

Educational Outcomes of English Language Learners at University

Hetty Roessingh
University of Calgary

Scott Roy Douglas
University of British Columbia, Okanagan Campus

ABSTRACT

This study compares the undergraduate academic achievement of domestic English language learners (ELLs) of different age on arrival (AOA) cohorts to native English speakers (NS), all of whom graduated from local high schools. The broad research question that frames the study is how the literacy levels of ELLs of different AOA cohorts influence retention, progress, and grade point average (GPA) as indicators of academic success. Findings suggest that ELLs are resilient and determined as they make progress toward degree status. However, their progress and achievement, regardless of AOA, is fraught with challenges. This outcome represents a loss of educational capital for Canada in an economy that needs the participation of these students, who are among our brightest and best. Suggestions are made for policy reform, pedagogy, and service provision for ELLs at university.

RÉSUMÉ

Cette étude compare la réussite scolaire universitaire des apprenants d'anglais langue étrangère arrivés au Canada à différents âges, à celle de locuteurs natifs qui ont obtenu leurs diplômes d'études secondaires d'une école du pays. L'objectif de cette étude est de mieux comprendre les niveaux de compétences académiques en lecture et en écriture des jeunes apprenants d'anglais langue étrangère arrivés au Canada à différents âges, et de saisir comment ces niveaux influencent la rétention, le progrès et la moyenne pondérée cumulative comme indicateurs de réussite scolaire. Les résultats suggèrent que les apprenants d'anglais langue étrangère font preuve de

résilience et sont déterminés à réussir au fur et à mesure qu'ils progressent vers l'obtention de leur diplôme. Toutefois, indépendamment de leur âge à leur arrivée au Canada, ces apprenants font face à des difficultés qui se reflètent dans leurs résultats académiques. Cette situation représente une perte de capital éducationnel pour l'économie canadienne qui a besoin de leur participation : Ces étudiants comptent parmi les meilleurs et les plus brillants du système éducatif. Les auteurs formulent des suggestions de réforme politique, de pédagogie adaptée et de prestations de services qui pourront être avantageuses aux étudiants d'anglais langue étrangère de niveau universitaire.

The number of English language learners (ELLs) in major school jurisdictions has grown at exponential rates over the past decade (Calgary Board of Education, 2008; Community Social Planning Council of Toronto, 2005; Ward, 2002). ELLs are either first-generation immigrants or Canadian-born children of immigrants; the literature generally describes them as Generation 1.5 (Harklau, 1993). Increasingly, these students represent a significant proportion of first-year admissions to university. Their learner profile has also been under-researched in the context of their participation in advanced or higher education (Fox, 2005). Macro-level data in the form of graduation rates from high school and university for immigrants and the children of immigrants lack the precision and detail of data analysis to offer a meaningful rendering or a prediction of their educational trajectory at university (Abada, Hou, & Ram, 2008; Alberta Education, 2009; British Columbia Ministry of Education, 2009).

Education and training are the most important investments society can make to ensure a high quality of life (Becker, 1993). As well, the global economy is increasingly characterized by technology, communication, and innovation, with high educational and literacy levels (*educational capital*) required to compete in this environment (Conference Board of Canada, 2008). Moreover, the dual trends of demographic shift and global migration challenge First World economies not only to invest in developing educational capital, but also to include the language learning needs of newly arriving immigrants so they, too, can make their full contribution to the economic and social well-being of their newly adopted homeland.

In this study, we report on the educational outcomes of 128 ELLs, graduates from local high schools, who were admitted to the University of Calgary (U of C) between 1996 and 2002. Our research compares the undergraduate academic achievement of ELLs of different age on arrival (AOA) cohorts who graduated from local Calgary high schools with the undergraduate academic achievement of their native English-speaking (NS) counterparts.

The nature of our work is exploratory: starting with university graduation rates for these students, we provide retrospective insights into their academic achievement by identifying six measures of educational achievement. We compare these measures to those of a random sample of 120 NS, noting differences on all measures. These differences support the claim of lost educational capital among ELLs, a loss that we attribute to underdeveloped academic language proficiency.

This article is organized as follows. We begin with background information to offer context for the reader and to develop a rationale for the study. We provide a brief review

of the literature on second language acquisition as it relates to developing the level of proficiency required for advanced academic studies. We then describe our study design and methodology, and report and discuss our findings. The findings suggest directions for policy and program reform in a variety of areas. We advocate for stronger English for academic purposes programming for ELLs in their K–12 schooling, in their transition to university, and in the academic journey of their university studies.

BACKGROUND

Canada's most recent immigration wave, beginning around 1990, may be described as a "brain gain." According to Thompson (2008), visible minorities who are newly arrived in Canada are far more likely to have a university education than the general population: 51% of people who immigrated to Canada between 2001 and 2006 had a university degree compared to 20% among the general Canadian population. Immigrants, in turn, are more likely to encourage, even pressure, their children toward higher education. The vast majority of immigrants, however, do not speak English and do not integrate into the economy commensurate with their potential to contribute (Zong, 2004). This outcome represents a loss of educational capital for Canada and for the next generation if the children of these immigrants fail to realize their full educational potential.

There is a strong desire among these students for post-secondary studies at university leading to careers in professions associated with engineering, business, and sciences (Fox, 2005). As newcomers, they are determined and resilient, and they, along with their parents, expect high achievement in the educational, economic, and political institutions that provide access to the opportunity structures of Canadian society. In short, immigrants believe that a good education leads to a good job and, in turn, a quality of life that makes Canada a sought-after country of destination, if not for themselves, then for their children. Immigrant parents have high academic expectations for their children, including participation in post-secondary school studies, especially at university (Grayson, 2008; Krahn & Taylor, 2005). Academic success for these children, increasingly the Canadian-born children of immigrants who do not speak English at home, depends on their acquisition of academic language proficiency.

