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EARLY SCHOOL LEAVING AMONG IMMIGRANTS
IN TORONTO SECONDARY SCHOOLS

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EXECUTIVE SUMMARY

The costs associated with emigrating to settle in a new and unfamiliar country is one that many are prepared to shoulder so that they may seek new opportunities, improve their lives and, often most importantly, offer a better future for their children. Because of this, it is necessary to understand the short- and long-term achievement of immigrant children and the children of immigrants. Completing high school and undertaking post-secondary studies are the first steps toward taking advantage of opportunities that served as the motivation for their families' move. Failing to complete high school or pursue a post-secondary education jeopardizes the economic prospects of immigrant and non-immigrant youth alike, thereby calling into question the benefits of emigration for those seeking opportunities believed not to be available in their home countries.

The changing demographic composition of Canada's population and the deterioration of immigrants' labour-market outcomes raise important questions about the socioeconomic integration of new immigrants, inter-generational mobility, and the way in which the future economic positions of the first and second generations hinge on ethnic background. The traditional theory of immigrant adaptation suggests a "straight-line" or "linear" form of assimilation, whereby time spent in the host country determines the degree of assimilation, both within and between generations. With respect to academic achievement, the straight-line approach suggests that children who immigrate at a younger age will have better outcomes than those who arrive later. Furthermore, those belonging to the third-plus generation should outperform those belonging to the second generation, who in turn should have better outcomes than the first generation.

Their declining labour-market position, no matter the reason, may be taken as an indication that the newer immigrant cohorts have been experiencing a more difficult time integrating into their host society; it also raises questions about the extent to which future generations will be able to assimilate, and into which groups they will assimilate. Recognizing that the straight-line model ignores certain groups within the immigrant population, the segmented assimilation hypothesis first articulated by Portes and Zhou has served to highlight the potential for horizontal or downward assimilation, particularly in the US context. Segmented assimilation theory notes that different patterns of adaptation characterize different immigrant groups: some follow the classical straight-line route to assimilation into the White middle class; others fall into poverty and join the ranks of the underclass; and still others advance economically while deliberately retaining the values of their ethnic community.

To evaluate these paths to assimilation, an application was made to the External Research Review Committee (ERRC) of the Toronto District School Board (TDSB) to gain access to their student databases. Permission was granted by ERRC and data were provided on the first group of Grade 9 students who could be identified and tracked at the TDSB; only data for which all individual student and school identifiers were deleted were released; subsequent analysis focused on baseline data contained in the offices of TDSB Research and Information Services.

The dataset follows 13-15 year olds by year of birth who started the first year of Ontario secondary study (Grade 9) in the TDSB in Fall 2000, for six years, to Fall 2006. The response variable in our analysis is an indicator of whether the respondent had dropped out of the system. For the regression analysis we estimated a multilevel model where individuals (level-1) were nested within neighbourhoods (level-2), where the respondents' neighbourhood was defined via their postal code. The neighbourhood-level variable used in this study was the proportion of people in the immediate neighbourhood (that is, those with the same postal code) living below the low income cutoff (LICO), as defined by Statistics Canada.

While it was not at all surprising to find that youth who lived in neighborhoods where higher proportions of residents lived in poverty also experienced higher dropout rates, it is important to note that this effect was statistically significant when region of origin and individual level factors were present in the model. When we realize that increased numbers of immigrant youth are living below the poverty line, this finding has important policy implications that require attention by policy makers at all levels of government.

While region has a significant impact on school completion its effect was measurably reduced when different individual level variables were introduced into the regression model, including gender, age of entry in school, living arrangements with family, placement in school stream and risk of not completing courses, and regardless of whether the respondent resided in a low or high socioeconomic status neighbourhood. This finding is important in that it provides markers for devising strategies that may lower dropout rates among specific immigrant groups from diverse countries of origin. For instance, students from the Caribbean were significantly more likely to enter school one year late, live in alternate family structures, find themselves placed in non-academic streams, and be at risk of not completing their course of study. Many of these risk factors are responsive to change by working effectively with schools and family.

KEY WORDS: Immigrant youth, secondary school, neighbourhood, TDSB, second generation, dropout rates, straight-line assimilation, segmental assimilation

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Early School Leaving Among Immigrants in Toronto Secondary Schools[1]

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INTRODUCTION

The costs associated with emigrating to settle in a new and unfamiliar country is one that many are prepared to shoulder so that they may seek new opportunities, improve their lives and, often most importantly, offer a better future for their children. Because of this, it is necessary to understand the short- and long-term achievement of immigrant children and the children of immigrants. Completing high school and undertaking post-secondary studies are the first steps toward taking advantage of opportunities that served as the motivation for their families' move. On the other hand, failing to complete high school or pursue a post-secondary education jeopardizes the economic prospects of immigrant and nonimmigrant youth alike, thereby calling into question the benefits of emigration for those seeking opportunities believed not to be available in their home countries.

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[1] An earlier version of this paper was presented at the 12th Biennial Jerusalem Conference in Canadian Studies, 16-19 June 2008.

The academic performance of first- and second-generation youth is an especially pertinent issue, given the rapidly changing demographic composition of Canada's population coupled with the economic downturn experienced by recent immigrant cohorts. Newcomers to Canada have experienced unprecedented obstacles to success that have translated into lower incomes and higher poverty rates relative to previous immigrant waves (Aydemir and Skuterud 2004; Bloom, Grenier, and Gunderson 1995). Research findings indicate, for instance, that the earnings gap between recent immigrants (that is, those who had arrived within the previous five years) and the 'like' Canadian-born has been increasing significantly with each successive cohort since the 1970s (Frenette and Morissette 2003). Given that employment earnings represent the major source of income for most families, it comes as no surprise that the decline in relative earnings has corresponded to an increase in the proportion of new immigrants living below the low-income cutoff. While low-income rates have fallen or remained constant even for the most vulnerable groups among the Canadian-born, the rate for new immigrants rose from 25 to 36 per cent between 1980 and 2000 (Picot and Hou 2003). Moreover, the low-income situation of many newcomers can be described as chronic. According to one recent study, as many as 65 per cent of immigrants experience a low-income spell within their first ten years of living in Canada and, of these, roughly one third remain at low-income levels for three years or more (Picot et al. 2007).

The deteriorating economic position of recent immigrants has occurred during a time of rapid demographic change in Canada. For example, the foreign-born population has been growing much more quickly compared to the native-born. Between 2001 and 2006, the immigrant population grew by 13.6 per cent, compared to 3.3 per cent for the Canadian-born (Statistics Canada 2007). As of the 2001 census, 14 per cent of Canadians between the ages of 15 and 24 were born outside of Canada, and the number is much greater in the major immigrant-receiving cities: 48 per cent of Toronto's and 29 per cent of Vancouver's youth were foreign-born at that time. Overall, immigrants made up one-fifth of Canada's population in 2006, up from 16 per cent in 1991. With Canada's below-replacement fertility rate, it is expected that by 2030, 100 per cent of its population growth will be due to immigration (Statistics Canada 2006).

