



Academic Persistence among Canadian First-Generation University Students

Summary of Research Paper 9

This research paper addresses the educational pathways taken by FGSs who pursue university studies in Canada. Specifically, the objective is to examine in which way and to what extent this concept, used mostly in the U.S., can be useful to evaluate both the access and the academic persistence of Canadian students. At the same time, it aims to evaluate whether being an FGS constitutes a handicap or not. The following questions guide our research:

- 1) Is being an FGS a real factor in access?
- 2) Is the socio-demographic composition of FGSs different than that of non-FGSs?
- 3) Does FGS status have an effect on persistence? – persistence being evaluated here through two indicators: obtaining a bachelor's degree and continuing on to graduate studies.

This study uses pan-Canadian data from Statistics Canada's Youth in Transition Survey (YITS, cohort B), as well as from ICOPE, a regional survey carried out by the University of Quebec system.

This text is divided into three chapters. The first explores the key issues through a brief overview, starting with selected studies on the situation of FGSs in the U.S., and, to a lesser extent, in Canada. Next, we identify the principal elements on which our analytical model has been organized, in light of the available data. The second chapter is a description of our methodology. We describe the data base used, the definition and operationalization of the variables in our analytical model, and the statistical analyses. In the third chapter we present and interpret the results. As part of our conclusion, we summarize the essential points and suggest further research avenues. This paper was inspired in large part by Note 2 produced by the *Transitions* project.

Key questions and theoretical issues

In the U.S., first-generation students have been the subject of numerous studies which have allowed for precisions at the theoretical level. In general, these empirical studies have tried to understand the influence of the parents' education level on student access, persistence and educational experiences in higher education.

The definition of the FGS concept varies depending on the authors and the purposes for which it is employed. From an administrative standpoint, the FGS category is relatively wide. For the American federal TRIO programs (programs that finance interventions aiming at college access equality), an FGS is a student whose parents have not obtained a bachelor's degree.

In this research note, an FGS is a student whose parents do not hold a post-secondary degree. Non-FGSs can then be logically divided into two categories: "college" non-FGSs are students with at least

one parent that holds a college degree; “university” FGSs are students with at least one parent that holds a university degree¹.

From this perspective, studies dealing with the access of FGSs to higher education have tended to show that several demographic and social factors distinguish these students from their fellow non-FSG students. FGSs suffer from multiple disadvantages: in their level of academic preparedness, in the amount of cultural and educational capital they acquired before beginning their studies, in the level of support they receive at home and at school, and in their difficulties in social and academic adaptation and integration. Considering that their parents are generally from a more disadvantaged socio-economic background than their peers, FGSs will also face more financial difficulties and are more likely to have more difficult living situations.

In sum, studies have indicated that, compared to their peers who have at least one parent who has attended a post-secondary institution, FGSs are less likely to continue on to higher education. Several other important factors can influence access to higher education, especially certain demographic characteristics (age, gender, ethnicity, income, and region (urban or rural)), the quality of academic preparation, family and institutional support, the level of mobilisation within the family, and, finally, the presence of a role model who can provide social and cultural capital along with the knowledge and the aspirations linked to the higher education environment.

A number of American studies have evaluated the level of persistence and success of FGSs. Most have shown that coming from a family with a lower education level hinders a student's schooling.

The number of Canadian studies that have explicitly used the concept of FGS in reporting on academic experience is very low. However, some conclusions can be drawn. Proportionally, a higher number of these FGSs did not go on to post-secondary studies. They were less likely than their peers to continue on to college level, and even fewer went on to university studies. It appears that the educational capital of parents carries more weight in terms of access to university studies than for other types of post-secondary programs. However, the effect of parents' educational capital plays much less of a role in persistence. In 2005, FGSs who were enrolled in post-secondary programs were proportionally more likely than others to have completed their studies with a diploma.

Methodology

Having access to two different databases allows us to better measure persistence in university. In the case of the YITS, the respondents were between 18 and 20 at the beginning of the study, and thus between 24 and 26 at the end of the last cycle, which allowed us to observe their university pathway for a period of as much as six years. With ICOPE, we followed for five years respondents who were enrolled in the UQ system in 2001.

Three dependent variables will be studied:

- 1) access to university;
- 2) completion of a bachelor's degree;
- 3) continuing on to graduate studies.

FGS status is the principal independent variable. We also take account of three groups of variables: those associated with social and cultural affiliation, with academic background, and with the types of academic pathways.