The educational success of immigrant children and the children of immigrants, therefore, is critical to Canada's future economic success. Canada's position in the global economy depends on high literacy rates and the ability to leverage creative potential. Canada aims to remain one of the world's most vibrant and wealthy societies in this new millennium. The Conference Board of Canada (2008) provided indicators of Canada's economic performance and educational achievement that point to the challenges ahead: Canada slipped from third to eleventh place in economic competitiveness over the last three decades. On educational and literacy measures, there are further reasons for concern: four in 10 working-age Canadians have literacy levels that are inadequate for the demands of the workplace. Canada also underperforms at the highest levels of educational attainment, producing relatively few PhDs, particularly in mathematics, sciences, computer sciences, and engineering. These disciplines can contribute to Canada's innovation capacity and ability to commercialize its educational capital. It is only high commodity prices in the oil and gas sector that are providing relative protection for Canada from the harsh effects of

the current global economic recession. The Conference Board of Canada (2008) recommended significant investment in educational spending and workplace training programs to respond to the challenges of the global marketplace. Further, to achieve this goal, enrolment in graduate school programs was recommended to increase by as much as 50% by 2010 (McQueen, 2002).

First-year admissions show a significant increase in ELLs of all AOA, including the Canadian-born children of immigrants, for those universities located in cities experiencing rapid increase in ELLs in the K–12 system. At the U of C, where our work takes place, we estimate that some 44% of first-year student admissions are ELLs (Roessingh & Douglas, 2011). This participation rate is remarkable, given that ELLs represent 25% of the general population of the Calgary Board of Education (2008), the U of C's single largest source of new student intake. ELLs represent 25% to over 50% of the population of many other large urban school boards in Canada, notably Toronto (Community Social Planning Council of Toronto, 2005) and Greater Vancouver (Ward, 2002).

Abada, Hou, and Ram (2008) reported extraordinarily high graduation rates for ELLs. Their data were supported by the Youth in Transitions Survey, or YITS (Human Resources Development Canada, 2000), which began in 2000 and is now in its fifth cycle. Ministries of Education, notably those in Alberta and British Columbia, likewise publish high school graduation data for ELLs reflecting rates of 76% and 82%, respectively, surpassing the outcomes for the general high school population. Roessingh (2004) recorded a high school graduation rate of 78% among ELLs at a local high school, many of whom are also represented in the data in this study.

Clearly, ELLs are overrepresented in students who are university bound. Popular media coverage of the YITS report also emphasized this point: “Immigrant kids outpace native-born at university: StatsCan study shows children of Chinese immigrants most likely to graduate” (Proudfoot, 2008); “If you're a new Canadian, 'you go to university'” (Church, 2009).

Graduating from high school is one thing, but successful engagement with the demands of university is another. Roessingh and Douglas (2011) found that the overwhelming majority of ELLs were unprepared for the demands of first-year university. ELLs were overrepresented among those who failed the Grade 12 English language arts diploma examination (in Alberta, English 30-1) or who achieved 55–60% as their total score (50% diploma examination and 50% teacher-awarded mark). This outcome reflects the students' linguistic vulnerability which places them at risk in their post-secondary studies.

At U of C, ELLs overwhelmingly achieve either marginal or failing marks on the Effective Writing Test, a requirement at the time of this study for all students who achieved less than 75% on the diploma examination. A survey of U of C faculty members revealed deep concern about students' writing skills (Brent, Andre, Oakleaf, Watt & Levey, 2002, p.1). Brent et al. add: “More troubling, a large proportion of students who fail the test have English as a second language. It is hard to identify who these students are as not all of them are visa students: many are Canadian residents or Canadian citizens and therefore are hard to track” (2002, p. 13). A small internal study of the Effective Writing Program (Andre, 2002), however, suggested that as many as 90% of students who were struggling to fulfill the EW requirement by the end of the spring term following their entry were likely to be ELLs. In other words, most of the students who did not fulfill the Effective

Writing Requirement had English as a second language. Unfortunately, many ELLs do not perceive themselves as needing instructed support, or naively believe they can somehow evade this requirement.

Developing advanced levels of academic English language proficiency lies at the heart of academic success for ELLs.

REVIEW OF THE LITERATURE: DEVELOPING ACADEMIC LANGUAGE PROFICIENCY

The term *English language proficiency* may be conceived as describing a broad array of language abilities including basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP). The constructs of BICS and CALP as originally articulated by Cummins (1981) provide a framework for describing the unfolding language learning demands of daily social interaction and the academic language and literacy required for the demands of content and curriculum associated with higher levels of education. BICS may be characterized as here and now; that is, everyday language for basic communication purposes that may be accomplished with a vocabulary of 3,000 to 5,000 high-frequency words. CALP, on the other hand, is characterized by abstract uses of language (for example, metaphor, symbolism, and specialized and technical uses) that require language itself for interpretation and comprehension.

It is generally accepted that ELLs can develop BICS proficiency within two years of their arrival and participation in an English-speaking school setting (Garcia, 2000). Developing CALP, however, is a long and gradual process. Consider that an academically competent NS high school graduate who aspires to university attendance is estimated to have a vocabulary of 18,000 word families (that is, a root word together with its inflected forms, or some 85,000 words) and reads at well above grade level.

Age on arrival (and, by proxy, the level of first language achievement, or L1, and educational attainment) and the length of residence have long been recognized as key variables in determining language achievement and, by extension, educational achievement in the second language, or L2 (Hakuta, Butler, & Witt, 2000; Klesmer, 1993; Thomas & Collier, 2002; Twyford, 1987). Students who arrive at over the age of 14 have many advantages: they have already crossed a key literacy threshold in their first language associated with the shift from learning to read to reading to learn, a shift that is generally identified as Grade 4 equivalent (Lee & Shallert, 1997; Roberts, 1994). They have metacognitive awareness and can independently deploy learning strategies, they have well-developed study skills, and they have encoded curriculum content, concepts, and skills in key academic disciplines in the first language (Li, 2004). Transferring this information, or mapping new language onto pre-existing cognitive frameworks, is far less onerous than having to “build from scratch” in a language the child is only beginning to learn. Such is the challenge facing the younger arrival, or the Canadian-born children of immigrant parents. Various studies have suggested a two-year language gap by Grade 6 (August, Carlo & Calderón, 2005; Klesmer, 1993; Roessingh & Elgie, 2009), and other studies have indicated that this gap only widens over time. For example, Cameron (2002) recorded significant gaps in lexical knowledge at surprisingly low levels (that is, at approximately Grade 4) among ELLs with a mean age on arrival of four years and six months, even 10 years after their immersion in English-medium instruction.