The rapidly growing immigrant population has brought about major changes to Canada's population. Sustained high levels of immigration since the latter half of the 1980s, together with the removal of preferential access for applicants from European countries in 1967, brought about a substantial and continuous rise in the proportion of ethnic, racial, and linguistic minorities that is unlikely to subside. Once from the predominantly White countries of Northern and Western Europe, the new immigration consists largely of those from Asian and, to a lesser extent, African countries. Data from the 2006 Census of Canada indicate that 58 per cent of recent immigrants were from Asian countries and another 11 per cent were born in African countries. To be sure, 19.8 per cent of Canada's population is foreign-born and, as of 2006, 16.2 per cent of the population identified themselves as visible minorities. In many Canadian municipalities, however, such as Toronto (50.0 per cent immigrant, 46.9 per cent visible minority), Vancouver (45.6 per cent immigrant, 51.0 per cent visible minority), Mississauga (51.6 per cent immigrant, 49.0 per cent visible minority), and Markham (56.5 per cent immigrant, 65.4 per cent visible minority), immigrants and visible minorities make up close to one-half of the population or more (Statistics Canada 2008; 2006b;

2001). Further, Canada's immigrants represent 220 countries and nearly 150 languages; fully 70 per cent of the Canada's foreign-born population has a mother tongue that is neither English nor French (Statistics Canada 2006b).

PATHS TO ASSIMILATION

The changing demographic composition of Canada's population and the deterioration of immigrants' labour market outcomes raise important questions about the socioeconomic integration of new immigrants, intergenerational mobility, and the way in which the future economic position of the first and second generation hinges on ethnic background. Theories of immigrant adaptation traditionally have suggested a "straight-line," or "linear," form of assimilation, whereby time spent in the host country determines the degree of assimilation, both within and between generations (Gans 1992; 1997). As immigrants spend more time in their host society, and as each successive generation becomes further removed from its foreign-born predecessors, the first and subsequent generations increasingly resemble the host population in terms of attitudes, beliefs, behaviours, and socioeconomic characteristics such that the two groups eventually become indistinguishable from one another. With respect to academic achievement, the straight-line approach suggests that children who immigrate at a younger age will have better outcomes than those who arrive later. Further, those belonging to the third-plus generation should outperform those belonging to the second generation, who in turn will have better outcomes than the first generation (Boyd 2002).[2]

Until recently, the straight-line model of assimilation was generally taken for granted. To be sure, age at migration has been found to be a strong predictor of academic performance among immigrants: the younger immigrants are upon arrival, the better their academic outcomes tend to be (see, for example, Cahan, Davies, and Staub 2001). Moreover, those hailing from Europe following World War II often followed this route to assimilation. Not only did the first generation experience relatively rapid upward mobility due to Canada's booming economy and the abundance of stable, well-paying jobs in the manufacturing sector, the second generation typically attained academic and labour-market success that matched or exceeded that of their peers with native-born parents. Indeed, these groups had higher levels of education and were more heavily concentrated in upper white-collar jobs, such as medicine, teaching, and managerial jobs (Boyd and Grieco 1998). However, scholars increasingly have come to recognize that this model does not easily fit the experience of many immigrant groups, particularly in the United States. For instance, Haitian youth living in Miami were found to have been confronted with social ostracism and bullying as a result of stereotypes held by native-born minorities that Haitians were unduly submissive towards whites. Haitian youth, thus, often have been torn between the cultural values of their parents that promote

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[2] The first generation are the foreign-born, the second generation includes those who were born in Canada to immigrant parents, and the third-plus generation consists of the offspring the Canadian-born. The third generation is often grouped with later generations (referred to as the third-plus generation) for theoretical and empirical simplification.

educational achievement and individual success, and inner-city American values that devalue schooling as a means to socioeconomic advancement (Portes 1995; Gans 1992). From this perspective, it is obvious that assuming the values, norms, and cultural practices of the native-born does not guarantee a step up the economic ladder. Thus, while some newcomers and their descendants have adapted easily to their host society, many have experienced hardship and disadvantage that make a straight-line path to successful socioeconomic integration unlikely.

Shifts in the ethnic, racial, and linguistic composition of newcomers to Canada and other immigrant receiving nations have provoked discussion about the applicability of a theory that largely ignores the barriers faced by minority groups. Adaptation of the contemporary first and second generations is further impeded by a new economy that no longer offers low-skilled, high-paying jobs to anyone willing to work. No more is upward social mobility accessible via blue-collar jobs that permit hard workers to advance through the pecking order and attain socioeconomic standing on par with the native-born. Their declining labour-market position, no matter the reason, may be taken as an indication that the newer immigrant cohorts are experiencing a more difficult time integrating into their host society; it also raises questions about the extent to which future generations will be able to assimilate, and into which groups they will assimilate.

Recognizing that the straight-line model ignores certain groups within the immigrant population, the segmented assimilation hypothesis first articulated by Portes and Zhou (1993) has served to highlight the potential for horizontal or downward assimilation, particularly in the US context (see also, Rodríguez 2002; Portes and Rumbaut 2001; Zhou 1997). Segmented assimilation theory notes that different patterns of adaptation characterize different immigrant groups: some follow the classical straight-ling route to assimilation into the White middle class; others fall into poverty and join the ranks of the underclass; and still others advance economically while deliberately retaining the values of their ethnic community. The path to assimilation that a given immigrant group follows depends on where they are from, where they go, and the demographic and socioeconomic characteristics that accompany them. Such factors as race, language ability, place of birth, socioeconomic status, and age at arrival are said to determine the segment of society into which immigrants will assimilate (Zhou 1997). Thus, as new arrivals become increasingly diverse, their paths to assimilation are more varied; children of the newer immigrant cohorts come from a multitude of ethnic, linguistic, and socioeconomic backgrounds, they are likely to experience some degree of economic hardship while in Canada, and they come from a wide array of national origins. Each of these factors has been linked with educational performance and subsequent opportunities for upward mobility.

Recent empirical work in Canada and the United States has revealed significant differences in school outcomes by race, ethnicity, language, age at arrival, and generational status. Looking at standardized math scores among first-, second-, and third-generation children in grade three, Glick and Hohmann-Marriott (2007) revealed that, among the first- and second-generation children of immigrants in the US, only those of Mexican origin had significantly lower test scores relative to the White children in the three-plus generation, while Central American, Chinese, East Asian, Vietnamese, and Eastern and Western European children had higher scores. Other children of

immigrants, including those from Puerto Rico, Cuba, the Caribbean, Philippines, and India, had test scores that were no different from White children with two US-born parents. Moreover, among the third generation, only Black children had significantly lower scores than Whites; the test scores of all other ethnic groups of this generation were no different than Whites when controlling for various sociodemographic and familial factors. Overall, research has indicated that historically disadvantaged groups in the United States, particularly Black and Hispanics, experience severe economic and academic disadvantage upon arrival that persists across generations (see, for example, Glick and White 2003).

