not Confirm | | 1,022 | 7.95 | | | |
| Did not Apply to Postsecondary | | 9,356 | 72.75 | | | |
| Age | From year of birth | | | 29.84 | 9.18 | 11-74 |
| Years in Canada since Arrival | Number of years in Canada prior to taking the con ed courses | | | 6.71 | 7.30 | -1-61 |
| Age when Arrived in Canada | | | | | | |
| Arrive After 14 | | 8,674 | 67.44 | | | |
| Arrived Up to 14 | | 1,458 | 11.34 | | | |
| Native Born | | 2,729 | 21.22 | | | |
| Statistics Canada Census Variables | Student postal code linked to data from the 2006 Federal Census | | | | | |
| Median Family Income | | | | 56040.2 | 23943.49 | 0 -308040 |
| Proportion of Lone Parents | | | | 33.68 | 15.99 | 0-100 |
| Proportion of Adults with High Education | | | | 28.29 | 15.70 | 0-92.81 |
| Proportion of Adults with Low Education | | | | 16.30 | 9.94 | 0-61.43 |
| Proportion of Single Detached Houses | | | | 22.43 | 29.64 | 0-104.55 |
| Average Number of Children | | | | 1.31 | 0.35 | 0.1 – 3.3 |
| Unemployment Rate | | | | 9.30 | 5.13 | 0-40.6 |

Table 4: Bivariate Analysis of the Administrative Dataset – Region of Origin by Individual and Neighbourhood Characteristics

| Individual Characteristics | English Speaking | Caribbean and Latin America | Africa | Non-English Europe | Asia | South Asia | Middle East | Sig |
|---|------------------|-----------------------------|----------|--------------------|----------|------------|-------------|-----|
| | 21.61% | 14.60% | 15.86% | 5.24% | 15.80% | 16.89% | 10.01% | |
| | 2778 | 1877 | 2039 | 674 | 2031 | 2172 | 1287 | |
| | | | | | | | | |
| <i>Female</i> | 0.59 | 0.74 | 0.66 | 0.72 | 0.69 | 0.62 | 0.56 | *** |
| <i>Age</i> | 26.31 | 31.7 | 30.1 | 33.95 | 31.64 | 29.64 | 29.67 | *** |
| <i>Younger than 14 when arrived</i> | 0.01 | 0.24 | 0.13 | 0.18 | 0.13 | 0.09 | 0.11 | *** |
| | | | | | | | | |
| Confirmations | | | | | | | | |
| <i>Ontario University</i> | 0.03 | 0.00 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | *** |
| <i>Ontario College</i> | 0.16 | 0.13 | 0.22 | 0.12 | 0.22 | 0.16 | 0.15 | *** |
| <i>Apply to PSE, no Confirmation</i> | 0.08 | 0.07 | 0.11 | 0.07 | 0.07 | 0.07 | 0.08 | *** |
| <i>Did not Apply to PSE</i> | 0.73 | 0.81 | 0.64 | 0.78 | 0.67 | 0.75 | 0.75 | *** |
| | | | | | | | | |
| Neighbourhood Characteristics | | | | | | | | |
| <i>Median Family Income</i> | 62277.29 | 53555.15 | 47352.99 | 59857.67 | 60056.47 | 54341.69 | 54741.69 | *** |
| <i>Proportion of Lone Parents</i> | 34.40 | 37.22 | 41.83 | 29.81 | 29.39 | 28.79 | 31.56 | *** |
| <i>Proportion of Adults with High Education</i> | 28.56 | 22.40 | 23.48 | 38.86 | 32.79 | 26.82 | 33.65 | *** |
| <i>Proportion with Low Education</i> | 16.24 | 19.11 | 19.03 | 10.14 | 14.85 | 16.58 | 13.09 | *** |
| <i>Proportion of Single Detached Houses</i> | 27.97 | 20.98 | 13.11 | 20.21 | 27.24 | 23.16 | 19.79 | *** |
| <i>Average Number of Children</i> | 1.27 | 1.34 | 1.43 | 1.12 | 1.23 | 1.39 | 1.30 | *** |
| <i>Unemployment Rate</i> | 8.58 | 9.31 | 11.03 | 7.62 | 8.48 | 9.67 | 9.63 | *** |
| | | | | | | | | |