Roessingh (2008), in linking vocabulary and reading comprehension scores to achievement outcomes on the Grade 12 English 30-1 diploma examination, noted that both older arrivals and younger arrivals could achieve marks of 55–59% with approximately a Grade 9 reading comprehension score. Older arrivals, however, could achieve this outcome with a lower measured vocabulary than younger arrivals. The older arrivals were presumably mediating the vocabulary gap by using L1 translation strategies where the corresponding lexical information was already encoded. Roessingh also cautioned that older arrivals may nevertheless be at academic risk in tertiary settings when they outgrow their ability to use L1 proficiency to make meaning in L2.

For all ELLs who graduate from high school in Canada, therefore, the journey through post-secondary schooling are likely to present challenges largely attributable to their underdeveloped CALP proficiency. For every AOA cohort group, there is a tipping point, a point at which English must overtake the first language for the purposes of academic study. All AOA cohort groups appear to encounter this tipping point by first- or second-year university. Younger arrivals must travel the educational trajectory largely in English: they experience code-switching and “tipping” into English very early after their first exposure to English, and they thereafter are forever chasing a moving target (Wong Fillmore, 1991). They may never fully close the linguistic gap. Older arrivals run into academic difficulties as well, at some point beyond Grade 12 when the distance between the students’ level of CALP and the requirements of advanced academic study at university becomes too great to mediate through the first language (Jiang & Kuehn, 2001). For this reason, instructors at college and university may perceive all ELLs at educational risk regardless of AOA and describe these students as Generation 1.5.

The demands of university studies place a high premium on tasks that require CALP (Dunworth, 2008): advanced reading, independent library and internet research, group work and presentations, and writing following discipline-specific genre conventions and expectations (reports, lab assignments, various types of essays, notes from lecture information). It is not only reading and writing that matter. ELLs’ overall language and literacy levels are challenged by problem-solving tasks that require the active and collaborative construction of meaning and understanding. From a literacy perspective, university students may be expected to read at a level well above Grade 12, given the participation of the upper quintile of high school students who may be expected to meet this challenge. Advanced reading materials are also characterized by a linguistic burden because of the sheer density of low-frequency words in a given text. Laufer (1992) set the threshold of vocabulary comprehension at 98% to make meaning of academic information. Roessingh and Douglas (2011) demonstrated the challenge confronting ELLs when they face the demands of university textbooks. It is this factor that underlies their academic struggles as they move forward. Perhaps the most striking finding in Roessingh and Douglas’s study relates to the performance gap on the English 30-1 diploma examination for ELLs (averaging 56%) and NS students (averaging 71%). This shortfall cannot be mitigated, for example, by a perceived advantage in mathematics that many ELLs believe will carry them through their post-secondary studies.

STUDY DESIGN

When our research project began in 2004, the U of C had no mechanism for identifying ELLs among newly admitted first-year students. Our database was generated from the names of students attending the U of C who were known to have received ELL support within the local public school board and who had participated in small-scale studies conducted by the research team (Roessingh, 2004; Roessingh & Kover, 2003). This sample of convenience is recognized as a limitation of the work at hand. The students' names were submitted to the office of University of Calgary Institutional Analysis, where personnel with the required security clearance for access into the registrar's database assembled the information we requested.

The registrar's database generated files for 74 ELL students who arrived in Canada as adolescents (older arrivals, aged 14 and above) and for 54 ELL students who arrived as children (younger arrivals under 14). A further sample of 120 NS students was randomly selected from the database as a group for comparison. The students entered U of C between 1996 and 2002. Before the data were released to us for research purposes, the students' names were masked for reasons related to Freedom of Information and Privacy (FOIP) legislation. Table 1 summarizes the number of students by category.

Table 1
Number of Students by Student Category

Student Category	Number of Students
ELL older arrivals in Canada (aged 14+)	74
ELL younger arrivals in Canada	54
NS comparison group	120
<i>N</i> =	248

We began to explore the data to reflect on successful degree completion and then followed up with a more refined analysis. From the initial sample, we selected 45 randomly sampled graduates who obtained a degree from the U of C. These university graduates were graduates from Alberta high schools, and they were all students who used Grade 12 mathematics (Pure Math PMAT 30) for entry into the U of C. Table 2 summarizes the number of students by category and identifies their degree subject.

METHODS

IBM SPSS Statistics 19 was used to provide a simple analysis of variation (ANOVA), and the Tukey HSD Post Hoc Test was applied when comparing the different groups of students in order to find statistically significant differences. For other analyses, given the exploratory nature of this study, the methods used were graphical summaries of the data at hand.