In Canada, research findings are less conclusive but, perhaps, more optimistic. Worswick (2001), for instance, found that language proficiency and age at arrival were particularly salient factors that influenced settlement and adaptation to school life. Looking at school children up to age 15, he reported that children of immigrants performed, on average, at least as well as children of the Canadian-born along several dimensions of academic achievement, including reading, writing, and mathematics. However, the children of immigrants whose first language was neither English nor French tended to have lower reading and writing scores than children of native-born parents. Nevertheless, with more years spent in the Canadian school system, reading and writing test scores tended to converge (see also Corak 2005). However, looking specifically at students for whom English was not their mother tongue, Gunderson (2007) found stark differences in the academic performance of different ethno-cultural groups. Based on a sample of 5,000 ESL students enrolled in the Vancouver school system between 1991 and 2001, Gunderson revealed that Mandarin- and Cantonese-speaking students in grades 8 through 12 outperformed English-speaking Canadians in all subjects with the exception of grade 12 English, while Indian-, Vietnamese-, Tagalog-, and Spanish-speaking students generally performed less well than the Canadian-born.

The commitment to, and performance of, young people is also contingent on the degree of comfort and social integration they experience in the schools they attend. The 2002 Ethnic Diversity Survey (EDS) provides us with some insights in this area. Based on special runs of the EDS, we investigated three aspects of comfort and social integration among Canadian youth 15-24[3] years of age: 1) experience of discrimination during the past five years, 2) whether this discrimination was due to ethnicity or culture, and 3) whether the trust placed in the people in schools varied by visible-minority status. Our analysis of these items within the EDS revealed that youth, 15-17 years of age, born outside of Canada were more likely to have experienced discrimination in Canada than their Canadian born counterparts. Thus, while 13 per cent of Canadian born youth said they had experienced discrimination, 36 per cent of youth born in Africa and 35 per cent of youth born in Asia and the Middle East claimed to have experienced discrimination. While 25 per cent of Canadian born youth identified ethnicity or culture as the basis for experiencing discrimination, the proportions for youth born outside of Canada were higher: approximately 45 per cent of youth born in Central and South America, the Caribbean, Bermuda, and Asia and the Middle East claimed that their experience of discrimination was based on ethnicity or culture.

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[3] This age group was selected rather than 15-17 to provide a sufficient sample size to generate cross-tabulations

Increasing numbers of the immigrant youth who come to Canada are visible-minority members, and the EDS affords us the opportunity to explore whether visible-minority status is associated with their capacity to feel integrated in schools. One important marker of social integration is the degree of trust that youth place in people within schools. Respondents in the EDS were asked whether they trusted the people they encountered in school. Our analysis of this item revealed that 10 per cent of non visible minority youth felt people in schools could not be trusted. However, the degree of mistrust varied significantly among visible-minority youth, ranging from 4.5 per cent for Chinese youth to 24 per cent for Black youth.

Though the paths to assimilation appear to be varied for immigrants and their offspring in both Canada and the United States, the contextual factors facing Canadian immigrants are very different, and it has been argued that there is little evidence of second generation decline in Canada (Boyd 2002; Boyd and Grieco 1998). Boyd (2002), for example, has pointed to the lack of urban ghettos and the smaller Black and Hispanic populations in Canada relative to the US, and has argued that downward assimilation is unlikely simply because there is no identifiable underclass. Boyd (2002) also has suggested that the greater proportion of immigrants entering Canada may create and sustain a "critical mass" that supports education as a tool for upward social mobility among immigrants and their children. Yet, the unlikelihood of segmented assimilation occurring en mass in Canada cannot be taken to imply that upward mobility is inevitable. Relative to their parents, "horizontal mobility" of the second generation may be more likely (Alba and Nee 2003, 268). Recent successions of immigrant cohorts entering Canada have been facing lower at-entry earnings, higher rates of unemployment, and higher low-income rates, while the native born have been enjoying declining unemployment and poverty rates (Picot and Sweetman 2005; Aydemir and Skuterud 2003). Despite the improbability of assimilation into an "underclass," the economic outlook for children of the foreign-born may not be much brighter than that of their parents.

IMMIGRANT STATUS AND THE SCHOOL EXPERIENCE IN ONTARIO

The school experience of first- and second-generation youth is a particularly important issue in Ontario, which receives fully one-half of all immigrants to Canada and now has a population that is 28.3 per cent foreign-born. With respect to youth, 19 per cent of Ontario's population aged 15 to 24 was foreign-born in 2006; in Toronto, this figure was 40 per cent (Statistics Canada 2007; 2008). Its large foreign-born population, particularly in urban areas, means that Ontario cannot afford to overlook the disadvantaged socioeconomic position of its immigrants and the long-term consequences this might have for their children.

Data from Statistics Canada's Youth in Transition Survey (2000) indicated that, at that time in Ontario, 11.2 per cent of 20 year-old males and 7.8 per cent of 20 year-old females were not in school and had yet to complete the requirements for a high-school diploma (Bowlby and McMullen 2002). Within Ontario, high-school dropout rates have been found to vary substantially by family income. For example, data from 2003 showed that, among those in the lowest income quartile, the

high-school dropout rate at age 19 was 8.3 per cent. This is three times higher than the dropout rate of 2.6 per cent among those in the highest income quartile. Furthermore, the post-secondary participation rate at age 19 was 40 per cent higher for those in the highest income quartile relative to those in the lowest quartile (Zeman 2007).

When asked about their main reason for dropping out, school factors were most commonly cited by early school leavers. A 2002 survey of 17-year-old Canadians indicated that nearly 45 per cent of those who had dropped out of school attributed their departure to the school environment. School-related factors were found to include boredom, or lack of interest in classes, difficulties with school work and with teachers, expulsion, and missing credits (Bushnik, Barr-Telford, and Bussiere 2004). A comparison of school leavers and school continuers revealed that the reading proficiency scores of dropouts were one full level below the average, as defined by the Program for International Student Assessment (PISA). A difference of one proficiency level can be considered a substantively large difference in student performance. Early school leavers also reported much lower grades; among those who had dropped out by age 17, 32 per cent reported an overall grade of less than 59 at age 15, compared to eight per cent of other students (Bushnik et al. 2004).

A recent study commissioned by the then-Ontario Ministry of Education and Training (Hospital for Sick Children 2005) revealed that first- and second-generation youth in Toronto and Kitchener-Waterloo experienced unique challenges in secondary school. In-depth qualitative interviews were conducted with 57 first- and second-generation youth who either had left school early or were at risk of doing so. Respondents cited the need to learn a new language, language barriers, unfamiliarity with the Canadian school system, and inappropriate linguistic assessment and grade placement as important risk factors for school disengagement. Stresses associated with resettlement, loneliness, isolation, and a lack of friends also were reported. The study further demonstrated that age at the time of migration was especially critical, whereby youth who immigrated during the latter years of high school were most at risk of dropping out.