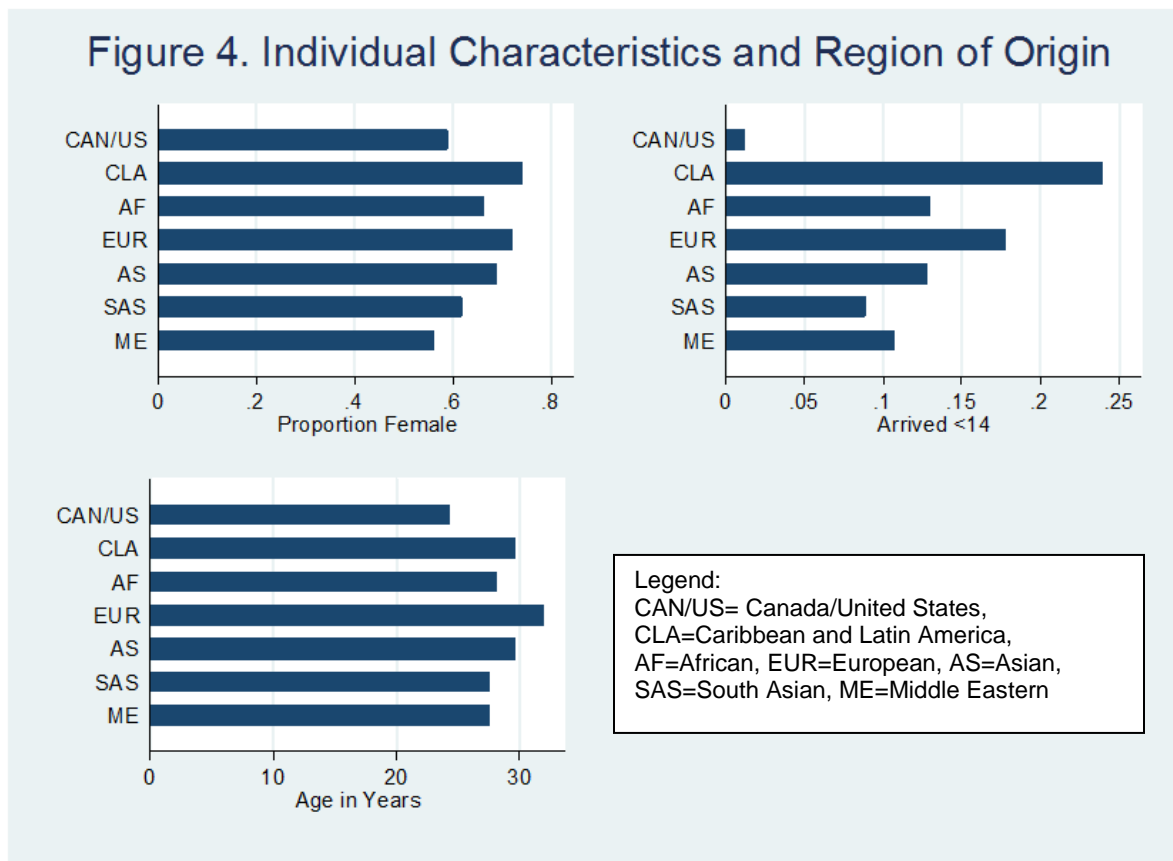
Table 5: Bivariate Analysis of the Administrative Dataset – Application Status by Individual and Neighbourhood Characteristics

| | Ontario University | Ontario College | Applied to PSE, no confirmation | Did not Apply | Sig |
|---|--------------------|-----------------|---------------------------------|---------------|-----|
| Individual Characteristics | | | | | |
| <i>Female</i> | 0.49 | 0.69 | 0.66 | 0.65 | *** |
| <i>Age</i> | 21.37 | 27.27 | 27.81 | 30.92 | *** |
| <i>Arrived before 14</i> | 0.28 | 0.13 | 0.13 | 0.10 | *** |
| Neighbourhood Characteristics | | | | | |
| <i>Median Family Income</i> | 58289.84 | 54574.43 | 55834.94 | 56342.66 | ** |
| <i>Proportion of Lone Parents</i> | 34.82 | 34.38 | 33.24 | 33.52 | |
| <i>Proportion of Adults with High Education</i> | 30.43 | 28.01 | 28.31 | 28.28 | |
| <i>Proportion of Adults with Low Education</i> | 15.53 | 16.67 | 16.37 | 16.22 | |
| <i>Proportion Single Detached Houses</i> | 22.57 | 21.26 | 22.53 | 22.69 | |
| <i>Average Number of Children</i> | 1.34 | 1.31 | 1.32 | 1.31 | |
| <i>Unemployment Rate</i> | 9.08 | 9.46 | 9.22 | 9.27 | |

Table 4 displays the results of the bivariate analyses undertaken for the administrative dataset. In all cases, the independent variable of interest was *Region*, identical to the analytic technique we employed with the TDSB survey dataset presented earlier in this report. Analysis of variance was the statistical technique employed in these analyses. As with the TDSB survey analyses, statistical significance analysis of variance findings indicates that there are significant mean differences on the outcome variable of interest (listed on the left hand side of the table) between at least two of the regions in the analysis. Analysis of variance statistics do not tell where the differences lie, but only that there are differences. Examining the means of the different groups can inform the reader where the differences are most likely to exist. The first row of the Table indicates the cell sizes of each of the regional groups, as well as their size in percentage relative to the entire sample.

In the bivariate analyses, analyses of variance were used to determine differences of the dependent variables across categories of the independent variable. The first analyses of individual characteristics by region of origin are graphically depicted in Figure 4. The female variable was found to have significant proportional differences by *Region*, with the smallest proportions from the Middle Eastern group (56%) and the English-speaking group (59%). Much higher percentages were found among the Caribbean and Latin American group (CLA) (74%) and the non-English speaking European group (72%). In terms of current age, there were significant differences among the groups. Those from non-English-speaking Europe had the highest average age at around 34 years, while those from English-speaking countries were the youngest at just over 26 years of age. The rest of the groups had average ages between 30 and 32.