FINDINGS

In this section, we report our findings for the two AOA cohort groups of ELL students (older arrivals and younger arrivals) and the comparison group of NS students. Six

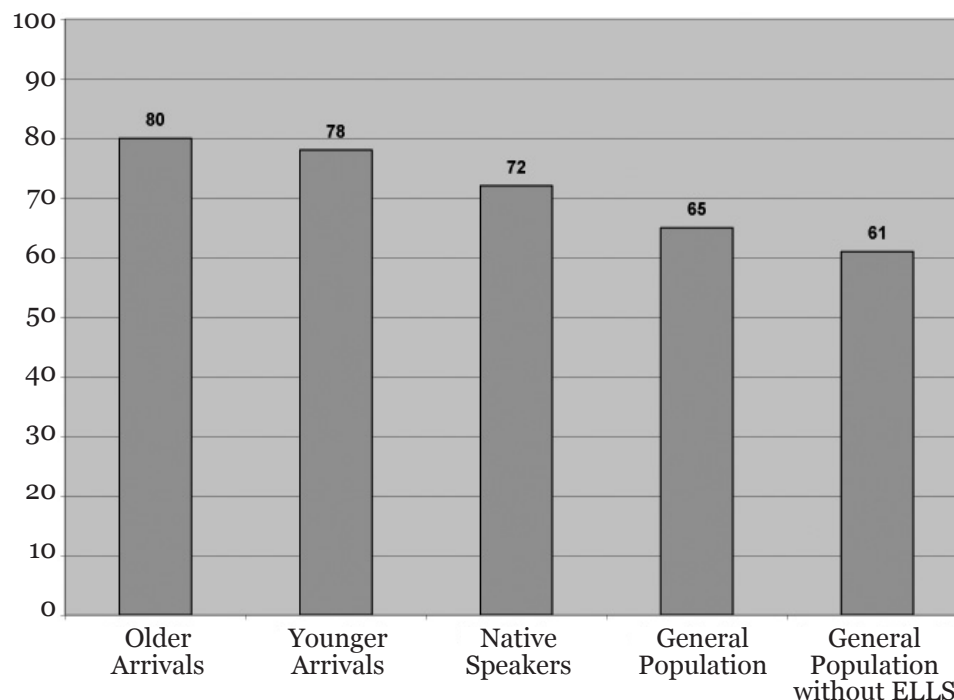
Table 2
Further Analysis of Successful Graduates From the University of Calgary Controlled for Alberta High Schools and Math 30

Student Category	Number of Students	Degrees
ELL older arrivals in Canada	15	1 Commerce, 1 Psychology, 1 International Relations, 1 Biology, 1 Chemistry, 2 Economics, 2 Computer Science, 6 Engineering
ELL younger arrivals in Canada	15	1 Nursing, 1 Commerce, 1 International Relations, 1 Chemistry, 1 Biology, 1 Actuarial Science, 2 Engineering, 7 Economics
NS comparison group	15	1 Psychology, 1 Linguistics, 1 Political Science, 1 Canadian Studies, 1 Nursing, 1 Sociology, 2 Zoology, 2 Computer Science, 5 Engineering

measures of educational achievement are presented, including graduation rates, average graduation GPA, GPA greater than 3.0 (on a 4.0 scale), numbers of credits attempted but not earned, time to completion in semesters of study before graduation, and incidence of academic probation.

Graduation rates for students entering university with Math 30 are illustrated in Figure 1. In addition to outcomes for our AOA cohorts of ELLs and the NS comparison group, we present the graduation rates for the U of C general population and for the general population with ELLs disaggregated.

Figure 1
A Comparison of Graduation Rates (%) at the University of Calgary



We observed that ELLs (both older and younger arrival cohort groups) graduate in greater numbers (80% and 78%, respectively) than their NS counterparts (72%). All three groups graduated in higher numbers than the general university population, who had a graduation rate of 65% (University of Calgary Office of Institutional Analysis, 2004). When ELLs were disaggregated from the general population, the graduation rate declined further to 61%. ELLs, though constituting 40–45% of the general student population, were contributing to overall graduation rates at the U of C, variability that the registrar's database does not take into account.

We then turned to a more refined analysis by first considering graduation GPA for ELLs in comparison to that of the NS group. A simple analysis of variance (ANOVA) was carried out to evaluate the relationship between AOA and GPA. This analysis showed that the effect of AOA was significant, $F(2, 42) = 4.14, p = .02$. Post hoc analysis using Tukey HSD was used due to the equal size of the three groups. Post hoc analysis indicated GPA was significantly lower for older arrivals compared to native speakers ($p = .02$). However, there was no significant difference between younger and older arrivals ($p = .34$) or younger arrivals and native speakers ($p = .32$). Tables 3, 4, and 5 illustrate the mean GPA comparisons for the three groups.

Table 3
A Comparison of Grade Point Average on Graduation

	<i>M</i>	<i>SD</i>
Younger arrivals	2.67	.36
Older arrivals	2.47	.25
Native speakers	2.88	.51

Table 4
Summary of Analysis of Variance for the Relationship Between AOA and GPA

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	Significance
Between groups	1.24	2	.62	4.14	.02
Within groups	6.27	42	.15		
Total	7.50	44			

Table 5
Results From Tukey HSD Post Hoc Comparison of AOA and GPA

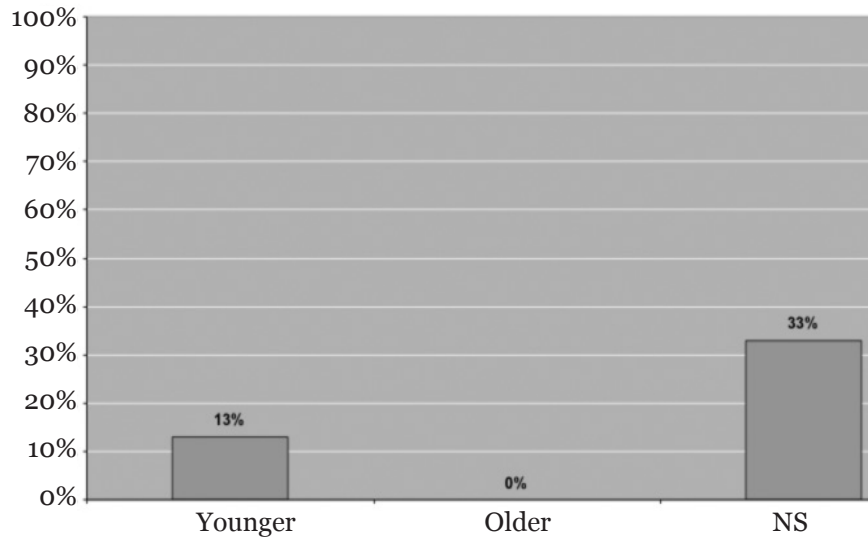
	Mean Difference	<i>SE</i>
Younger vs older	.20	.14
Younger vs native speakers	-.21	.14
Older vs native speakers	-.41*	.14

* The mean difference is significant at .05.