LOCAL TORONTO RESEARCH

Applied research in Toronto public education dates back to its foundation in the early nineteenth century, when the key motivator was a desire to decrease of absenteeism among students. At that time, absenteeism rates were published, thus providing a measure of public accountability. Funding for schools was based on daily attendance and, eventually, progress in addressing absenteeism became the primary way of examining educational progress. A search for the reasons for absenteeism, therefore, provided the basis for much of the applied research on the Toronto public school system into the early twentieth century.

Thus, the Toronto school Census of 1863 was literally that, a census of all Toronto children between the ages of 5 and 16. It looked at who attended school and the reasons provided by children who could not attend school. This 'Census' constituted a benchmark study, for it clearly established

that the main reasons for non attendance were socio-economic. Many children, it found, were working full- or part-time, assisting in the provision of care for other children, or simply were unable to get to school. For example, 13 per cent of students in the 1863 Census said they could not come to school "for want of clothes." This was a surprise to many who had believed that more economically challenged students (sometimes called 'Street Arabs') were truant from school, that is, voluntarily staying away. The 1863 Census, and additional research in the late nineteenth and early twentieth centuries, led to the establishment of much of the student-support infrastructure of today's public educational system, along with parks, community centres, and part of the Toronto Public Health Department (Brown 1999).

By the mid- to late-twentieth century, the emphasis on accountability through absenteeism had disappeared from the research agenda, and the focus had shifted to such matters as graduation from high school (or its inverse, dropping out), improving student achievement, and the placement of students into academic 'streams' which were designed to differentiate those going into university from those going directly into the workplace.

In the 1960s, the seven Toronto boards (Metropolitan Toronto, North York, Toronto, Scarborough, Etobicoke, East York, and York) each had established research departments. One key theme of their research became the composition and achievement patterns of new immigrant groups who were entering Toronto schools in growing numbers from the 1950s through the 1970s. The Every Student Surveys of the Toronto Board in the 1970s clearly outlined the socio-economic patterns associated with streaming. For example, according to the 1970 Every Student Survey, only 24 per cent of Grade 8 students from low-income Park Public School (now known as Nelson Mandela Park Public School), located on Shuter Street between Parliament and River Streets, went on to five-year high-school programs, compared to 95 per cent from Deer Park Public School in the more affluent Yonge and St. Clair area of the city. The surveys also outlined the challenges of immigrant populations for the Toronto Board (Stamp 1981, 234-235).

Cohort studies of Grade 9 students have been conducted periodically since the 1959 Toronto Grade 9 cohort (Wright 1967). Grade 9 students who had participated in the 1987 Every Secondary Student Survey were followed for five years. By the end of 1992, 56 per cent had graduated, 11 per cent were still in the Toronto board for a sixth year, while 33 per cent had dropped out. There was little difference between those born in Canada and those born outside Canada. However, there were clear distinctions between other subgroups of students. The dropout rate for Black students (42 per cent) was more than twice that of Asian students (18 per cent), with White students in between (31 per cent). The dropout rate for key language groups also varied widely: that speakers of English-only was marginally above the Toronto total (37 per cent), but other groups varied from the Chinese (19 per cent) to the Portuguese (41 per cent). The dropout rate for those living with one parent was almost twice that for those living with two parents (48 per cent versus 27 per cent), and the dropout rate for those students from non-remunerative households was thrice that of those whose parents worked in professional occupations (46 per cent to 15 per cent). Likewise, the dropout rate for those in the 'Basic stream' of study, which was intended to lead students directly to the workplace, was

thrice that of the majority of students who were in the 'Academic stream,' which led to university (21 per cent versus 64 per cent).

This study also clearly established an almost linear relationship between the pattern of credit completion in Grades 9 and 10, and graduation or dropout by the end of Year 5 of secondary study, first suggested in King et al. (1988). According to the data, the vast majority of students who completed all 8 mandatory credits by the end of Grade 9 had graduated by the end of five years. By contrast, most students with 6 credits or fewer by the end of Grade 9 had not graduated by the end of five years. A similar relationship was found for Grade 10 (Year 2), where almost all students who had completed the 'norm' of 16 or more credits by the end of Grade 10 had graduated, while most of those with 14 or fewer credits had not (Brown 1993).

The Every Secondary Student Survey of 1991 was another landmark study, one with multiple components. In an examination of achievement (Yau et al 1993), similar demographic patterns to those in the 1987 Survey were identified. In addition, links were very clearly established with hours of homework per week, hours of part-time work per week, and there was found to be a very strong link with attitudes towards post-secondary education (both by the student and the student's parents). A later cohort study of the 1991 Grade 9 students confirmed these links, along with the earlier demographic relationships. Although the dropout rate itself had declined dramatically in five years, from 33 per cent to 23 per cent, the relationships between subgroups remained (Brown 1996). The earlier patterns associated with Grade 9 and 10 credit completion also were confirmed by this cohort study and by a comparable cohort study done by the Scarborough Board's research department (Turner 1996). Monitoring of Grade 9 and 10 credit completion has since become part of Ontario educational planning.

In 1998, the six component areas of Metropolitan Toronto were amalgamated into the new City of Toronto. This led to a broader examination of much larger groups of students. For one thing, the total number of secondary students in the amalgamated Toronto District School Board was three to four times the size of the old Toronto Board, despite an overall decline in enrolment and the removal of tens of thousands of adult students.[4] By 2000-2001, the amalgamated research department had established Student Success Indicators to examine annual outcomes for its secondary students. An analysis of five years of data in 2006 documented a 'modest but consistent increase in student achievement,' including a decline in the proportion of Grade 9 students who had fewer than 6 credits, and in those who had not completed compulsory Mathematics, English, and Science courses. A noticeable increase in the proportion of students applying to, and accepted into, university also was observed.

At the same time, many of the achievement gaps profiled in earlier reports also were identified. These included:

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[4] At present, there are some 89,000 secondary students in the TDSB's 104 high schools. Data accessed from: http://www.tdsb.on.ca/_site/ViewItem.asp?siteid=302&menuid=3654&pageid=3049

- a consistent gap between higher-achieving female and lower-achieving male students;

- higher-achieving age-appropriate and lower-achieving older students;

- higher-achieving students who stayed in the same secondary school versus those lower-achieving students who switched schools;

- higher-achieving high-income neighbourhoods and lower-achieving low-income neighbourhoods;

- those with normal or high achievement in elementary school, who, in general achieved normal to higher achievement in secondary grades, versus those who were at risk in elementary school and were also more at risk at the secondary level;

- those taking a majority of courses in the Academic program of study versus a much more at-risk population taking Applied and Essentials courses (these had replaced the Advanced, General, and Basic streams in Ontario, with little obvious effect); and

- those with low Grade 9 and 10 absenteeism with higher achievement, and those with high Grade 9 and 10 absenteeism, and lower achievement.

