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# A Report on the Postsecondary Decisions of High-Achieving Students in Ontario

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## Introduction

A goal of the Government of Ontario is to ensure that all students who are capable have access to higher education. This often results in a significant amount of research oriented toward students who are considered to be underrepresented in postsecondary education (PSE). While it is essential to understand how those students fare in gaining access to PSE, it is also important to better understand the situation for students who are considered to be among the brightest in Ontario.

Unfortunately, little is known about high-achieving secondary school students in Ontario. For example, we know little about their postsecondary destinations or the ability of higher education institutions within Ontario and, more broadly, within Canada to retain them. Institutions often recruit high-achieving international students, but can the same be said for domestic students?

This HEQCO @ Issue paper provides insight into the postsecondary decisions of secondary school students with the strongest academic records – that is, students who are considered to be the “highest-achieving” high school graduates in Ontario. To explore this topic, we used two methodological approaches: studying application and admissions data from the Ontario Universities’ Application Centre (OUAC) and conducting interviews with secondary school counsellors and advisors.

As a result, this report provides quantitative data displaying trends associated with the highest-achieving students, including comparisons against a larger population. The broad overview provided by these quantitative data is complemented with qualitative interview data. This approach enables this report to provide both scope and depth about the postsecondary destinations of the top-achieving students in Ontario secondary schools.

## Research Questions

This report seeks to better understand secondary school high achievers and their PSE decisions. It addresses five research questions about the PSE destinations and decisions of Ontario’s top secondary school students using quantitative data from the OUAC:

1. What grade cut-offs characterize the top percentiles?
2. What proportion of these top students register at an Ontario university?
3. How concentrated is the distribution of these students across Ontario universities?
4. In what programs do these students register?
5. How concentrated is the distribution of these students across Ontario secondary schools?

This is not to say that the highest-achieving students in Ontario secondary schools attend only university; however, for the purpose of this paper, only application and admissions data from the OUAC were available.

The OUAC data are informative and provide scope, but they lack depth because they do not provide answers to a number of important questions, such as the academic destinations of those top students who leave the province and the relative importance of certain criteria in their academic decision-making. Hence, we pursued these and other questions in a series of in-depth interviews with counsellors and advisors at the secondary school level.

Through these interviews, as well as interviews with other professionals (e.g., university faculty, scholarship program directors and alumni interviewer advisors) who are highly involved with large numbers of the population of interest, we were able to determine some of the questions not addressed by our quantitative data. The questions that guided our interviews gave us a better understanding of how the best and brightest students are defined, how these students prepare for university and how they make decisions about applying

to and accepting offers from universities. The questions and prompts that guided our interviews can be found in Appendix A.

## Data and Methods

### Quantitative Data and Methods

As mentioned earlier, two sources of data inform this report. The data for the quantitative analysis come from the OUAC and include data for all Ontario high school students who submitted an application for admission to an Ontario university between the fall of 1994 and 2008. The population of interest are students whose grade point average (GPA) places them in the top 1% and 5% of all applicants.

The quantitative data analyses presented in this paper are purely descriptive. Data are drawn on to address the five research questions presented above. To reiterate, these data are used to present trends over time, including what grades deem a student to be a high achiever, the proportion of such students who apply to and attend an Ontario university and the extent to which top students are concentrated in a few postsecondary institutions. In addition, OUAC data are used to identify in which disciplines, broadly defined, high-achieving students are most likely to enrol and how this compares to the larger population of students.

### Qualitative Data and Methods

Informational interviews were conducted with two groups of interest:

1. The first was composed of 20 individuals who advise secondary school students on their PSE applications in both public and independent schools. In public schools, these individuals tend to be guidance counsellors, while in independent schools, this type of work tends to be managed by university admissions or placement advisors. Unless otherwise specified, this paper refers to these individuals as “advisors.”
2. The second group includes 11 individuals who do not work in secondary schools but are highly involved with large numbers of high-achieving secondary school students. This group is made up of scholarship program directors, alumni interviewer advisors for Ivy League and British universities, faculty who teach first-year students in certain highly selective programs and faculty who research issues of college choice and elite education. These individuals are thought to be the most knowledgeable about the specific academic programs in Ontario, the United States and abroad that advisors consistently mentioned during interviews as being highly desirable among high-achieving students.

To determine which public schools should be contacted for interviews, we populated a list of schools based on a multi-year review of winners of major merit awards, such as the Loran Award and TD Scholarship, as well as the *Toronto Star's* annual publication on the highest-achieving students in each of the Greater Toronto Area (GTA) school boards. We used these two sources to develop a list of schools, and we contacted those appearing on the list at least twice (N=20), asking them to participate. Just under half (n=9) agreed to do so. Given the small sample size and limited geographic scope, we requested during each interview to be put into contact with a colleague in a public or independent school, working outside the GTA, who might be interested in participating. This resulted in three additional interviews.