A further look at graduation GPA showed that far fewer (or none at all in the case of older arrivals) ELLs graduated with GPAs higher than 3.0 (on a 4.0 scale) (see Figure 2). Because a GPA of at least 3.0 is required for admission to graduate studies, the vast majority of ELLs will not be admissible to graduate school despite their strengths in mathematics. By contrast, 33% of NS met the required threshold of 3.0 for future graduate studies should they so choose.

Figure 2

Percentage of Graduates With a GPA Greater Than 3.0



Next we considered how ELLs compared to their NS counterparts in terms of credits attempted and credits earned toward graduation. A simple analysis of variance (ANOVA) was carried out to evaluate the relationship between AOA and Credits Attempted But Not Earned (CANE). This analysis showed that the effect of AOA was significant, $F(2, 42) = 5.41, p = .01$. Post hoc analysis using Tukey HSD was used due to the equal size of the three groups. Post hoc analysis indicated CANE was significantly lower for both younger arrivals ($p = .04$) and older arrivals ($p = .01$) compared to NS. However, there was no significant difference between younger and older arrivals ($p = .83$). Tables 6, 7, and 8 illustrate the mean CANE comparisons for the three groups.

Table 6

A Comparison of Credits Attempted But Not Earned on Graduation

	Mean CANE	SD
Younger arrivals	9.27	6.69
Older arrivals	10.60	6.23
Native speakers	3.60	5.60

Table 7
Summary of Analysis of Variance for the Relationship Between AOA and CANE

	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	Significance
Between groups	414.44	2	207.22	5.41	.01
Within groups	1610.13	42	38.34		
Total	2024.58	44			

Table 8
Results From Tukey HSD Post Hoc Comparison of AOA and CANE

	Mean Difference	<i>SE</i>
Younger vs older	-1.33	2.26
Younger vs native speakers	5.67*	2.26
Older vs native speakers	7.00*	2.26

* The mean difference is significant at .05.

ELLs took more semesters overall to graduate, and they also took more spring and summer courses than their NS counterparts (see Figure 3). This measure related to the data already presented: ELLs required make-up time to repeat courses attempted unsuccessfully.

Finally, we considered the incidence of academic probation as an indicator of academic success. Students are placed on academic probation if their GPA falls between 1.7 and 2.0 (on a 4.0 scale). An analysis of the percentage of students placed on academic probation revealed striking differences between ELLs and their NS counterparts, with over half of younger-arriving ELLs on academic probation at some point in their educational journey (see Figure 4).

DISCUSSION

Our results suggest that ELLs of all AOA suffer the effects of inadequate English language proficiency because this factor plays an increasingly important role in their academic success over time. Younger arrivals never appear to close the linguistic gap, and over time older arrivals are not able to mediate university curriculum through their first language. Sooner or later, the academic bar and the concomitant language and literacy requirements outstrip the ability of all ELLs to keep up with the demands of their studies. This limitation is manifest in the academic outcomes discussed in this section.

The data suggest that ELLs make educational progress and achievement in greater numbers than might be expected given general graduation rates. When their achievement is compared to that of the cohort of NS who also presented Math 30 for admission requirements, the gap between groups closes to seven to eight points. It may be that NS who present Math 30 as an admission requirement for direct entry into professional faculties such as engineering and kinesiology have a greater focus and commitment to their program of studies.

Figure 3
Total Semesters in University (Spring and Summer Sessions Included)

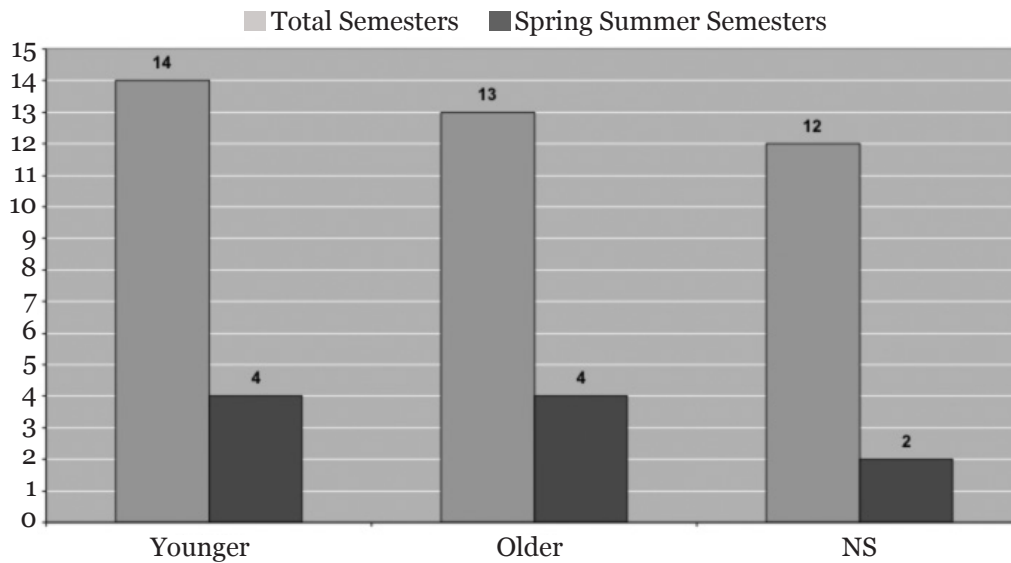
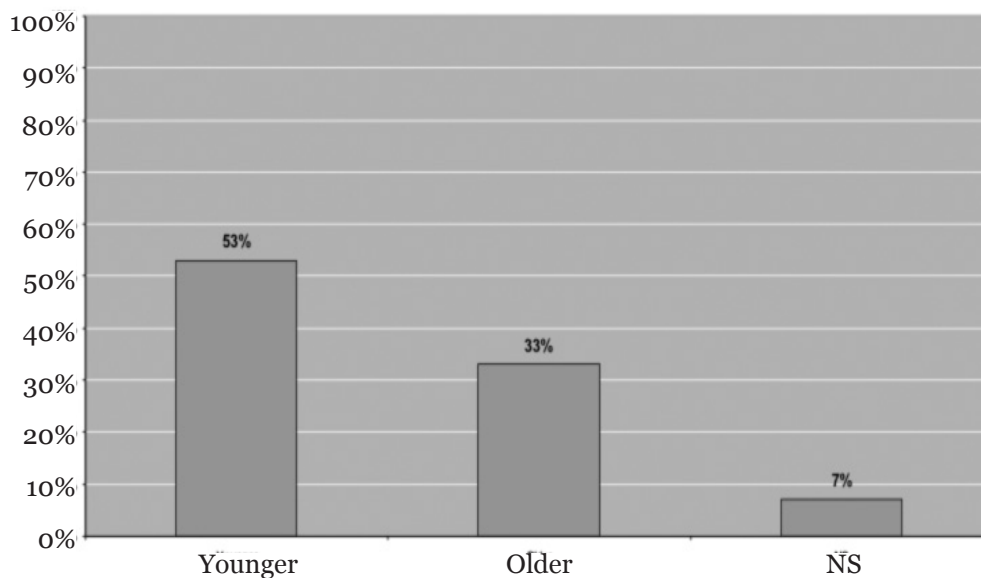


