POST-SECONDARY PATHWAY CHOICES OF IMMIGRANT AND NATIVE-BORN YOUTH IN TORONTO

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ABSTRACT

This paper examines the antecedents and correlates of the post-secondary (PSE) choices of immigrant and non-immigrant students from the Toronto District School Board (TDSB), where first and second generation students comprise 80% of the student population. University and community college confirmations are examined in relation to socio-economic, individual level, and cultural factors, employing logistic regression analysis. Findings reveal that secondary students choosing university over community college are disproportionately female, are more likely to have been born in certain regions of the world including Eastern Asia and South Asia, and possess few at-risk characteristics having taken academic courses in Grades 9-10, university courses in Grades 11-12 and done very well in their Grade 9 Mathematics course.

INTRODUCTION

The rapid expansion of post-secondary education (PSE) in Canada has resulted in over half of every new high school cohort moving on to PSE (Cheung, 2007). Participating in PSE means choosing between the academic pathway represented by the university, or the more vocationally oriented direction of the community college. While degree granting universities have more rigorous entrance requirements, are viewed as academically more intensive and, in the longer term, offer more prestigious and lucrative job opportunities to graduates, colleges have lower tuition fee levels or, in some provinces, no tuition at all and, because of their shorter duration, more favorable opportunity costs. Monetary returns to investing in a college education are improving as a consequence of growing skills shortages in the trades and technology sectors (Gaskell & Rubenson, 2004).

Students' choice of a university or college pathway is determined not only through rational calculation but also by their personal situations and preferences. The latter are shaped in important ways by students' school performance and their family's socioeconomic position and cultural background. In recent years, the latter has become an important determinant of PSE participation as a consequence of high rates of immigration from non-European countries and the transformation of the ethnic composition of the larger metropolitan areas, especially Toronto, Montreal and Vancouver.

PSE aspirations among immigrant youth are very high and while highly motivated, there is nevertheless great variability in the school performance and PSE attainment of the various ethnic groups that comprise the immigrant student population in Canada. While most students transition successfully to PSE, some elect to enter the labour market after high school

while others leave before graduation (Thiessen, 2009; Mc Andrew et al, 2009).

EXPLANATIONS FOR PSE PARTICIPATION

In a comprehensive review of the Canadian research literature, Cheung (2007) concluded that socioeconomic status, individual differences, and cultural factors are basic determinants of post-secondary participation.

SOCIO-ECONOMIC

Higher levels of parental income and education are positively associated with the educational aspirations and plans of young people. Students from higher income families are more likely to complete high school and attend university. Those from lower income families are more likely to enter employment or opt for the more vocationally oriented community college.

INDIVIDUAL

PSE participation is highly dependent on academic achievement in high school, especially in the areas of mathematics and language. Achievement, in turn, is influenced by the characteristics and dispositions of the individual and their families. Gender, for example, is often associated with school success as evidenced in the debate over boys' 'underachievement'. Progress through the K-12 system is also shaped by the individual's interactions with the institution. School performance (largely) results in assignment to different curricular tracks with obvious implications for post-high school pathways. Although tracking characterizes the individual, research has shown that students from disadvantaged backgrounds, including low-income students and racial minorities, are disproportionately channeled into the low ability tracks.

CULTURAL

Previous research on PSE participation by immigrant youth shows that relative to non-immigrants they enroll in much larger numbers. These broad comparisons tend to mask the variability in PSE participation and institutional choice among immigrant youth. PSE participation patterns differ markedly by country (region) of origin. Moreover, school achievement and PSE participation appear related to immigrant-specific factors such as 'age at arrival' and 'time-in-country'. Boyd (2008) argues that research on PSE participation needs to more finely differentiate the immigrant and non-immigrant comparison to reflect both region of origin and generational status dimensions[1].

PURPOSE

The primary objective of this paper is to examine the antecedents and correlates of the PSE choices of immigrant and non-immigrant students from the Toronto District School Board (TDSB). The TDSB is unique in the extent of its diversity. First and second generation immigrant students in the TDSB, for example, now comprise 80% of the student population. Moreover, this 'new' majority is extremely diverse: approximately 100 languages are spoken and have emigrated from over 200 countries. In assessing the basis for PSE participation and choice it is essential to reflect this diversity by defining immigrant status to include both generational status and region of origin.

The objectives of the study are to:

1. Describe the choice of a college or university education by TDSB students in terms of socio-economic, individual level differences, and cultural factors in order to highlight the relevant antecedents and correlates of PSE choice.
2. Examine the choice of PSE institution in relation to socio-economic, individual level and cultural factors through the use of binary logistic regression.