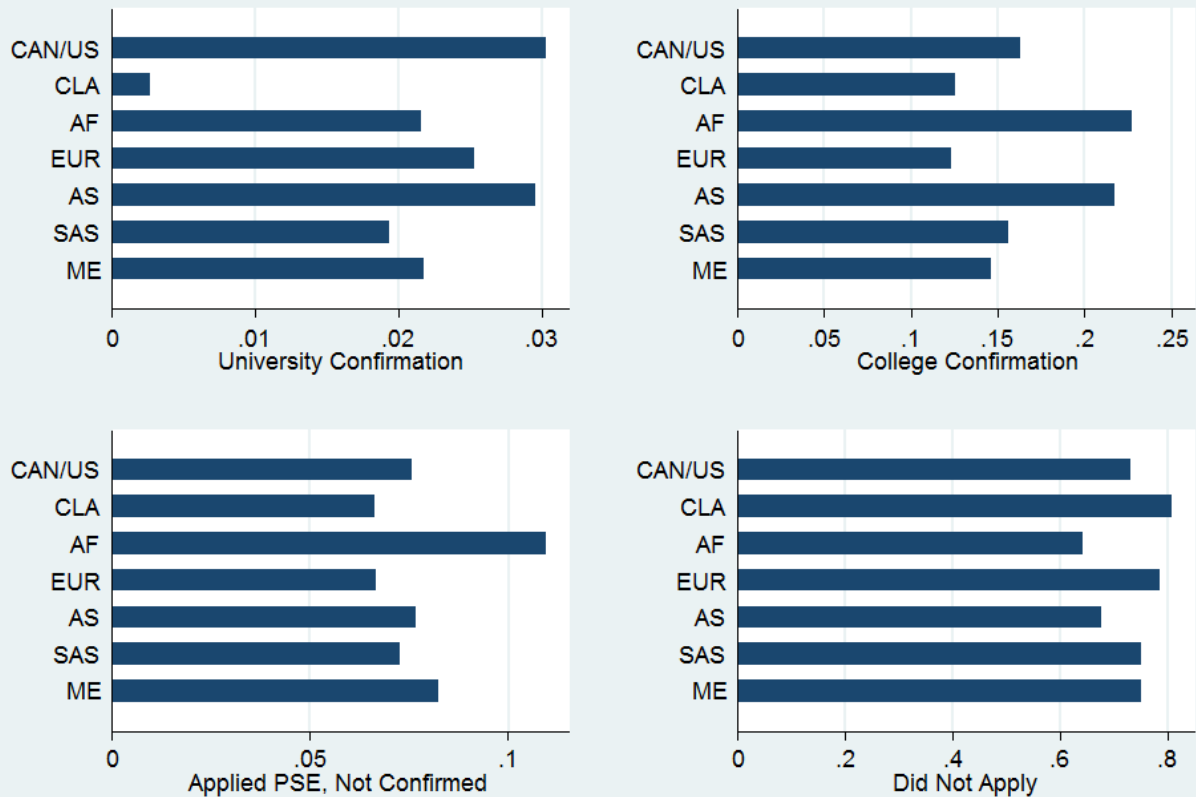
Figure 4. Individual Characteristics and Region of Origin



A dichotomous variable measuring the proportion of students who had arrived in Canada before the age of 14 revealed statistically significant differences among the groups, with the fewest number of students arriving in Canada prior to the age of 14 found in the English-speaking group (1%), followed by the South Asian group (9%). Eleven per cent of Middle Eastern students arrived before the age of 14, compared to 13% of African and Asian students. However, the vast majority of students in the English-speaking group were Canadian-born. The Caribbean and Latin American group reported having the highest proportion of students arriving to Canada before the age of 14, with nearly a quarter of respondents in this age category.

Analysis of variance also revealed that significant differences among groups existed in terms of their PSE trajectories. These differences are illustrated in Figure 5, which shows the percentage of students who confirmed an Ontario university or college offer of admission. On average, there was little variation across all regions among students who confirmed that they were planning to attend university (2-3%), with the exception being the Caribbean and Latin American group, which had virtually no university confirmation. In contrast, college confirmations varied considerably across the groups, with the highest proportions coming from Africa and Asia (22%), compared to just 12% from non-English speaking Europe and 13% from the Caribbean and Latin American group. Among those who applied to PSE but did not receive a confirmation, students of African origin comprised the highest proportion (11%), compared to approximately 7-8% for the other groups. Significant differences were also found among the different groups who did not apply to PSE, with the highest proportion found in the CLA group (81%) and the lowest found among African students (64%).

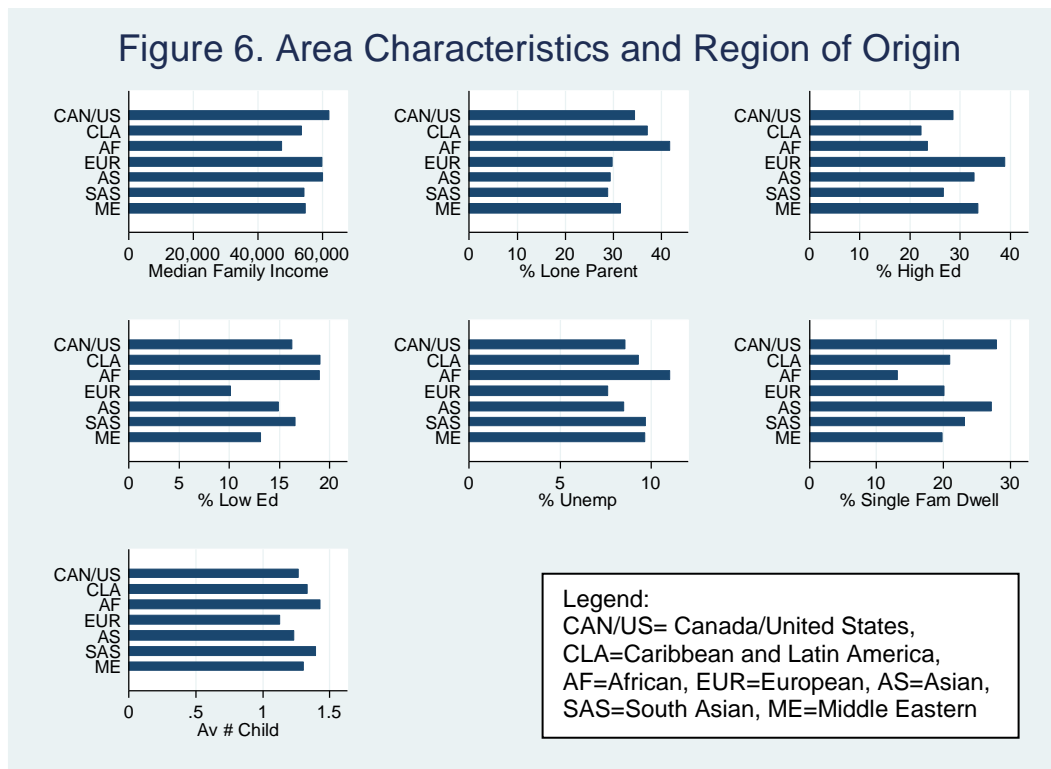
Figure 5. Confirmations and Region of Origin



Legend:
 CAN/US= Canada/United States, CLA=Caribbean and Latin America, AF=African, EUR=European, AS=Asian, SAS=South Asian, ME=Middle Eastern

Differences in neighbourhood characteristics among the different groups were also investigated. Such differences were understood to signal differences in socioeconomic status that were not possible to capture through individual administrative data items, as they were not available. Instead, average characteristics of the neighbourhoods in which respondents lived, as derived from the 2006 Census, were used to provide us with proxy measures of the “average” living conditions experienced by the different groups being analyzed in this study. As illustrated in Table 4, statistically significant differences among the groups were found among all neighbourhood characteristics examined here. These differences are also depicted in graph form in Figure 6.