Figure 4
Percentage of Students Placed on Academic Probation by Student Category



The lower English language proficiency of ELLs may mask their latent cognitive abilities that may only become unleashed over time as (and if) their CALP develops. This seemingly counterintuitive result of the ELL group being more likely to succeed and yet achieving this success with a lower GPA suggests various explanations. ELLs may be persistent because of family and cultural expectations for academic achievement. Persistence is reflected in the number of semesters they take at university, despite higher levels of academic probation, courses attempted but credit not earned, and spring and summer

semesters spent in school. In contrast, their NS counterparts may feel more freedom to pursue other educational options, or to seek work if a university education is not what they expected it to be. Others may simply have had a change of heart, need “time out,” or find the costs of a university education prohibitive.

Although the proportion of ELLs who do graduate (78% for the younger arrivals and 80% for the older arrivals) is higher than that of the NS and the general population, their lower graduation GPA reflects a loss of educational and intellectual capital for the future. First, the overwhelming majority (87% of the younger arrivals and none of the older arrivals) of these young men and women will not be able to enroll in graduate studies, which is a dream held dearly by many of them and a goal articulated in the university’s academic plan. Another concern pertains to the quality of programming ELLs experience at university. Having failed and repeated so many of their core courses, they may use course shopping as a survival strategy, a trend that is evident in the transcript data. For example, they may take courses deemed easy to pass or even to excel in—such as Japanese 101—to counter the effects of a low GPA in required courses. Further analysis of our data identifies this concern as serious and a further indicator of the overall lack of quality experiences for these students at university.

This situation points to the need for professional development among faculty members across campus and the enhancement of ELL support before students attempt university studies, during their transition to university, and throughout their university experiences. Faculty are often ill-prepared to respond to the language learning needs of the increasing numbers of ELLs in their classes (Li, 2004). An interesting finding of a study conducted in Greater Toronto (Murphy Kilbride and D’Arcangelo, 2002) showed that immigrant students at college perceived little support from the college itself. For example, although language assistance was reported as the number one need of new immigrant students, the college was not the number one place where students felt they could have this need met. They instead turned to family and friends for assistance more than half of the time.

Various types of support available throughout the university years could increase the chances of success for ELLs. For example, counselling could take into account the ELLs’ still-unfolding English language proficiency, providing the students with appropriate advice on the timetabling and sequencing of courses (Roessingh, 2004; Roessingh & Field, 2000). A course load of three or four courses rather than the usual five would allow the students time to read text materials that are conceptually and linguistically dense. English-language support at the post-secondary level could be specifically targeted at the ELL population (Jiang & Kuehn, 2001). Teaching academic skills, learning strategies, and academic vocabulary may ameliorate the academic performance of younger-arriving and Canadian-born ELLs, who may have less developed CALP in their first language. Such skills training would differ from non-credit ESL programs, which at the post-secondary level are usually designed for recently arrived international visa students who finished high school in their home countries and have not yet been admitted to mainstream credit courses. These non-credit ESL programs are often expensive and frustrating for ELLs who already sound good in English, are familiar with the local culture, came from mainstream classes in local high schools, and are impatient to continue with their further education.

According to Cheng, Myles, and Curtis (2004), the most difficult tasks for international graduate students include leading class discussions, writing long reports, participating in

class discussions, discussing issues with peers in small groups, working in collaborative projects or out-of-class study groups, and giving talks, seminars, and presentations. Although the authors focus on the experience graduate students, they provide many good suggestions that would also apply to the needs of ELLs arriving from the K–12 system in Canada. Other studies find similar demands at the undergraduate level (Dunworth, 2008).

Over the past decade, many of these issues have been identified by U.S. post-secondary institutions, which have made strides in addressing the learning needs of Generation 1.5 (Roberge, Siegal, & Harklau, 2009). There is much we can learn about program structure (for example, adjunct and sheltered courses), curriculum (for example, sustained content), and assessment from the experiences of our colleagues in the United States.

CONCLUSION

This study points to the loss of educational and intellectual capital, and hence human capital, in the workplace of the future, a workplace that will increasingly require high levels of educational achievement by students for whom English is an additional language. Although the students in this study persist in their educational pursuits, they complete their programs with less academic stability and confidence than they may be capable of achieving. The majority of these students will be unable to engage in academic studies at the graduate level. Many may have difficulties transitioning to the workplace and securing the jobs they have worked hard and long to prepare for.