SAMPLE AND VARIABLES

The data used in the analysis were obtained from the TDSB administrative file for the Grade 9 cohort of 14,252 TDSB students, tracked from September 2000 to Fall 2006. The research sample comprised 8,443 individuals who confirmed acceptance of a post-secondary offer after graduation (6,409 university and 2,034 college). The information base for the analysis was constructed by combining data from the TDSB Student Information System for the Year 2000 Grade 9 cohort file with data obtained from the Ontario Universities Applications Centre (OUAC) and the Ontario College Application Centre (OCAS). Despite an expectation that students will complete high school in four years, only 55% of the Grade 9 cohort graduated after their fourth year of high school. Approximately a fifth returned to complete additional years of high school and 18% graduated five to seven years after commencing their high school careers. Most students had either graduated or dropped out by Fall 2007. Thus, students transition into different post-secondary pathways at different times, requiring us to collect post-secondary application and confirmation information from the 2004 through to the 2008 application cycle.

TABLE 1: Cultural, Socio-economic and Individual Level Factors and PSE Confirmation

VARIABLE	CONFIRMED UNIVERSITY (%)	CONFIRMED COLLEGE (%)	EXP (B)
A. CULTURAL FACTORS			
STUDENT'S REGION OF BIRTH			
Born in Canada: English speakers (Ref)	74.8	25.2	
Born in Canada: Non-English speakers	76.8	23.2	1.07
Caribbean	42.4	57.6	0.51*
Africa	62.1	37.9	1.35
Europe	80.2	19.8	1.04
Eastern Asia	90.5	9.5	2.23**
South Asia	74.6	25.4	1.39*
Western Asia	68.1	31.9	0.79
PROPORTION OF NON-ENGLISH SPEAKERS IN SCHOOLS			
Low-Medium Proportion (Ref)	75.1	24.9	
High Proportion	80.7	19.3	1.42*
B. SOCIO-ECONOMIC FACTORS			
LIVED IN SAME HOUSE DURING HIGH SCHOOL			
Moved Houses (Ref)	74.6	25.4	
Lives in the Same House	76.4	23.6	0.88
STUDENTS' NEIGHBOURHOOD INCOME			
Low-Medium Income Neighbourhoods (Ref)	73.8	26.2	
High Income	82.7	17.3	1.40**
SCHOOL LEVEL CHALLENGE (1)			
Low-Medium SES Schools (Ref)	70.9	29.1	
High SES Schools	83.9	16.1	1.48**
C. INDIVIDUAL FACTORS			
GENDER			
Male Students (Ref)	73.2	26.8	
Female Students	78.3	21.7	1.47**
STUDENTS TAKING GRADE 9-10 ACADEMIC PROGRAMS (2)			
Non-Academic (Ref)	14.4	85.6	
Academic Programs	82.1	17.9	9.36**
STUDENTS TAKING GRADE 11-12 UNIVERSITY PROGRAMS			
Not Taking University (Ref)	36.2	63.8	
Taking University	88.2	11.8	5.82**
SCHOOL MOBILITY OF STUDENTS DURING HIGH SCHOOL			
Moved Schools (Ref)	61.8	38.2	
Stayed in the Same School	77.7	22.3	1.35*
ACHIEVEMENT IN GRADE 9 MATHEMATICS			
Low-Medium Grade 9 Mathematics (Ref)	65	35	
High Achievement Grade 9 Mathematics	93.8	6.2	4.36**
GRADE 9 CREDIT ACCUMULATION			
Low Credit Accumulation (Ref)	32.2	67.8	
Medium-High Credit Accumulation	77.8	22.2	1.70*
FAMILY STRUCTURE			
Other Parental Situation (Ref)	69.5	30.5	
Lives with Both Parents	81.1	18.9	1.31**

* $p < .01$ ** $p < .001$

The variables used to predict university or college confirmations were categorized as cultural, socio-economic, or individual factors. Most may be given straightforward interpretations. However, some were defined by combining different variables while others are indicators that represent a more basic construct. In defining immigrant status, we distinguished first and second generation groups as those born in Canada who spoke English in the home from those born in Canada who did not speak English in the home. The first generation was further disaggregated into six regions of origin. Among the individual factors, students' program of study at the Grade 9 and 12 levels indicated the curricular 'track' to which they were assigned. For example, students in Grade 9 would be enrolled in either a non-academic or academic program of study. Student 'at-risk' status was indicated by the achievement in Grade 9 Mathematics and by the number of academic credits they had accumulated by Grade 9. Low achievement or minimal accumulation both indicated the student was vulnerable to academic failure in the high school program. The school challenge variable derives from the Learning Opportunity Index (LOI) developed in 1999; the index consists of average and median income of families with school-aged children; parental education; proportion of lone-parent families; housing type (apartment, single detached housing); recent immigrant; and student mobility.