Figure 6. Area Characteristics and Region of Origin



An examination of neighbourhood median family income revealed that the highest median family income was found in the neighbourhoods of English-speaking students (around \$62,000). In comparison, the average neighbourhood incomes of African and Caribbean/Latin American students were \$47,353 and \$53,555 respectively. The proportion of families headed by lone parents was also significantly different by region of origin, with African students' neighbourhoods having the highest lone-parent households (around 42%), compared to 29% of South Asian and Asian students.

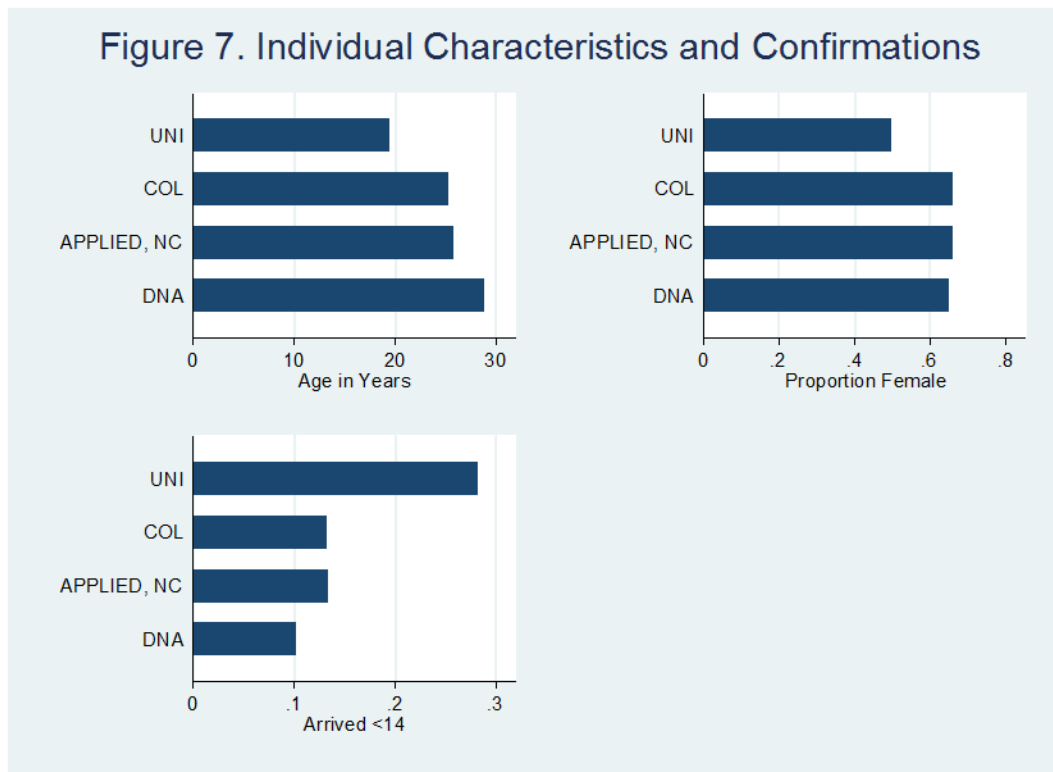
In terms of the proportion of adults with high education in the neighbourhoods, non-English speaking Europeans resided in neighbourhoods that had the highest average at nearly 40%, compared to CLAs and Africans whose neighbourhood averages were around 22-23%. In contrast, looking at the proportion of adults with low education reveals, unsurprisingly, that Africans and CLAs were more likely to live in neighbourhoods with higher proportions of adults with low education (around 19%) compared to non-English speaking Europeans (10%).

The proportion of single detached houses in students' neighbourhoods also varied by region of origin. The highest proportions were found in English-speaking and Asian students' neighbourhoods, at around 27% of dwellings. This is in stark contrast to African students' neighbourhoods, where only 13% of dwellings were single detached houses.

In terms of average number of children per household, the highest averages were reported in African students' neighbourhoods (1.43) and South Asians' neighbourhoods (1.39), which was in sharp contrast to the averages in the neighbourhoods inhabited by non-English speaking European students (1.12).

Unemployment rates also varied considerably by students' region of origin. The highest unemployment rates were found in the African students' neighbourhoods (around 11%), while students from other regions lived in neighbourhoods with rates below 10%.

A final set of analysis was performed examining individual and neighbourhood characteristics with postsecondary confirmations as the dependent variable. Analysis of variance tests (presented in Table 5) revealed that there were statistically significant differences in individual characteristics among students' PSE confirmation outcomes (Figure 7). In terms of gender, females only had 49% of university confirmations, compared to 69% of college confirmations. Of those who applied to PSE and did not confirm an offer of admission, 66% were female, while of those who did not apply to PSE, 65% were female.



The average age of those who confirmed an offer of admission at an Ontario university was just over 21 years of age, while the average age of those confirming college admissions was over 27. There were significant differences in confirmation outcomes among students who had arrived to Canada before the age of 14, with 28% having university confirmations and only 13% having college confirmations.

Neighbourhood characteristics were not significant predictors of differences in confirmation outcomes in this analysis, with the exception of median family income. As one may expect, those who confirmed university offers of admission were more likely to be from neighbourhoods with higher median family incomes than those who confirmed college admission, those who were not confirmed, or those who did not apply to PSE.