Our exploratory findings raise many questions for future research. For example, future studies would be welcomed that include larger randomized sample sizes. Because of the limited number of ELLs identified in the U of C database, the present study was unable to unearth the role of underlying proficiency related to age on arrival and length of residence in Canada. We wonder whether our findings are generalizable to other universities across Canada, and we would encourage similar work in settings such as the University of British Columbia and the University of Toronto—both settings that likely attract large numbers of ELLs from local high schools.

Qualitative studies would also help in understanding the ripple effect of the loss of so many of the hopes and dreams that young immigrant learners bring to Canada. How is identity restructured when they fail academically? How are their career aspirations realigned to face the reality of failed educational attainment? Immigration is central to the Canadian ethos, along with the promise of a better future for immigrant children resulting from a publicly funded education system. For the first time, Canada is seeing a generation of immigrants for whom immigrating may mean a loss of social status, perhaps for two generations: immigrant parents, who are unable to reclaim their former profession, and their children, who may not achieve commensurate with their talents and abilities.

In conclusion, we suggest that there are three key areas requiring attention, given the needs of immigrant youth for whom English is an additional language: policy reform, pedagogic practices, and programming support for ELLs to develop English language proficiency across all age and educational levels.✦

REFERENCES

- Abada, T., Hou, F., & Ram, B. (2008). *Group differences in educational attainment among the children of immigrants*. Statistics Canada. 11F0019M. No. 308. Retrieved from <http://www.statcan.gc.ca/pub/11f0019m/11f0019m2008308-eng.pdf>
- Alberta Education. (2009, July). *Improving high school completion: Using school-based accountability data to inform educational research and policies*. Presentation by John Burger and Anna Nadirova at University of Calgary, Faculty of Education July Institute, Calgary.
- Andre, J. (2002). *What happens to students who fail the Effective Writing Test?* Internal information, Effective Writing Program, University of Calgary.
- August, D., Carlo, M., & Calderón, M. (2005). *Transfer of reading skills in bilingual children: Subproject 2 of acquiring literacy in English: Crosslinguistic, intralinguistic and developmental factors*. Retrieved from Center for Applied Linguistics website: <http://www.cal.org/acquiringliteracy/subprojects/project2index.html>
- Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press.
- Brent, D., Andre, J., Oakleaf, D., Watt, D., & Levey, A. (2002). *Effective Writing Program preliminary report*. Submitted to Dr. Kathleen Scherf, November 1, 2002. University of Calgary.
- British Columbia Ministry of Education. (2009, April). The facts of ESL in British Columbia: Record number of students in ESL graduate. *Edufacts*. Retrieved from http://www.bced.gov.bc.ca/news/edufacts/2009/0903_esl.pdf
- Calgary Board of Education. (2008, May). *Great beginnings: The positive impact of intake practices for ESL student achievement*. Presentation at the Celebrating Linguistic Diversity Conference, Toronto.
- Cameron, L. (2002). Measuring vocabulary size in English as an additional language. *Language Teaching Research*, 6(2), 145–173.
- Cheng, L., Myles, J., & Curtis, A. (2004). Targeting language support for non-native English-speaking graduate students at a Canadian university. *TESL Canada Journal*, 21(2), 50–71.
- Church, E. (2009, October 12). If you're a new Canadian, "you go to university." *Globe and Mail*. October 13, 2009, A4.
- Citizenship and Immigration Canada. (2007). *Annual report to parliament on immigration, 2007*. Retrieved from <http://www.cic.gc.ca/english/resources/publications/annual-report2007/section1.asp#1>
- Community Social Planning Council of Toronto. (2005). *Renewing Toronto's ESL programs: Charting a course towards more effective ESL program delivery*. Retrieved from <http://socialplanningtoronto.org/wp-content/uploads/2009/02/esl-programs.pdf>
- Conference Board of Canada. (2008). *The Conference Board of Canada annual report, 2008*. Retrieved from <http://sso.conferenceboard.ca/HCP.aspx>
- Cummins, J. (1981). *Bilingualism and minority language children*. Toronto: OISE Press.

Dunworth, K. (2008). A task-based analysis of undergraduate assessment: A tool for the EAP practitioner. *TESOL Quarterly*, 42(2), 315–323.

Fox, J. (2005). Rethinking second language admission requirements: Problems with language-residency criteria and the need for language assessment and support. *Language Assessment Quarterly*, 2(2), 85–115.

Garcia, G. N. (2000). *Lessons from research: What is the length of time it takes limited English proficient students to Acquire English and succeed in an all English classroom?* NCBE: Issue in Brief No. 5. Retrieved March 5, 2012. http://www.ncela.gwu.edu/files/rcd/BE020918/Lessons_From_Research.pdf

Grayson, P. (2008). The experiences and outcomes of domestic and international students at four Canadian universities. *Higher Education Research and Development*, 27(3), 215–230.

Hakuta, K., Butler, Y., & Witt, D. (2000). *How long does it take English learners to attain proficiency?* Retrieved from http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED443275&ERICExtSearch_SearchType_0=no&accno=ED443275

Harklau, L. (1993). *Generation 1.5 students and college writing*. Retrieved from Center for Applied Linguistics website: http://www.cal.org/resources/Digest/digest_pdfs/o305harklau.pdf

Human Resources Development Canada. (2000). *Youth in transition survey (YITS)*. Retrieved from <http://publications.gc.ca/Collection/Statcan/81-588-X/81-588-XIE2000001.pdf>

Jiang, B., & Kuehn, P. (2001). Transfer in the academic language development of post-secondary ESL students. *Bilingual Research Journal*, 25(4), 1–17.

Klesmer, H. (1993). *ESL Achievement Project: Development of English as a second language achievement criteria as a function of age and length of residence in Canada*. A special leave project for the North York Board of Education. North York Schools, ON.