As with previous studies, few differences between those born in Canada versus those born outside Canada were identified. However, this gross comparison served to conceal significant variations among students born outside Canada. Those born in the English-speaking Caribbean, Central/South America/Mexico, and Eastern African were more highly at-risk, while those born in Eastern Europe, South Asia, and Eastern Asian tended to be less at-risk. Year of arrival in Canada did not appear to have made an obvious difference. The Grade 9 achievement of 21 key language groups was examined, and it was found that the groups with the highest at-risk status in both 2003-4 and 2004-5 were those whose first language was either Spanish, Portuguese, or Somali. (Brown 2006).

DATA, VARIABLES, AND METHODS

An application was made to the External Research Review Committee (ERRC) of the Toronto District School Board (TDSB) to gain access to their student databases in relation to a Canadian Council on Learning project. Permission was granted by ERRC and data were provided on the first group of Grade 9 students who could be identified and tracked at the TDSB. Only data for which all individual student and school identifiers had been deleted were released to us. Subsequent analysis focused on baseline data contained in the files of TDSB Research and Information Services. As part of the release through the Research Review Committee of the TDSB,

any identifier with a frequency of less than 10 (for example, countries of birth with fewer than 10 students) were classified as 'other.'

The dataset traces the academic progress of 13-15 year olds, by year of birth, who started the first year of Ontario secondary study (Grade 9) in the TDSB in Fall 2000, and follows them for six years to Fall 2006. A total of 18,798 students were identified as starting their Grade 9 studies at the TDSB in Fall 2000. Of these, 18,068 (96.1 per cent) were still present at the end of the school year (June 2001). Nearly all (98 per cent) had an identifiable Grade 9 homeroom. Females represented 47.4 per cent of the sample versus males who represented 52.6 per cent of the entire sample.

While 79 per cent of the Grade 9 student cohort could be identified as elementary students in their legacy student information system (SIS) in March 2000, 21 per cent, or over a fifth, could not be so identified. Most of these students would have come from outside the TDSB, either from other educational authorities in Ontario, or from other countries. Some might have transferred from Grade 8 in one legacy system to Grade 9 in another legacy system.

There were 18,798 students in the original Grade 9 cohort. By 31 October 2006 (the official end of Year 6 of the study), 2,220 students had transferred out of the TDSB to another secondary institution (mostly in Ontario) and could no longer be followed. They were removed from the analysis. Another 329 students were removed due to record error, leaving 16,249 students.

By the end of their sixth year of secondary study (that is, by Fall 2006), 72 per cent of the students in the sample had graduated (received an OSSD or successfully completed 30 or more credits), 2 per cent had not graduated but were still in the TDSB in Fall 2006 for Year 7 of secondary studies, and 26 per cent had dropped out by the end of Year 6 (that is, had left the TDSB without a record of transferring, and without graduating).

The administrative data set used in this study contained a set of variables that included: gender and region of birth, which distinguished among seven rather broad regions: Canada, Europe, the English-speaking Caribbean, Africa, South Asia, West Asia, and Eastern Africa. Moreover, the respondents born in Canada were divided into two groups, namely, those who spoke English at home and those who did not speak English at home. These two categories were used as proxies for second- and first-generation Canadians, respectively. Also contained in the dataset were a number of socio-economic factors that were employed as independent variables in the analysis. These included: family status (living either with their parents or in some other living arrangement in Grade 11 Year 3, 2002-3) and a variable (based on age), which indicated whether the respondents started high school on time or a year late. We also included a variable that was intended to capture the proportion of people in the student's immediate neighbourhood that fell below the Low Income Cutoff, or LICO. This measure was derived from postal codes that were matched with Statistics Canada's dissemination area-level LICO data and was based on the 2001 Census. Finally, three independent variables were included in the analysis to provide information on important aspects of schooling for students. The first variable reflected streaming within secondary school. It identified the majority of courses taken in Grade 9/10 by students, and was employed to classify the student's

program of study as Academic, Applied, or Essentials. The second independent variable was developed to indicate whether a given student was considered to be "at risk" in the 2000 Grade 9 cohort. A student was classified as "at risk" if he or she had completed fewer than seven courses by the end of grade nine. The third variable was employed to distinguish between students who had taken English-as-a-second-language (ESL) courses and those who had not. This variable was used as a proxy for language proficiency.

The descriptive statistics for the variables used in our analysis are provided in Table 1. Frequencies are provided for categorical variables, and means are provided for quantitative variables. The descriptive statistics are provided separately for each region of origin. With the exception of gender, the other variables used in the analysis displayed statistically significant differences across region of origin. The most noteworthy findings in this regard are discussed below.

In terms of dropout levels, students from the Caribbean had the highest dropout levels (40 per cent), whereas students from Eastern Asia were the least likely to drop out of high school (10 per cent). English-speaking, Canadian-born students were in the middle in this regard; approximately 20 per cent of all native-born students dropped out of high school during the years under study. With regard to age at entering high school, English-speaking, Canadian-born students were the most likely to enter on time (97 per cent), whereas Caribbean students were the least likely to enter on time (88 per cent), followed closely by students from Africa (89 per cent). In regard to parental status, students from European backgrounds were the most likely to live with both parents (74 per cent), in contrast with Caribbean students who were the most likely to be living in other family structures. For example, only 26 per cent of students from the Caribbean lived in two parent families. Among English-speaking, Canadian-born students, exactly half (50 per cent) lived with both parents.

In regard to academic level, East Asian immigrant students overwhelmingly were found in the 'Academic' stream (90 per cent), followed closely by Europeans (85 per cent), English-speaking Canadians (78 per cent), and South Asians (78 per cent). In contrast, Caribbean immigrants were the least likely to be in the 'Academic' stream, with only 39 per cent of Caribbean students on this path. Similar patterns by region of origin emerged for the at-risk variable. Here East Asian immigrants (7 per cent) and European immigrants (10 per cent) were the least likely to be labeled "at risk," whereas Caribbean immigrants (33 per cent) were most likely to be considered to be "at risk." Again, Canadian-born, English-speaking students were in the middle, as 14 per cent of them had not completed at least six credits at the end of grade nine.