ANALYSIS AND RESULTS

Table 1 provides information for interpreting the relationship between antecedents and PSE choice for the 8,443 PSE confirmations and is classified in terms of cultural, socio-economic, and individual level factors. The first two columns are descriptive and show the proportions confirming university and community college, respectively. The third column is derived from our logistic regression model and displays the odds ratios associated with each variable used to predict PSE choice[2].

CULTURAL EFFECTS

There are limited differences in post-secondary confirmations between students born in Canada speaking English, and those born in Canada but speaking another language: 75% of Canadian-born speaking English confirmed university, compared to 77% of Canadian-born speaking another language[3]. There are key differences between some regions of birth for students born outside Canada. Students born in Western Asia, Africa, and Europe show no significant difference in university confirmation. Students born in East Asia and South Asia are significantly more likely to confirm university than the other groups, and students born in the Caribbean are more likely to confirm college than other groups – a finding that replicates an earlier study of TDSB school-leaving (Anisef et al, 2010).

University confirmations ranged from a low of 42% for students from the Caribbean to 91% for those born in Eastern Asia. College confirmations also varied widely, from a low of 10% for students from Eastern Asia to a high of 58% for students from the Caribbean.

Students attending secondary schools where most of the students do not speak English are significantly more likely to confirm university than other students. It is unclear why this is so. In the TDSB, many schools have students who do not speak English at home – but no specific non-English language dominates any school. The schools with high proportions of non-English speakers are rarely located in affluent areas or attended by affluent students.

SOCIO-ECONOMIC EFFECTS

After taking into account all other variables in the model, those living in higher income neighbourhoods were 1.40 times more likely to confirm university than those living in poorer neighborhoods (83% compared to 74% of those in other neighbourhoods). Similarly, students who attended high SES schools were also more likely than those in other schools to confirm university (84% compared to 71%) and, after accounting for all other variables, were 1.48 times more likely to confirm university.

INDIVIDUAL EFFECTS

Females were 1.47 times more likely than males to confirm university, a finding that is consistent with recent research literature. We also found that family structure exerts a significant influence on PSE confirmations in that students who lived with both parents were 1.31 times more likely to confirm university. There are significantly fewer resources available to single parents than dual parent families, thus impacting the choice of PSE.

The strongest influences on university over college choice are achievement and tracking. Students taking Academic (university-directed) courses in Grades 9-10 were 9.36 times more likely to confirm university (82% compared to 14% of those who took Non-Academic courses). Similar results were found after examining the influence of program in Grades 11-12. Likewise, students receiving high marks in Grade 9 Mathematics were 4.36 times more likely to confirm university. Having 'average' Grade 9 credit accumulation of 7 or more credits exerted a powerful influence on PSE confirmations; these students were 1.70 times more likely to confirm university over community college.

There was no significant difference in confirmation patterns between those who lived in the same house,

and those who moved houses; but those who stayed in the same school were more likely to confirm university. Although at first counterintuitive, this makes sense in the context of Toronto. Students who move schools at the secondary level often do so because they experience academic and/or social difficulties. Students who move residences do so in response to their parents needs and at times, involuntarily.

CONCLUSION

The goal of this study was to examine the antecedents and correlates of PSE choice among youth in the Toronto District School Board, paying particular attention to cultural differences. The findings confirm that the student composition of Ontario universities and community colleges are different, with universities drawing upon students that reside in higher income neighborhoods and benefit from the social and cultural capital advantages that result from these residential origins. Secondary school students choosing university over community college are disproportionately female and, from a cultural perspective, are more likely to have been born in certain regions of the world including Eastern Asia and South Asia. Students choosing university over college were more likely to select university programs while in high school and be exposed to high proportions of students speaking languages other than English. Those confirming university possess few at-risk characteristics having taken academic courses in Grades 9 and 10, university courses in Grades 11 and 12, and having done very well in their Grade 9 Mathematics course. The profile that emerges for those confirming university over college is one of early entry to an academic pathways, significantly higher-level academic performance, and stronger multicultural exposure within secondary schools.