Overview of Bivariate Analyses

The bivariate analyses have allowed us to examine how students' region of origin is associated with various demographic characteristics, as well as their PSE plans and outcomes. We have found, for example, that immigrant adult students are more likely to be female and older than their native-born counterparts. Very likely stemming from these age and gender differences, we have also found other differences in their demographic characteristics, including marital and family sizes. The administrative dataset has also pointed to considerable differences in the characteristics of the census neighbourhoods of the different groups, pointing to different neighbourhood criteria that can be understood to represent the likely living conditions experienced by students.

The survey dataset contained information on student PSE plans and the administrative dataset reported on actual pathways. In general, the expectations of students and their actual pathways varied considerably. As a whole, over half of all students surveyed planned to attend college, while one-quarter planned to go to university. Perhaps most importantly, analysis of variance failed to find any significant differences in these expectations among students by region of origin. When we look at the administrative dataset to examine actual pathways, the story is rather different. Only 2% of students overall confirmed university, but this group contained no students from the Caribbean and Latin America. Around 17% of all students confirmed college, but stark differences existed between the different regions of origin groups. Around 22% of African and Asian students confirmed college, compared to just 12% of non-English speaking Europeans and 13% of Caribbean and Latin Americans.

Thus, there are significant differences between plans and outcomes for all students, regardless of region of origin, at least in the short term. Analysis by region of origin has revealed that these differences do not exist at the educational planning stage but do surface at the outcomes stage of confirmation to PSE. Bivariate analyses have also provided insight into other key differences among the different immigrant groups, for example, in terms of demographic and neighbourhood characteristics. It is likely that pre-existing differences among groups are at least in part responsible for driving the differences we see in PSE confirmations among the different immigrant groups.

Multivariate Analysis

In order to tease out how individual characteristics may contribute to the different PSE plans of the groups examined in the survey dataset, multivariate analysis was employed in order to control for various background factors of interest. Multivariate analyses allow for independent (region of origin) and dependent variable (PSE plans) relationships to be explored, while simultaneously controlling for additional factors (demographic background and attitudinal measures) that may contribute to the explanatory relationship.

Table 6 presents the results for the logistic regression estimations predicting postsecondary education plans among the adult day school survey respondents. The three outcomes in the table (i.e., each column) are: aspires to university; aspires to college; and aspires to either college or university. The last column reflects the combination of respondents who indicated that they planned to go to either university or college. In this particular sample, around one-quarter of respondents indicated a plan to attend university, while over half (55%) indicated that they expected to attend a college. Survey respondents were permitted to make multiple choices. A separate category was therefore created to capture whether or not the respondent had any type of postsecondary aspiration. Nearly three-quarters (73.5%) of respondents indicated that they expected to continue on to postsecondary education. In the logistic regression to follow, we consider four outcomes: university-only plans (N=116, or 18% of total sample), college-only plans (N=303, or 48.4% of total sample), either college or university plans (N=460 or 73.5% of total sample), and both college university plans (N=41 or

6.5% of total sample).¹⁴

We used various independent variables to estimate these models: sex (female coded one); age (dummy coded so that those less than 30 were coded one); region of origin (divided into seven possible regions: Canada/US, Caribbean and Latin America, Africa, Europe, Asia, and South Asia; length of time in Canada (using five grouped categories); whether married or living common-law; whether had a child under four years of age; and two summed scales. The scales are composite measures of several Likert-type items used in the survey to assess the experiences and challenges experienced by the respondents while in the adult day school. The first scale is a summative measure of the “experiences” of the respondents in class and is derived from 14 items asked of the respondents (detailed in Table 1). The alpha for this variable was 0.82, indicating excellent internal consistency.¹⁵ The second scale is a summative measure of challenges experienced by the students, consisting of six items (also detailed in Table 1). It should be noted that access to daycare was not included in this scale because it did not apply to over half of the respondents. The alpha for this scale was weaker at 0.72, although this is still generally considered to be acceptable. Also included in the estimations were independent variables measuring if the respondent was unemployed (1=yes), a Canadian citizen (1=yes), and if she or he had postsecondary education from a different country (1=yes).

¹⁴ Please note that “neither college nor university plans” is the counterfactual to the “either college or university plans” and that the results for such a regression would literally be the same as the “either college or university” results except with the coefficient signs reversed.

¹⁵ Question direction was taken into account and questions worded “negatively” were reverse coded in the creation of all summative measures.

Table 6: Logistic Regressions Predicting Postsecondary Plans
Unstandardized Logistic Regression Coefficients

| | University Only | College Only | Either | Both |
|---|----------------------|---------------------|----------------------|---------------------|
| Female (1=yes) | 0.222 | -0.524 [*] | -0.262 | -0.136 |
| Age 21-30 (1=yes) | -0.168 | 0.666 [*] | 0.829 ^{**} | 1.026 [*] |
| Region of Origin (reference=Canada/US) | | | | |
| Caribbean and Latin America | 0.404 | -0.002 | 0.590 | -0.536 |
| Africa | 0.284 | -0.320 | 0.425 | 0.647 |
| Europe | -0.526 | -0.392 | -0.563 | 0.980 |
| Asia | 0.347 | -0.380 | 0.329 | 0.410 |
| South Asia | 0.045 | -0.812 | -0.530 | 0.217 |
| Middle East | 0.532 | -1.030 | 0.066 | 0.406 |
| First Language English | -0.124 | -0.104 | -0.165 | 0.319 |
| Length of Time in Canada (reference=less than 1 year) | | | | |
| 1-3 years | 0.246 | -0.757 | -1.106 | -1.284 |
| 4-5 years | 0.022 | -0.904 | -1.829 ^{**} | -2.110 [*] |
| 6-10 years | -0.460 | -0.235 | -1.658 [*] | -1.603 |
| Over 10 years | 0.122 | -0.615 | -1.507 [*] | -2.159 [*] |
| Married | -0.090 | -0.124 | -0.488 | -0.708 |
| Has Child under 4 | 0.453 | 0.146 | 0.927 [*] | 0.118 |
| Experiences in Continuing Education Scale | -0.099 | 0.140 | 0.109 | 0.209 |
| Challenges while in Continuing Education Scale | -0.157 | 0.088 | -0.160 | -0.0278 |
| Unemployed | -0.097 | 0.0192 | -0.227 | -0.135 |
| Citizen | -0.348 | 0.279 | 0.417 | 1.621 [*] |
| Foreign Postsecondary Education | -0.791 ^{**} | 0.710 [*] | 0.182 | 1.402 ^{**} |
| Constant | 0.506 | -1.127 | 2.473 | -3.009 |
| N | 454 | 454 | 454 | 454 |
| pseudo R ² | 0.044 | 0.053 | 0.087 | 0.103 |