Table 1: Descriptive Results for Variables in the Study, Separated by Region of Origin (n = 12,138)

	Canada (Eng) Mean/Proportion	Can (non-Eng) Mean/Proportion	Caribbean Mean/Proportion	Africa Mean/Proportion	Europe Mean/Proportion	Eastern Asia Mean/Proportion	South Asia Mean/Proportion	Western Asia Mean/Proportion	
DropOut									***
Yes	0.19	0.18	0.40	0.23	0.15	0.10	0.16	0.22	
No	0.81	0.82	0.60	0.77	0.85	0.90	0.84	0.78	
Sex									
Female	0.49	0.47	0.50	0.53	0.49	0.47	0.50	0.49	
Male	0.51	0.53	0.50	0.47	0.51	0.53	0.50	0.51	
Age of Entry									***
On time	0.97	0.98	0.88	0.89	0.95	0.92	0.94	0.95	
One year late	0.03	0.02	0.12	0.11	0.05	0.08	0.06	0.05	
Living Situation									***
Both parents	0.50	0.72	0.26	0.42	0.74	0.59	0.49	0.66	
Alternative structure	0.50	0.28	0.74	0.58	0.26	0.41	0.51	0.34	
Streaming Level									***
Academic	0.78	0.83	0.39	0.59	0.85	0.90	0.78	0.75	
Applied	0.21	0.15	0.53	0.38	0.14	0.09	0.20	0.24	
Essentials	0.02	0.02	0.08	0.03	0.01	0.01	0.02	0.02	
At risk									***
At risk	0.14	0.13	0.33	0.22	0.10	0.07	0.11	0.16	
Not at risk	0.86	0.87	0.67	0.78	0.90	0.93	0.89	0.84	
Taken ESL courses									***
No	0.99	0.99	0.90	0.85	0.81	0.72	0.78	0.74	
Yes	0.01	0.01	0.10	0.15	0.19	0.28	0.22	0.26	
LICO	6.41	5.48	4.17	3.44	4.95	5.37	3.88	4.13	***
n=	6,697	1,297	460	338	800	1,027	1,094	425	

*** p-value <.001

A slightly different pattern emerged with respect to the experiences of students who had taken an ESL program. Not unexpectedly, English-speaking, Canadian-born students were the least likely to have taken an English-as-a-second-language course (< 1 per cent). In contrast, approximately 28 per cent of East Asian immigrant students in the sample had taken an ESL course. They were followed in this regard by West Asian (26 per cent) and South Asian immigrants (22 per cent). In comparison, just 10 per cent of Caribbean immigrant students had taken an ESL course.

Finally, using LICO as an indicator of economically disadvantaged neighbourhoods, it appears that African immigrant youth lived in the most disadvantaged areas, followed by South Asian immigrant youth, and then by West Asian immigrant youth. In contrast, Canadian-born, English-speaking students tended to reside in neighbourhoods with the lowest incidence of families living below the poverty line.

In general, however, the most consistent pattern revealed by the descriptive statistics is that East Asian and European immigrants are generally in the most favourable positions in terms of sociodemographic and school related characteristics, whereas Caribbean immigrants appear to be in the most disadvantaged. English-speaking students who had been born in Canada, tended to be in the middle.

Regression Results

The response variable in our analysis is an indicator of whether the respondent had dropped out of the system.[5] Respondents were considered as drop outs if they had not graduated by 2006.[6] For the regression analysis, we estimated a multilevel model where individuals (level-1) were nested within neighbourhoods (level-2), where each respondent's neighbourhood was defined via her/his postal code. The neighbourhood-level variable used in this study was given by the proportion of people in the immediate neighbourhood (that is, those with the same postal code) living below the low income cutoff (LICO), as defined by Statistics Canada. The response, or dependent, variable was a binary measure which distinguished between those who had dropped out of high school and those who had not. In regressing the level-1 outcome (dropout) on both level 1 and level 2 predictors, we employed a mixed logit model. Such a model falls under the banner of hierarchical generalized linear models, where the Bernoulli distribution is specified for the response variable, and a logit link is used to map the mean of the response variable to the linear predictor. Then, the logit link is defined as:

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[5] Approximately 10 per cent of the cohort left the TDSB for another school board. Since we were unable to track the education records of these students after they left the TDSB, we removed them from the analysis.

[6] Listwise deletion was used for missing data resulting in a final sample of 12,138. The majority of the deleted observations were removed as a result of our selection process.

$$\eta_{ij} = \log\left(\frac{\varphi_{ij}}{1 - \varphi_{ij}}\right),$$

where φ_{ij} is the predicted probability of dropping out for the i'th observation in neighbourhood j, and η_{ij} is the log odds of dropping out.

To estimate the magnitude of variation between neighbourhoods in dropout levels, we first estimated an unconditional model without any predictors at either level (Model 1). Since the level-1 variance is heteroskedastic, the intraclass correlation is not as intuitive as it is in the standard hierarchical linear model, but it is still a useful index because it represents the ratio of the level-2 (neighbourhood) variance to the total variation. In models with binary outcomes, the intraclass correlation is best conceived under the latent variable approach, where the level-1 random effect is assumed to have a standard logistic distribution with a mean of 0 and variance equal to $\pi^2/3$.[7]

Using conventional notation, the level-1 model is specified as:

$\eta_{ij} = \beta_{ij}$,

and the level-2 model is:

$\beta_{0j} = \gamma_{00} + \mu_{0j}$,

where:

$\mu_{0j} \sim N(0, \tau_{00})$.

In the second equation, the γ_{00} represents the average log-odds of dropping out across the neighbourhoods, and μ_{0j} is the random effect at level-2. The last term indicates that we are adopting the usual assumption that the error term at level-2, μ_{0j}, is normally and identically distributed with an expected value of zero and a constant variance, τ_{00}. This assumption is applied to all models estimated in this paper.

The estimates from Model 1 are provided in the first column of Table 2. The key estimate in this model is the intraclass correlation, ρ, which indicates that approximately 13 per cent of the

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[7] Thus, for mixed models with a Bernoulli sampling distribution, the intraclass correlation is calculated as $\rho = \tau_{00}/(\tau_{00} + \pi^2/3)$, where τ_{00} is variance at level-2.

variation in the outcome is attributable to neighbourhood characteristics (p<.001). Since it is highly statistically significant, we proceeded to include a random effect at level-2 in Model 2.[8]

The region of origin variable is the only variable included in Model 2, in which the level-1 structural model is specified as:

$$\eta_{ij} = \beta_{0j} + \beta_{1j}X_{1ij} + \ldots + \beta_{kj}X_{kij},$$

where, β_{1j} through β_{kj} are the parameters representing the six dummy-coded variables for the region of origin variable. The level-2 model is:

$$\beta_{0j} = \gamma_{00} + \mu_{0j}.$$

The parameters for the dummy-coded variables are treated as fixed (that is, $\beta_{pj} = \gamma_{p0}$ for $p > 0$). The likelihood ratio chi-square test for the region of origin variable was highly statistically significant (p < .001), and the parameter estimates in Model 2 can be interpreted as the log-odds of dropping out of high school relative to the reference category, namely, English-speaking, Canadian-born respondents. In comparison with English-speaking, Canadian-born students, only immigrant youth from the Caribbean were more likely to drop out of high school (p < .001). In contrast, the immigrant youth who are less likely to drop out than native born English-speaking students were those from Europe (p < .01), South Asia (p < .01), and Eastern Asia (p < .001), respectively. Perhaps most interestingly, second-generation Canadians were no more or less likely to drop out of high school than were first-generation Canadians. In Model 2, the estimated variance at level-2 remained statistically significant (p < .001), as approximately 11 per cent of the total variation in dropout levels was attributable to neighbourhood characteristics, after controlling for country of origin.