We conducted a thorough review of the websites of 25 independent schools in Ontario, placing particular emphasis on information about university placement rates, destination of graduates, average grades and total scholarships. Based on this review, we asked 12 schools to participate; six agreed to do so. We also asked advisors in independent schools for additional participants, and this resulted in two further interviews.

To populate a list of potential participants for the second group of interest, we conducted a web search to identify individuals familiar with the programs and institutions frequently mentioned in interviews with advisors

– those that are highly sought after by high-achieving students. This resulted in a small list of faculty members for the Ontario programs as well as a number of individuals involved in conducting pre-admission interviews for the American and overseas schools. From this list, 11 individuals agreed to participate, and we conducted interviews with them.

For both groups of participants, we conducted semi-structured informational interviews over the telephone, lasting approximately 30 minutes, guided by the interview questions in Appendix A. Participants gave consent based on the fact that interviews would not be recorded and that only handwritten and/or typed notes would be used. We also assured participants of anonymity for themselves and their organization.

After all of the interviews were complete, the notes were coded. We used open coding –developing categories, labelling concepts, etc. – to identify and classify emergent themes. Further details of the coding process can be found in Appendix B.

Analyzing the qualitative data enabled us to identify four primary themes:

1. how to define high-achieving students
2. how high-achieving students prepare for PSE
3. how high-achieving students apply for PSE and make their decision
4. where postsecondary students ultimately pursue their PSE

## Findings

This section highlights our quantitative findings as well as our main qualitative findings. Together, these sources of data increase our understanding of the PSE decisions of high-achieving students in Ontario.

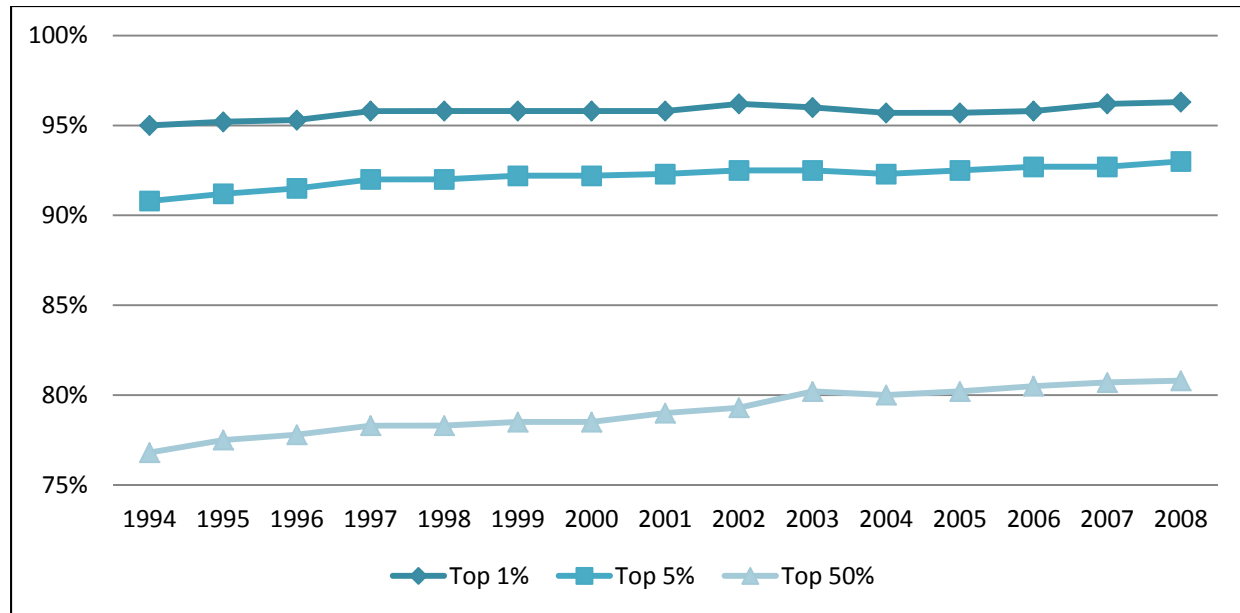
### What Defines a High-Achieving Student?

A succinct way to identify a high-achieving student is by his or her strong GPA. Most interviewees suggested that students achieving an average of 90% or higher in their top six courses were high achievers. Their justification for this standard was that it represented a strong overall academic record and not an average “inflated” by strength in one or two subjects. While 90% was the most commonly cited figure, some interviewees considered it to be more appropriate for courses with less subjectivity, such as Mathematics and Science; for courses in the Humanities, Fine Arts and Social Sciences, they suggested that the grade cut-off should fall in the upper 80s.

Thus, in the quantitative context of this paper, defining a student as “high achieving” focuses only on academic performance and only on Ontario high school students who have applied to Ontario universities through the OUAC. Applicants’ averages, which determine whether they can be classified as high-achieving students, are derived from an average of their grades in their six best university-eligible Grade 12 or Ontario Academic Credit courses. Students whose average grade places them in the top 1% or 5% of all applicants are considered to be high achievers.