^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

University-only Plans. The results for the logistic regression predicting university-only plans reveal that there is only one statistically significant determinant of this outcome: having foreign postsecondary education experience. Having foreign PSE experience reduced the likelihood of someone having university-only plans.

College only plans. Two of the variables in the logistic regression predicting college-only plans were statistically significant: female and foreign postsecondary experience. In the case of gender, being a female

significantly reduced the likelihood that a respondent would have college-only plans, while having foreign postsecondary credentials significantly increased the likelihood that a respondent would have college-only plans.

Either university or college plans. In the third column of Table 6, college and university plans were combined into one variable. Logistic regression results indicate that three factors predicted this particular outcome: being less than 30 years of age; length of time in Canada (as with university expectations, there was a general tendency for those who had been here longer to have less PSE plans relative to the most recently arrived); and having a child under four years of age.

Both university and college plans. In the final column of Table 6, the results for predicting if a respondent answered that he or she planned to go on to both college and university are presented. Here, we find that age, length of time in Canada, citizenship and having foreign postsecondary credentials were all statistically significant predictors of this outcome. In particular, respondents between 21 and 30 (compared to those over 30) were more likely to indicate that they planned to do both, as did respondents with citizenship and foreign postsecondary credentials. In terms of length of time in Canada, there was a tendency for those who were here longer (compared to recent arrivals) to indicate that they planned for both forms of PSE.

Summary of multivariate analysis of student survey. In general, it can be concluded that there are no particularly profound findings with regard to the outcome variables examined here. In general, the predictors included in these models are not particularly strong determinants of the factors under consideration. The most consistent predictors across models were age and having foreign postsecondary education experience. In the case of age, being younger (21-30) increased the likelihood of all the outcomes examined here, with the exception of university-only plans. In the case of foreign postsecondary education, this factor reduced the likelihood of having university-only plans but increased the likelihood of having "college-only" and "both college and university" plans. Length of time in Canada predicted whether students planned to attend "either" or "both", with a general trend of those in the country longer being less likely to indicate such preferences. Region of origin, when the effects of other variables are controlled for, had no statistical significance in predicting the PSE plans of continuing education day students.

Multivariate Analysis of the Administrative Dataset

As described earlier, the administrative dataset contains much detailed information about students, although it lacks any attitudinal measures. The administrative data were also supplemented with neighbourhood characteristics obtained from the Canadian census. Because we had information on neighbourhood, we first employed a random intercepts model (also known as a multilevel model) in order to determine the extent to which different neighbourhoods impacted on the variance of PSE uptake. Surprisingly, individual differences in neighbourhood had explained less than 2% of the overall variance in PSE uptake. What this means is that among continuing education students, the neighbourhood in which they lived made no difference in whether or not they would go on to postsecondary education. This is a rather remarkable finding unto itself, because much achievement literature focuses on "neighbourhood effects." While continuing education students live in a variety of neighbourhoods across Toronto, all of these neighbourhoods can be characterized as lower income.

The estimations of postsecondary confirmations were further collapsed into one category where university and college confirmations are combined. The decision to collapse was based on the very low percentage of university confirmations (2%), making a university-only analysis untenable given the extremely small sample (N= 280). In the first column of the analysis of Table 7, individual characteristics are entered as predictors of PSE confirmation, while in the second column, neighbourhood characteristics are added.

Individual characteristics. Sex, age, region of origin¹⁶, whether a native English speaker, generation status and if respondents arrive after age 14 were included as individual predictors of PSE confirmation. The generation status variable was created from information in the administrative data set on age/year at arrival in Canada and had the following categories: native-born, 1985 and earlier, 1986-1996 and since 1997. Results revealed that females were more likely than males to go on to PSE, while age was negatively associated with PSE confirmations. In other words, the older a respondent was, the less likely he or she was to confirm PSE. Generation status and region of origin had no impact, while arriving after age 14 was positively associated with PSE confirmation.

Neighbourhood characteristics. Although previous steps taken in analysis had determined that neighbourhood did not explain the variance in PSE attainment, this step was taken to determine if the intercepts should be allowed to vary in the multivariate estimate. Although this did not prove to be necessary, neighbourhood characteristics still may have a uniform effect across individuals and can be included as independent variables. In the second step of analysis, various neighbourhood characteristics obtained from census data were included: proportion of adults with high education; the unemployment rate; the proportion of single detached homes; proportion of lone parent families; and median family income. A fairly weak but statistically significant association between proportion of adults with high education and PSE confirmations was found.

Summary of multivariate analysis of administrative data. In summary, sex, age and arriving after age 14 were individual predictors of confirming PSE. Females were more likely than males to confirm, as were younger people. Interestingly, arriving after age 14 to Canada was also found to be positively associated with PSE confirmations. In terms of neighbourhood characteristics, only the proportion of highly educated persons in a neighbourhood was significantly, but weakly, associated with PSE confirmations.