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[8] If this estimate was not statistically significant we would have proceeded to estimate a simple logistic regression model.

Table 2: Hierarchical Generalized Linear Model Predicting Dropout from the Independent Variables (n = 12,138)

	Model 1			Model 2			Model 3		
	b	SE(b)	p	b	SE(b)	p	b	SE(b)	p
Fixed Effects									
Constant	-1.627			-1.544			-2.618		
Country of Origin						***			***
Caribbean				1.029	(0.11)	***	0.144	(0.129)	
Africa				0.152	(0.144)		-0.396	(0.168)	*
Europe				-0.298	(0.11)	**	-0.067	(0.124)	
Eastern Asia				-0.808	(0.114)	***	-0.577	(0.131)	***
South Asia				-0.305	(0.096)	**	-0.295	(0.111)	**
Western Asia				0.148	(0.13)		0.079	(0.148)	
Canada (non-English)				-0.153	(0.084)		0.006	(0.095)	
Canada (English)				(ref)	------		(ref)	------	
Sex									***
Male							0.345	(0.057)	***
Female							(ref)	------	
Age of Entry									***
One year late							0.590	(0.113)	***
On time							(ref)	------	
Living Situation of Student									***
Alternative family structure							0.294	(0.058)	***
Living with both parents							(ref)	------	
Streaming Level									***
Applied							1.014	(0.067)	***
Essentials							1.336	(0.167)	***
Academic							(ref)	------	
At Risk of not completeing									***
At risk							2.169	(0.076)	***
Not at risk							(ref)	------	
Taken ESL courses									
Yes							-0.119	(0.11)	
No							(ref)	------	
Level II									
LICO							-0.055	(0.011)	***
Random Effects									
Variance of the Random Intercept	0.498			0.402			0.168		
Intraclass Correlation (Rho)	0.131		***	0.109		***	0.049		*

* p-value <.05; ** p-value <.01; *** p-value <.001
Standard errors are in parentheses

Model 3 also included the remaining level-1 variables, and the level-2 variable LICO.[9] The specification of the level-1 structural model is:

$$\eta_{ij} = \beta_{0j} + \beta_{1j}X_{1ij} + \ldots + \beta_{kj}X_{kij},$$

where, β_{1j} through β_{kj} are now used to conveniently denote the parameters for all of the quantitative and categorical dummy-coded explanatory variables in the model. At the neighbourhood level, only the intercept, β_{0j}, is a function the level-2 predictor W_j, which is our measure of LICO:

$$\beta_{0j} = \gamma_{00} + \gamma_{10}W_j + \mu_{0j},$$

whereas, all of the other parameters are fixed. Hence:

$$\beta_{pj} = \gamma_{p0}, \text{ for } p > 0.$$

Most of the variables included in this model were statistically significant ($p < .001$), controlling for the other predictors in the model, and holding constant the value of the random effect, μ_{0j}.[10] The only exception was the variable which was used to distinguish between those who had and had not taken ESL classes, which was not statistically significant.

The magnitude of the estimates for the region of origin variable were reduced in Model 3; however, the pattern of estimates was similar to that produced by Model 2. The most noteworthy change occurred among Caribbean immigrant youth, as their relative chances of dropping out declined dramatically when the control variables were included in the model. In fact, their dropout levels no longer were statistically significantly different from those for English-speaking, Canadian-born students. The relative chances of dropping out also declined for African students in Model 3. When the controls were included in the model, their dropout levels become statistically significantly lower than those for Canadian-born students ($p < .05$), as were the dropout levels for students from South Asia ($p < .01$), and Eastern Asia ($p < .001$). Similar to the findings obtained in Model 2, there were no differences between first- and second-generation Canadians in terms of their likelihood of dropping out of high school.

In regard to the level-2 variable, LICO, it is not surprising that respondents residing in neighbourhoods with lower proportions of residents living below the poverty line were less likely

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[9] The LICO variable is centred on its grand mean.

[10] When not otherwise stated, all of the interpretations for Model 3 were made controlling for the other predictors in the model, and holding constant the value of the random effect, μ_{0j}.

to drop out of high school than were respondents residing in neighbourhoods with higher proportions of residents living below the poverty line.[11]

The estimates for the other variables that were statistically significant also were in the expected direction. For example, males were more likely than females to drop out. The over-representation of males among drop-outs is not a new phenomenon (Anisef 1994). However, the share of school leavers who are male has increased in recent years. In 1990-1991, a sizable majority of drop-outs were men (58.3 per cent), but by 2004-2005, that proportion had increased to 63.7 per cent. This was not because more men were dropping out – in fact, there has been a decrease in the number of male drop-outs – but rather because the decrease in the rate of dropping out has been larger for young women (Bowlby 2005).In terms of the academic achievement variable, students in 'Academic' stream, the reference category, were the least likely to drop out of high school, whereas students classified as in the 'Essentials' program had the highest dropout levels. This finding is generally consistent with past research (Applied Research Branch 2000). In addition, King (1988) has observed that the level at which courses are taken by secondary school students was the best predictor of dropping out. The parameter estimate for the family structure variable revealed that students in two-parent families were less likely to drop out of high school than students living in other family structures. Likewise, students who started high school on time were less likely to drop out than students who began a year late. Finally, students who were classified as "at-risk," that is, those who completed fewer than seven credits in grade nine, were more likely to drop out than students who had completed seven or more credits in grade nine. Interestingly, when controlling for the explanatory variables, including the level-2 variable, LICO, the proportion of variance attributable to level-2 was reduced to approximately five per cent, but remained statistically significant ($p < .05$).

DISCUSSION AND CONCLUSION

High-school graduation is a prerequisite to advanced education and training in Canada. Consequently, the educational and occupational futures of those who drop out of high school are severely curtailed. Immigrant adolescents generally recognize the importance of further education and invest considerable effort in their high-school studies (Krahn and Taylor 2000). However, not all newcomer youth are successful in school; and those who drop out before graduation represent a significant cost to their parents. Emigration for them involved considerable sacrifice that was to be off-set by the promise of a Canadian education for their children. Canada, too, pays an economic and social penalty when immigrant children fail to integrate into the school system, perform well, and subsequently contribute to the broader society.

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[11] Since LICO is reverse coded, the negative coefficient indicates that students residing in the lowest incidence neighbourhoods are least likely to drop out of highschool.