In our analysis of PSE choice we were unable to distinguish between the second and third generation. Such a finding may reflect basic similarities in pathway choice. However, it could equally well be attributed to our use of home language as a proxy for the second generation designation. The availability of data that contained specific information on both parents' and children's birthplace would allow development of a more definitive measure of generational status. Significant PSE pathway differences were found among ethnic groups of the first generation. There were, however, important variations within these groups. Many were able to surmount barriers imposed by disadvantaged family or socio-economic conditions, do well in school, and proceed to PSE. Future research might usefully examine the characteristics and behavior of these youths and their families. Identifying such 'resilient' individuals and tracking their progress would give greater insight into the dynamics of stratification in PSE pathway choice.

Both generational status and resilience issues (among others) can be more effectively addressed with data that details student, home, and school information. For example, the TDSB has gathered data on 17-year old students who also participated in the Student Census Survey of 2006-07. The Census contains extensive information on the characteristics of students and their home and school situations and, additionally, has been linked to three years of respondents' post-secondary applicant information – the 2007, 2008, and 2009 applications cycles. When available, these merged files will allow a more comprehensive analysis of the basis for students' PSE pathway decisions.

The findings reported in this study provide valuable information to the secondary school and post-secondary communities. Educators at the secondary school level learn that cultural, neighborhood, school and individual factors, some of which may be amenable to change, significantly influence the educational and future career pathways adopted by their students. Educators at the post-secondary level can also benefit from the findings of this study by exploring the sorts of institutional strategies and teaching supports needed to assist entering students better prepare for and engage in academic and social pursuits within their institutions. A significant number of TDSB secondary school graduates who apply to community college programs – irrespective of immigrant status – are academically ill-prepared and may require remedial help (Sweet & Anisef, 2005). At the university level, a high proportion of graduates who transition to university are immigrants or children of immigrants from Eastern Asia and South Asia. Universities may be advised to put into place student services that not only meet language-support needs but also respond to cultural and social differences (Grabke & Anisef, 2008). The focus on secondary to post-secondary transitions in our analysis of the TDSB data reinforces the need for all levels of the education system to recognize the changed social and demographic character of the school population and to be responsive to these changes.

LE CHEMINEMENT POSTSECONDAIRE DES JEUNES IMMIGRANTS ET DES JEUNES NÉS À TORONTO

La progression rapide des études postsecondaires (EPS) au Canada s'est traduite par le passage de plus de la moitié de chaque nouvelle cohorte du secondaire aux EPS (Cheung, 2007). Les élèves optent pour le collège ou l'université en fonction de calculs rationnels et de situations et de préférences personnelles. Ces dernières dépendent des résultats scolaires des élèves ainsi que du statut socioéconomique (SES) et du bagage culturel de leur famille. Les jeunes immigrants aspirent beaucoup aux EPS. Toutefois, les résultats scolaires et l'accession aux EPS des élèves des groupes ethniques composant la population des élèves immigrants au Canada varient énormément. Si la plupart accèdent aux EPS, certains choisissent d'entrer sur le marché du travail après leur secondaire et d'autres quittent l'école avant d'obtenir leur diplôme (Thiessen, 2009; Mc Andrew et coll., 2009).

RAISONS DE L'ACCESSION AUX EPS

Dans une revue de littérature de la recherche au Canada, Cheung (2007) conclut que le SES, les différences individuelles et les facteurs culturels sont déterminants dans la poursuite des études postsecondaires.

SES : Le niveau de revenu et d'éducation élevés des parents est étroitement lié aux aspirations académiques des jeunes. Les jeunes des familles aisées sont plus susceptibles de terminer leur secondaire et d'aller à l'université que les jeunes des familles pauvres qui risquent davantage de trouver du travail ou de choisir un programme professionnel dans un collège.

Différences individuelles : La poursuite des EPS dépend des résultats au secondaire, particulièrement en mathématiques et en langues. La réussite scolaire, quant à elle, est influencée par les caractéristiques et les dispositions de l'élève et de sa famille.

Facteurs culturels : Des études ont montré que les jeunes immigrants s'inscrivent beaucoup plus que les non-immigrants aux programmes d'EPS. Ces comparaisons cachent cependant les variations dans la poursuite des EPS et les choix d'institutions des jeunes immigrants.

OBJECTIF

Dans cet article, nous examinons les antécédents et correspondances des choix d'EPS des élèves immigrants et non-immigrants du *Toronto District School Board* (TDSB). Les immigrants de première et deuxième génération y composent 80 % de la population : on y parle environ 100 langues et les élèves viennent de plus de 200 pays.

DONNÉES, VARIABLES ET MÉTHODES

Nous avons suivi 14 252 élèves de 9e année du TDSB de 2000 à 2006, pour tracer leur profil et comparer les élèves ayant accédé à l'université ou au collège. Les élèves accédant à différents programmes postsecondaires à différents moments, nous avons dû colliger les données sur les demandes et les confirmations d'admission de 2004 à 2008.