¹⁶ The category of "Middle East" (N=36) was separated from "South Asians" at this point in the survey analysis in order to maximize comparability and prevent dropping of this sizeable category from the administrative dataset.

Table 7: Logistic Regressions Predicting Postsecondary Confirmations
Unstandardized Logistic Regression Coefficients

| | Basic Demographic | +Neighbourhood |
|--|-------------------|----------------|
| Female | 0.116 | 0.109 |
| Age in Years | -0.059*** | -0.0603*** |
| English Native Speaker | -0.083 | -0.177 |
| <i>Generation Status (Reference=Native Born)</i> | | |
| 1985 and earlier | -0.185 | -0.0962 |
| 1986-1996 | -0.082 | 0.0273 |
| Since 1997 | 0.157 | 0.243 |
| Arrived after Age 14 | 0.267** | 0.273** |
| <i>Region of Origin (reference=Canada/US/UK)</i> | | |
| Caribbean and Latin America | -0.387 | -0.489 |
| Africa | 0.400 | 0.313 |
| Europe | -0.120 | -0.237 |
| Asia | 0.445 | 0.353 |
| South Asia | -0.105 | -0.179 |
| Middle East | -0.161 | -0.267 |
| <i>Neighbourhood Characteristics</i> | | |
| Adults with High Education | | 0.004* |
| Unemployment Rate | | -0.003 |
| Proportion of Single Detached Homes | | -0.000 |
| Proportion Lone Parent Families | | 0.002 |
| Median Family Income | | -0.000 |
| Constant | -0.119 | -0.134 |
| <i>N</i> | 12858 | 12372 |
| <i>Pseudo R²</i> | 0.049 | 0.051 |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Comparing the Predictors of PSE Plans and PSE Confirmation

In the next set of analyses, we use the survey and administrative data in a comparative manner, analyzing how variables common to each dataset function to predict PSE plans and confirmations. Such an exercise required that variables common to each dataset be recoded, so that they are comparable. By way of illustration, in the survey, data regarding age were collected in terms of banded age groups, while in the administrative dataset they were collected as raw years of age. For the sake of simplicity, we developed a simple dichotomous variable that codes ages up to and including 30 as "1" and all others as "0." This dichotomous variable was subsequently employed in both datasets. Regions were already similarly coded, as was status as an English native speaker. Length of time in Canada was assessed in the survey through

grouped bands of years, and thus information on year of arrival was used from the administrative data to construct a variable measured in an identical manner. There are five variables/concepts that are common to both the survey and the administrative datasets: gender; dichotomized age (up to 30/over 30); whether English native speaker; region of origin; and length of time in Canada.

Table 8 presents the results of the comparative analysis using the “harmonized” variables across the two datasets. The dependent variable in the first column is whether the respondent indicated either college or university plans, while the dependent variable in the second column is whether the respondent confirmed either college or university. In both cases, zero on these variables means “neither college nor university.” The overall impression is that there is a very weak association between the predictors of aspiration and those that also predict confirmation. In fact, the only shared predictor of both estimations, and indeed the only statistically significant predictor in the estimation of expectations/confirmations, was being 30 years of age or less, although the effect was in opposite directions. Being younger is positively associated with expectations but negatively with PSE confirmations. There are no other shared predictors between these two outcomes of interest.

Table 8: Comparison of Predictors of PSE Plans and Confirmations between Two Datasets
Unstandardized Logistic Regression Coefficients

| | Plans (Survey) | Confirmations (Admin) |
|---|----------------|-----------------------|
| Female | -0.133 | 0.0544 |
| Age 30 or less | 0.811*** | -0.596*** |
| <i>Region of Origin (Reference: Canada/American/English Europe)</i> | | |
| Caribbean and Latin America | 0.520 | -0.359*** |
| Africa | 0.493 | 0.429*** |
| Europe | -0.447 | -0.095 |
| Asia | 0.001 | 0.470*** |
| South Asia | -0.424 | -0.066 |
| Middle East | -0.386 | -0.127 |
| English Native Speaker | -0.208 | -0.124 |
| <i>Length of Time in Canada (Reference=less than 1 year)</i> | | |
| 1-3 years | -0.773 | 0.149 |
| 4-5 years | -0.987 | 0.223* |
| 6-10 years | -0.884 | 0.094 |
| Over 10 years | -0.549 | 0.044 |
| Constant | 1.454* | -0.777*** |
| N | 534 | 12858 |
| <i>Pseudo R squared</i> | 0.049 | 0.033 |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Summary and Conclusions

For a significant number of adults in Ontario, pathways to postsecondary education (PSE) are seldom direct and often complex due to financial obligations and family commitments. Many seek out non-traditional pathways to PSE, including continuing education courses offered by school boards (e.g., foundation courses in English). While immigrants may enrol directly in Canadian universities and community colleges to upgrade their foreign qualifications, a significant number rely on continuing education courses to upgrade their skills before applying to PSE. Our literature review revealed that there are no studies that document the effectiveness of continuing education as a strategy for accessing PSE by adults in Canada. This study addresses this gap in the research literature by investigating postsecondary outcomes for Canadian-born and immigrant adults who seek to upgrade their credentials through continuing education at the secondary level or at adult day schools through the Toronto District School Board (TDSB).

The experience of schooling by these adult students is quite different from that of most adolescent high school students, and it is not only due to their age. Most adolescent students in the position to apply to postsecondary institutions have been full-time students for nearly all of their lives. In contrast, while the adult students in this study were studying full-time, most were full-time for only a very short period.¹⁷ Fewer than half of adult students both started and finished the 2008-2009 school year. Only 38% attended both the 2007-2008 and 2008-2009 school year, while only 15% attended three consecutive school years (2007-2008 through 2009-2010). Under such circumstances, that at least one-fifth of these students continued into an Ontario postsecondary institution is an extraordinary achievement.