Education, then, is a key factor in the integration process of immigrant children. The variation frequently observed in their school performance has been explained theoretically as either a generational sequence determined principally by age at arrival, or, alternatively, by socio-cultural differences that shape the interactions of individuals with the school. Where integration is viewed as a linear progression, first- and second-generation immigrant children`s school performance is expected to converge with that of the native-born. School performance differences are assumed to be a function of institutional exposure, as indicated either by age-at-arrival or time-in-school. When considered from the perspective of cultural differences, the school performance of immigrant children is expected to vary by source country or region. Our study explored both generational-difference and cultural-difference explanations for immigrant dropout rates. We also examined the extent to which barriers to school completion reflected the individual characteristics, personal situations, and current (economic) resources found among immigrant youth and their families.

The results of our analyses indicate little support for a generational explanation of immigrant dropout rates. Region of origin was, however, a significant predictor of dropout rate when first-generation youth were compared with the native born and the 'third plus' generation. For example, students from the Caribbean were found to be the most likely to drop out of school, while students from Eastern Asia were the least likely to leave school early. Neighbourhood effects also were significant. While it is not at all surprising to find that youth who live in neighborhoods where higher proportions of residents live in poverty also experience higher dropout rates, it is important to note that this effect remained statistically significant when region of origin and individual-level factors were present in the model. When we realize that increased numbers of immigrant youth are living below the poverty line, this finding has important policy implications that require attention by policy makers at all levels of government.

Individual Differences

Gender differences found in this study parallel those found in the literature on male 'underachievement.' The effect of family structure also was consistent with the general literature. Single-parent families ('alternate' structures) generally possess fewer material and social-emotional resources.

School-related Factors

Our study included several factors that describe the academic potential and performance of children. 'Age of entry' indicates whether the student entered secondary school at the modal age of native-born children. Late entry may result from additional time needed by newcomers to adjust to the TDSB classroom or because of poor academic performance of those immigrant children who arrived at an earlier age but who struggled with the elementary school program. Those who failed

to accumulate the required credits by grade nine were more inclined to drop out of high school. Both adjustment and academic achievement require language competence. It is, therefore, interesting that relatively few immigrant students take an ESL course. This is consistent with Gunderson's (2007) work which found many immigrants were reluctant to enroll their children in ESL because it would limit the time available to study the core-curriculum courses. School-related factors reflect district policies and the practices or opportunity structures available within the system. The most salient of these in the general literature can be related to the academic streaming of children. Those who enter the 'vocational' stream are more likely to drop out than those who elect to follow the 'university' pathway. Choice of a school pathway is determined by several factors not all of which are school-based. However, the effects of streaming are of particular importance to immigrant children who may take a lengthy period of time before adjusting to Canadian social and educational norms and practices.

Policy Implications

Recent OECD overviews of school achievement and immigrant adjustment suggest several school and community practices designed to facilitate the integration of immigrant children and youth. These include early intervention with pre-schoolers to develop language skills, programs designed to promote the social adjustment of youth, and opposition to the uncritical use of streaming policies. Many of these programs note differences in the school performance and needs of first- and second-generation students (OECD 2007).

While our analysis suggests that generational status bears little relationship to educational outcomes among immigrant youth in the TDSB, we did find that an immigrant youth's region of origin exerted a significant influence on school completion. While this is so, the impact of region was measurably reduced when different individual-level variables were introduced into the regression model, including gender, age of entry in school, living arrangements with family, placement in school stream, and risk of not completing courses, and regardless of whether the respondent resided in a low- or high-socioeconomic status neighbourhood. This finding is important in that it provides markers for devising strategies that may lower dropout rates among specific immigrant groups from diverse countries of origin. For instance, students from the Caribbean were found to be significantly more likely to enter school one year late, live in alternate family structures, be placed in non-academic streams, and be at-risk of not completing their course of study. Many of these risk factors are responsive to change by working effectively with schools and families. For example, special transition-year programs could be considered for students who enter a school late, in order to meet their needs and improve their adaptation to the social and academic life of Canadian schools. In this instance, the use of the 'buddy' or 'mentor' systems found to work well in the Host program funded by Citizenship and Immigration Canada, could be introduced and periodically evaluated. School counselors could be called upon to work alongside of buddies and mentors to address issues of adaptation and school risk factors noted in our analysis of those who dropped out. Another initiative that has shown very promising results is the 'Pathways to Education' program.

Starting in the TDSB Regent Park area around the time of this cohort study, the Pathways program since has been expanded to several other areas in Toronto, such as Lawrence Heights. This program looks at all students going from Grade 8 into Grade 9, and provides an array of supports for all students in the area while they are attending a Toronto secondary school. To date, this program has not been targeted at immigrant youth, but it is worth considering what aspects of it might work best with high-risk immigrant youth populations. By working closely with the families of those youth most likely to drop out of school, some success might be achieved in directing these at-risk youth into academic programs.

Future Research Directions

We were only able to employ a proxy for second generation in our measure of generational status. A more comprehensive measure of generational status is needed to confirm our findings. Recent research in the TDSB suggests the direction this might take. Six years after this cohort study started, the Toronto District School Board (TDSB) administered the 'Student Census,' asking of Grade 7-12 students a number of detailed questions on country of origin. This study also asked country of birth of parents/primary caregivers. The future analysis of these results may provide more detailed results on generational differences.

Where a given student lives appears to be a significant influence on her/his academic achievement and the geography of 'neighbourhood' often can be associated with measures of socio-economic status or with indicators of poverty, both of which have been found to be related to a child's school performance. An important addition to this research on place would be to investigate the degree to which the location of the school attended by students interacts with the neighborhood in which they reside. In Toronto, many students attend schools outside of the immediate area of where they live, so the two are by no means identical.

While our study has identified some of the important factors influencing dropout rates among specific groups of immigrant youth, detailed case studies are needed to further investigate these and other factors that may be involved in the decision to leave school early. The variability among immigrant groups underscores the importance of paying close attention to the factors that define these differences. While quantitative data analysis provides important clues, there is a need to 'look underneath' regression coefficients and develop a series of qualitative case studies that are informed by a common template and provide a dynamic understanding of the structures and processes within selected immigrant groups with regard to early school leaving.

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CERIS - The Ontario Metropolis Centre

CERIS - The Ontario Metropolis Centre is one of five Canadian Metropolis centres dedicated to ensuring that scientific expertise contributes to the improvement of migration and diversity policy.

CERIS - The Ontario Metropolis Centre is a collaboration of Ryerson University, York University, and the University of Toronto, as well as the Ontario Council of Agencies Serving Immigrants, the United Way of Greater Toronto, and the Community Social Planning Council of Toronto.

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The Metropolis Project

Launched in 1996, the Metropolis Project strives to improve policies for managing migration and diversity by focusing scholarly attention on critical issues. All project initiatives involve policymakers, researchers, and members of non-governmental organizations.

Metropolis Project goals are to:

- Enhance academic research capacity;

- Focus academic research on critical policy issues and policy options;

- Develop ways to facilitate the use of research in decision-making.

The Canadian and international components of the Metropolis Project encourage and facilitate communication between interested stakeholders at the annual national and international conferences and at topical workshops, seminars, and roundtables organized by project members.

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