Quatre cheminements ressortent clairement :

- 45 % confirment être acceptés à l'université[1] ;
- 14 % confirment être acceptés au collège ;
- 18 % ont fait une demande d'admission, mais n'ont pas reçu de réponse, ou ont terminé leur secondaire, mais n'ont fait aucune demande d'admission ; et
- 23 % ont décroché et n'ont pas fait de demande à un programme d'EPS.

L'analyse porte sur les 8 443 élèves parmi les 14 252 ayant confirmé poursuivre des EPS (6 409 à l'université, 2 034 au collège).

RÉSULTATS

Nous avons étudié les variables descriptives et fait une analyse de régression sur le fait de choisir l'université plutôt que le collège. Les tendances sont constantes.

Facteurs culturels : Il y a peu de différences de confirmation d'admission entre les locuteurs de l'anglais nés au Canada (indicateur de troisième génération) et les jeunes nés au Canada, mais parlant une autre langue à la maison (indicateur de deuxième génération). Il y a toutefois des différences majeures selon la région de naissance : les élèves d'Asie de l'Est et du Sud sont plus susceptibles d'être acceptés à l'université, les jeunes des Caraïbes d'être acceptés au collège. Les jeunes fréquentant une école où la plupart des élèves ne parlent pas l'anglais à la maison sont également plus susceptibles d'aller à l'université.

Facteurs socioéconomiques : Les élèves fréquentant des écoles et vivant en milieu aisé ont plus de chances d'aller à l'université qu'au collège.

Facteurs individuels : Les filles et les jeunes vivant avec leurs deux parents sont plus susceptibles d'aller à l'université. Il n'y a pas de différence significative entre ceux qui ont et ceux qui n'ont pas déménagé, bien que les jeunes qui sont restés à la même école ont plus de chances

d'accéder à l'université. Ceci s'explique dans le contexte torontois : si un élève change souvent d'école, c'est parce qu'il a des difficultés scolaires ou sociales. Quand un élève déménage, c'est en réponse aux besoins de ses parents.

Les influences les plus grandes sur les choix d'EPS sont les résultats scolaires et la répartition des élèves par niveaux *(streaming).* Les élèves qui suivent des cours menant à l'université en 9e et 10e années ont de meilleures chances d'aller à l'université. De plus, le fait d'avoir de bonnes notes en mathématiques et des crédits élevés en 9e année est fortement associé au fait de choisir l'université plutôt que le collège.

CONCLUSION

Les résultats confirment que les universités et les collèges ontariens ont des populations différentes, les universités attirant les élèves de milieux aisés et bénéficiant d'avantages socioculturels résultant de leurs origines résidentielles. Les élèves du secondaire choisissant l'université sont surtout des filles et ont de fortes chances de venir d'Asie de l'Est ou du Sud. Ils ont tendance à avoir fréquenté des écoles secondaires qui favorisent une culture académique, et des milieux scolaires où l'on parle plusieurs langues. Les élèves accédant à l'université présentent peu de risques d'échec, ayant suivi les cours menant à l'université et ayant bien réussi en mathématiques de 9e année. Voici le profil des élèves accédant à l'université : ils ont un cheminement académique stable, des résultats au-dessus de la moyenne et ont fréquenté une école secondaire en milieu multiculturel.

Dans le futur, des études pourraient se pencher sur le phénomène de la « résilience » chez les jeunes de milieu défavorisé et sur les membres des groupes ethniques qui n'accèdent pas aux EPS. Plusieurs surmontent les barrières socioéconomiques, réussissent bien à l'école et poursuivent des EPS. En identifiant et en suivant ces jeunes, nous pourrions mieux comprendre la dynamique de stratification dans le choix des programmes d'EPS.

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FOOTNOTES

[1] A proxy variable for generational status was employed in the binary logistic regression analysis with first generation immigrant status defined as being foreign-born, second generation as being born in Canada but not speaking English in the home, and third generation as being born in Canada and speaking English in the home.

[2] Odds ratios represent the odds of confirming university for all categories of a predictor variable versus the comparison group, while holding all other predictor variables constant.

[3] The use of proxy variables for measuring generational status limits interpretation. For example, many second generation immigrant students have English as their first language, especially among Caribbean students who have been shown in many studies to experience significant school problems.

NOTES

[1] Les élèves peuvent recevoir plusieurs offres d'admission, mais une « confirmation » signifie que les élèves ont accepté l'offre de l'université.