The variables in the category of social and cultural background include the parents' educational capital (FGS or not), the linguistic group, being part of a visible minority, the province and the residential environment (rural or urban). The academic background variables include questions on academic life in high school: grade point average, time devoted to homework, drop out periods, interruption of studies between high school and university, type of high school (private or public) and academic aspirations. The variables associated with academic paths are: age of entry to university, the field of study and the registration status.

¹ Throughout this text the term “college” refers mostly to what is known in Canada as a community college and in Quebec as a *collège*, including the public *cégep* (*collège d'enseignement général et professionnel*). Colleges do not grant university degrees such as the BA, BSc, MA, MSc, PhD, etc.

We propose a descriptive analysis and a multivariate analysis. The first is to determine, using a Khi-2 test, the independent variables that have a significant influence on the likelihood of completing a bachelor's degree and of continuing on to graduate studies, with special emphasis on FGS status. This analysis also aims to present a general portrait of persistent students as a function of their socio-demographic characteristics, their academic experience and their university pathway.

The second, multivariate, analysis will allow us to estimate the relative influence of each of the variables associated with social and cultural background, as well as the variables of previous academic achievement on the probability of going to a university, of achieving a bachelor's degree and on continuing on to graduate studies – if the effects of other variables are controlled. We use logistic regression, a type of analysis that explains or predicts a dichotomous variable by means of an ensemble of factors or independent variables. In this case, we consider to what degree the probability of access to university studies, the probability of completing a bachelor's degree, and the probability of continuing with graduate work are correlated with being an FGS and with other factors.

A global outlook – FGSs in Canadian universities

After high school, most young Canadians of the current generation continue on to some sort of post-secondary program. As shown in table 1, out of 10,784 young adults aged 24-26 in December 2005, 47% had attended a university, 34% a college, and only 19% had not gone beyond high school.

The results also show that access to higher education is strongly associated with the parents' education level. The children of parents who have no college or university experience are less likely to continue their studies after high school than students whose parents did have that experience. Thus, in 2005, the proportion of those who had attended a university was 69% among those whose parents had attended an institution of the same level, while this figure was 29% for FGSs.

In a more general way, from the multivariate analysis of table 3, we can point out that being a non-FGS increases the probability of access to higher education, even when many factors are accounted for. Moreover, the influence of gender on access to university decreases as the level of their parents' education increases.

The proportion of FGSs at university is relatively equal in all of the Canadian provinces. That is to say, the differences between the provinces are not great enough to be considered significant. This same proportion does vary, however, according to linguistic category, and is higher for minority populations: among allophones (30%), among Francophones living outside of Quebec (29%), and for Anglophones living in Quebec (28%).

Access to university is one thing; but having the persistence to continue and to finish a degree is another. In what measure is persistence influenced by the parents' education level? To address this question, we chose to examine the group of students who, as their first post-secondary experience, enrolled in a bachelor's program. The results show that in 2005, 56% of students had received their bachelor's degree, while 44% were either still pursuing their degrees or were out of the system. The likelihood of obtaining a bachelor's degree was relatively the same for all students and was not affected by their parents' education level – the status of FGS did not have an influence on completing a degree.

The likelihood of obtaining a bachelor's degree is associated with a student's high school academic record. The results of a bivariate analysis show that the students who had higher grade levels in high school, who spent much more time on their homework and who did not have any academic irregularities such as dropping out or interrupting their studies after high school were more likely to have completed their degree at the time of this study.

Globally, there is no significant difference between the persistence of FGSs and their peers. Having said this, however, there are certain factors that do have a particular effect on FGSs' academic persistence: earlier school performance and having had a break before enrolling in university. As with their peers, having had higher academic aspirations at the end of high school is linked to academic persistence at university. After achieving their bachelor's degree, FGSs are significantly less likely to continue on to graduate studies. However, this difference fades after taking socio-demographic variables and previous school record into account.

An institutional perspective: FGSs in the University of Quebec system

First-generation students represented 45% of new students in the University of Quebec system in autumn 2001. Among the 55% who were not FG, a little less than half were students whose families did not have any university experience: 24% were from the non-FGS/college category and 31% from the non-FGS/university category.

First-generation students are proportionally two times more numerous in ICOPE than in the YITS. They are also generally older than other students. In fact, when considering only those students aged 21 and older, one can see that it is principally the FGSs in this category that show distinctive traits, while the younger FGSs (18-20) are closer to their non-FG peers, or at least to the FGSs from the YITS sample. FGSs in the older age group are more likely to enroll in shorter undergraduate programs, are proportionally more likely to enroll part-time, are more likely to have been out of school in the year prior to their enrollment, and consider themselves less well-prepared at the beginning of their program than their peers. In addition, their living conditions are also different – they are more likely to be balancing work, study, and family responsibilities.