Our analyses have examined two sources of data from the Toronto District School Board (TDSB) in order to investigate continuing education students' postsecondary plans and confirmations. We analyzed the data sources in a systematic manner, starting with descriptive and bivariate associations among key concepts, then moving on to multivariate analyses and data imputations in order to test more complex relationships among our variables.

Our multi-stage analysis has revealed complex findings. Recall that the bivariate analyses found that there were considerable differences in the characteristics of the census neighbourhoods of the different ethnic/racial groups considered here, pointing to different neighbourhood criteria that can be understood to represent the likely living conditions experienced by students. In the multivariate analysis, however, neighbourhood was found not to contribute to the explained variance in expectations (and thus not retained as a multilevel factor). In addition, neighbourhood characteristics that were included in the multiple regression analysis were found to have only a marginal impact. This study has found that neighbourhood matters, but that the neighbourhoods from which continuing education students are disproportionately drawn are more similar than different from each other. Thus, while continuing education students live in a variety of neighbourhoods across Toronto, all of these neighbourhoods can be characterized as lower income. In other words, comparing neighbourhoods among continuing education students will be inconsequential due to their similar socioeconomic positions. Comparative analysis of the neighbourhoods of continuing education students and the general population of high school students, however, would likely prove to be different.

While research shows that the employment of non-traditional pathways is frequently linked to disadvantaged socioeconomic circumstances, and that the trajectories chosen may further increase educational stratification by reducing students' chances of completing a university degree, it is important that we consider an alternative perspective. Adoption of non-traditional trajectories may actually provide opportunities

¹⁷ Partly because of this high mobility, academic years at adult day schools are organized into quadesters, allowing for easier access and exit.

for postsecondary education that some students would not ordinarily possess if their only alternative were a “traditional” educational pathway. Be that as it may, our study shows that only 20% of adult learners confirm a university or college offer of admission, a figure well below the attainment rate in Ontario.

Bivariate analyses revealed that over half of all survey students planned to attend college, while a quarter planned to attend university. Significant differences in these plans among students by region of origin were not found. In terms of looking to the administrative dataset for actual pathways, however, only a mere 2% of students overall confirmed university, but this group contained no students from the Caribbean and Latin America. Overall, fewer than 20% of all students confirmed college, but stark differences existed among the different region of origin groups. Around 22% of African and Asian students confirmed college, compared to just 12% of non-English speaking Europeans and 13% of Caribbean and Latin Americans.

Bivariate analysis by region of origin has revealed that these differences of region of origin do not exist at the planning stage, but at the outcomes stage of confirmation to PSE. Indeed, these differences were illuminated in the multivariate stage of analysis. Our results comparing the predictors of plans and confirmations (Table 7) revealed no common predictors (apart from age, which had opposite effects in each estimation). Additional analyses revealed a particularly unexpected pattern of a strong negative association between plans and confirmations.

Previous research has found PSE plans of students from lower socioeconomic groups to be lower than those of students from more affluent backgrounds (Marjoribanks, 2003), and that these plans vary according to ethnic group membership (Chang, Chen, Greenberger, Dooley & Heckhausen, 2006; Uwah, McMahon & Furlow, 2008). These differences in predictors of PSE plans have been somewhat supported in our findings. Educational expectations, in turn, have been found to be positively associated with academic persistence (Bui, 2007; Lent, Brown & Hackett, 1994) and future academic attainment (Andres, Adamuti-Trache, Yoon, Pidgeon & Thomsen, 2007; Wigfield & Eccles, 2000). This is where our findings stand in stark contrast to the extant literature on the topic.

It must be emphasized, however, that the existing literature examining the relationship between PSE plans and attainment tends to look at trends in sample data that are much different from the subgroup with which we are working. Our sample is not comprised of “typical” North American teenagers. For one, they are adults, were likely born outside North America, are very likely to be visible minorities, and have a fairly low socioeconomic status relative to the rest of the population. These characteristics themselves suggest quite strongly that our subgroup of interest is atypical, and it stands to reason that the vast majority of literature that exists on PSE expectations and outcomes does not “fit.” Existing literature focuses on children and the myriad factors (including parental and peer influences) that predict their PSE plans and outcomes. The causal mechanisms underlying PSE plans and outcomes are very likely different in a population of adults in continuing education day schools.

In conclusion, our findings comprise a preliminary step in understanding the non-traditional pathways chosen by adult learners in the TDSB. In order to provide the necessary supports, both at the secondary and postsecondary levels, that would facilitate greater access to and persistence in Ontario’s higher education system, we need to learn far more regarding the life course structures and dynamics that impact on the education and employment related choices made by adult learners. We examine some of these possibilities in Appendix A, where propensity score matching techniques were employed in order to determine the likelihood of our survey respondents confirming PSE, given similar case characteristics in the much larger administrative data set. Our preliminary findings there point to a somewhat troubling negative correlation between plans and confirmations. Qualitative studies of former continuing education day students could help shed light on these findings and determine at what point and why, these plans are apparently abandoned. It may be the case that the simple logistics of having to immediately provide for a family and the high costs of PSE are discouragement enough.

Additional analyses that would elaborate on our understanding of adult learners would compare this population with the more general population of students in the TDSB. Our findings have indicated a notable negative association between PSE plans and attainment, which is in contradiction to the existing literature on the topic. We have argued that this is likely due to characteristics of our subpopulation that make them particularly different from the general population of high school students. Further studies should compare the continuing education day school students with the general TDSB population in order to identify key differences and how these differences on the onset may contribute to the different PSE outcomes we observed here. In comparing this specific population with the more general population of high school students, we could learn more about how various factors differentially impact traditional and non-traditional secondary school students. Such potential research studies that identify and compare the timing and sequencing of education and employment-related choices in relation to demographic, social and cultural factors between traditional and non-traditional students would provide valuable information, which would be particularly useful in developing policies and practices for increasing postsecondary participation among adult learners.

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