Krahn, H., & Taylor, A. (2005). Resilient teenagers: Explaining the high educational aspirations of visible minority youth in Canada. *Journal of International Migration and Integration*, 6(3–4), 405–434.

Laufer, B. (1992). How much lexis is necessary for reading comprehension? In P.J. Arnaud and H. Bejoint (Eds.). *Vocabulary and applied linguistics*. London: MacMillan.

Lee, J., & Schallert, D. (1997). The relative contribution of L2 language proficiency and L1 reading ability to L2 reading performance: A test of the threshold hypothesis in an EFL context. *TESOL Quarterly*, 31(4), 713–739.

Li, Y. (2004). Learning to live and study in Canada: Stories of four EFL learners from China. *TESL Canada Journal*, 22(2), 25–43.

McQueen, C. (2002). Elizabeth Saccá prepares Concordia for 21st century. Retrieved from http://ctr.concordia.ca/2002-03/Dec_5/07-sacca/index.shtml

Murphy Kilbride, K., & D'Arcangelo, L. (2002). Meeting immigrant community college students' needs on one greater Toronto area college campus. *Canadian Journal of Higher Education*, 32(2), 1–26.

Proudfoot, S. (2008, September 23). Immigrants' kids outpace native-born at university: StatsCan study shows children of Chinese immigrants most likely to graduate. *Edmonton Journal*, p. A5.

Roberge, M., Siegal, M., & Harklau, L. (2009). *Generation 1.5 in college composition: Teaching academic writing to U.S.-educated learners of ESL*. New York, NY: Routledge.

Roberts, C. (1994). Transferring literacy skills from L1 to L2: From theory to practice. *Journal of Education Issues of Language Minority Students*, 13, 209–221.

Roessingh, H. (2004). Effective high school ESL programs: A synthesis and meta-analysis. *Canadian Modern Language Review*, 60(5), 611–636.

Roessingh, H. (2008). Variability in ESL outcomes: The influence of age on arrival and length of residence on achievement in high school. *TESL Canada Journal*, 26(1), 87–107.

Roessingh, H. & Douglas, S. (2011). English Language Learners' transitional needs from high school to university: An exploratory study. *Journal of International Migration and Integration*, DOI: 10.1007/s12134-011-0202. Available online: <http://www.springerlink.com/content/n62629705u6jv66q/>

Roessingh, H., & Elgie, S. (2009). Early language and literacy development among young ELL: Preliminary insights from a longitudinal study. *TESL Canada Journal*, 26(2), 24–45.

Roessingh, H., & Field, D. (2000). Time, timing, timetabling: Critical elements of successful graduation of high school ESL learners. *TESL Canada Journal*, 18(1), 17–31.

Roessingh, H., & Kover, P. (2003). Variability of ESL learners' acquisition of cognitive academic language proficiency: What can we learn from achievement measures? *TESL Canada Journal*, 21(1), 1–21.

Roessingh, H., Kover, P., & Watt, D. (2005). Developing cognitive academic language proficiency: The journey. *TESL Canada Journal*, 23(1), 1–27.

Thomas, W., & Collier, V. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement* (Final Reports, Paper 1). Retrieved from Center for Research on Education, Diversity & Excellence website: http://repositories.cdlib.org/crede/finalrpts/1_1_final

Thompson, E. (2008, May 26). Immigration policies boosting number of degree holders in Canada: Study. *Victoria Times-Colonist*. Retrieved from CanWest News Service website: <http://www.canada.com/victoriatimescolonist/news/story.html?id=d3815d11-2584-4b53-90b2-d4aed5461e1f>

Twyford, C. (1987). Age-related factors in second language acquisition. *National Clearinghouse for Bilingual Education, Focus No. 2*. ED296581.

University of Calgary Office of Institutional Analysis. (2004). *University of Calgary fact book 2003–2004*. Retrieved from <http://oia.ucalgary.ca>

Ward, D. (2002, December 11). Special report: The changing face of B.C. Dramatic shift in languages across the Lower Mainland: Native English-speakers fall below 50 percent in Richmond, Burnaby. *Vancouver Sun*, p. A4.

Wong Fillmore, L. W. (1991). When learning a second language means losing the first. *Early Childhood Research Quarterly*, 6, 323–346.

Zong, L. (2004). *International transference of human capital and occupational attainment of recent Chinese professional immigrants in Canada* (Working Paper Series). Retrieved from Prairie Centre for Research on Immigration and Integration, Prairie Metropolis Centre website: http://pcerii.metropolis.net/frameset_e.html

CONTACT INFORMATION

Hetty Roessingh
Faculty of Education
University of Calgary
hroessin@ucalgary.ca

Scott Roy Douglas
Faculty of Education
University of British Columbia Okanagan Campus
scott.douglas@ubc.ca

Hetty Roessingh's research program focuses on the instructional needs of learners (K–12) for whom English is a second language (ESL). Her published works include tracking studies for ESL high school dropout and achievement outcomes in Grade 12, research on rates of English language acquisition, and ESL curriculum, program, and materials design. Her current interests include a SSHRC-funded study on developing growth models for the acquisition of English language proficiency for different age on arrival (AOA) and length of residence (LOR).

Scott Roy Douglas has worked with additional language learners throughout the world from the Middle East to Asia. His research primarily looks at the transition from high school to university and the vocabulary use and academic achievement of non-native English-speaking students. His other research interests include English for Academic Purposes (EAP) curriculum design, blogging as a tool for fostering English language proficiency, and English as an Additional Language teacher training. He also authors textbooks for university-bound EAP students.

ACKNOWLEDGEMENT

We are grateful for the support of a grant from the Prairie Metropolis Centre that allowed us to complete this work. We extend our sincere thanks to those of our (unknown) colleagues who took the time to review our work on behalf of CJHE and to provide feedback that was very useful in shaping our final draft. Finally, we recognize the support of the editor and the journal manager for their ongoing encouragement in shepherding our manuscript to publication. Many thanks!