The situation of older FGSs is reflected in their chances of achieving their bachelor's degree. Even though the younger (18-20) FGSs' rates of graduation are barely distinguishable from those of their peers, the older FGSs have a rate of graduation significantly lower than that of their peers. The regression analyses indicate that for the 18-20 year-old FGSs, as well as for those 21 and older, the preponderant positive factors associated with finishing their degree are to have passed all of their first-semester courses and to have studied full-time.

Finally, in contrast to the YITS, the results obtained from the ICOPE data do not show a significant difference between FGSs and non-FGSs in terms of their rates of continuing on to graduate studies.

Options for analysis and conclusion

Three questions were at the basis of this analysis. The first had to do with first-generation students' access to higher education; the second concerned the social composition of this category of students, and the third was their academic persistence. This last question was analyzed based on the completion of a bachelor's degree and enrollment in graduate studies.

In Canada, the percentage of young adults aged 24-26 who attend or who have attended a university is 29% for FGS, while this figure is 69% for young adults who have at least one parent who has completed a university degree. The multivariate analysis reinforced this first claim: that the parents' educational capital positively influences their children's access to university.

This same analysis also indicates that other factors have an influence on university access. Some of these pertain to individual traits such as the father's occupation, the residential environment, high school grades, the type of high school, and the student's academic aspirations. Other factors pertain more to the organization of the system. When considering individual traits, the logic of social reproduction still holds, with one exception: working-class students can continue on to university on the basis of their high school grades. In this respect, we should point out the effect of the academic meritocracy.

The ICOPE did not allow us to gather data on access to university, but it did reveal that 45% of the students in the UQ system are FGSs. Meanwhile, according to the YITS data, 23% of the students in Canada are FGSs (table 26).

Any comparison between the YITS data and that of the ICOPE should obviously take into consideration the fundamental difference between the two populations: the ICOPE surveyed all of the new students in the UQ system, regardless of their age, while the YITS only surveyed a sample of a cohort of students aged 24-26 in their fourth sampling cycle, in 2005. Now, 63% of the FGSs in the UQ system were 26 or older. It is highly likely that this university system is distinct from the average Canadian university, but nothing allows us to identify whether the most important factor is FGS status or a student's age.

The ICOPE data indicates that, effectively, a very large segment of FGSs only have access to university studies much later in their lives. Furthermore, this institutional survey makes it clear that the academic pathway of FGSs does not necessarily follow the usual route, as many did not first

complete their 2-year pre-university college program, which in Quebec is the standard prerequisite for entering university. FGSs differed from other students in their social and cultural composition but not in the characteristics of their schooling. In particular, their success in high school was their ticket for access to university.

A second observation lies in the different ways of attending university. FGSs are proportionally more numerous in the areas of social science and management/business, and less well-represented in the pure sciences. They are also more numerous in the new rather than in the traditional universities. However, they are not different in terms of their registration status or their tendency to change programs.

Using the ICOPE data has allowed us to observe that with a sampling of young adults aged 18-20, we have only captured a portion of the FGSs who enroll in universities. Actually, FGSs tend to be older than other students – we find them more often in the 21 and older age groups – a characteristic that was revealed in earlier studies.

Achieving a bachelor's degree does not significantly distinguish FGSs from other categories of students, which is different from the American context. However, this confirms the results of recent Canadian works.

Overall, the aspects and the factors examined in this analysis are better at explaining access than persistence, which could perhaps be an effect of selection or resilience. Once they have begun their university studies, FGSs are either not very distinguishable, or not by that much, from their non-FG peers. This is the case except for the impact of having had good grades in high school, which is considered as the main condition for success in further studies. However, academic persistence is linked to many aspects of the university experience, as much academic as social.

The results of this research paper call for further, more systematic comparative research. On one hand, our results indicate that there are differences in academic pathways between the Canadian and the U.S. situations, and that it would be worthwhile to deepen the approach to understand the origin of these differences. On the other hand, as we have indicated, there are also differences between universities, differences that could be the object of a more in-depth exploration, if only by taking into account the different university missions and the different services they offer to their students.

Reference :

Pierre Canisius KAMANZI, Sylvie Bonin, Pierre Doray, Amélie Groleau, Jake Murdoch, Pierre Mercier, Céline Blanchard, Monic Gallien, Rémy Auclair (2010). *Academic Persistence among Canadian First-Generation University Students* (Projet *Transitions*, Research Paper 9). Montreal, Centre interuniversitaire de recherche sur la science et la technologie (CIRST).

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