Figure 1 shows the grade cut-offs of the top 1%, 5% and 50% of OUAC applicants by year. The median GPA (grade cut-off of the top 50%) has been included as a point of reference. There are marginal increases in the average grades of each of these groups over time. The largest growth occurs in the top 50%, with an increase of 4 percentage points over a 15-year period of time. The increase in the average grade of the top 5% is equivalent to 2.2 percentage points, and for the top 1%, the increase is minimal – specifically, 0.7 percentage points.





**Figure 1: Grade Cut-offs of University Applicants: Top 1%, 5%, and 50%**

This paper has stated that using grades is a succinct way to identify high-achieving students; however, it is not the only way. When we presented the concept of a high-achieving student during interviews, it provoked considerable discussion and led to a variety of descriptions of the qualities such students possess. While grades and classroom achievement were the first and most frequently described measures, high-achieving students were broadly considered to be well rounded and to have many diverse, non-academic interests and pursuits.

High-achieving students were said to be involved, busy and significant contributors to their schools and communities. Across the province, high-achieving students are serving on student councils and participating in athletics, school clubs and/or community service organizations. In reviewing the annual *Toronto Star* list of the highest academic achievers in each school board in the GTA, we noted that even the highest-achieving students (all at 97% or above) had many and diverse extracurricular interests and activities. For example, some were working part-time, volunteering in hospitals, leading environmental clubs, writing for their school newspaper or yearbook, participating in varsity athletics, performing charity and fundraising work, and acting as tutors in their schools and communities. Thus, while our definition of high-achieving students is restricted to those who are academically the strongest, it should be kept in mind that these students also tend to have high levels of both academic and social engagement.

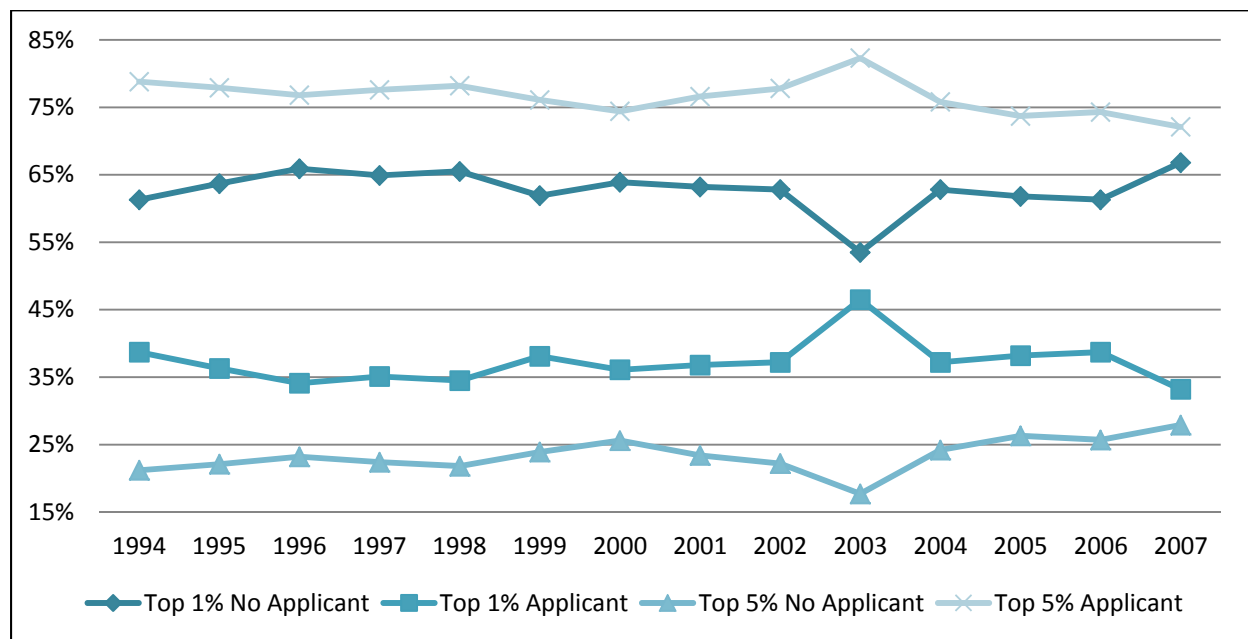
***What Programs Do High Achievers Take in High School, and Which High Schools Do They Attend?***

Interviewees noted that high-achieving students, in addition to having the top grades, tended to enrol in unique and challenging secondary school programs where they were available. The International Baccalaureate Diploma Programme was the most commonly mentioned program. Interviewees also commented that a growing number of students were also taking Advanced Placement Program courses,

which are useful for admission to and potentially advanced standing at American universities.<sup>1</sup> Other participants noted that the highest-achieving students enrol in French immersion, gifted or specially designed academic streams (e.g., Performing or Visual Arts, Mathematics and Sciences, International Studies, Modern Languages and unique programs for elite athletes).

The interviews also revealed that many high-achieving students seek out and participate in additional summer courses, camps or enrichment programs. In these programs, students participate in a series of workshops, lectures and group projects as well as off-campus trips. These programs are designed to bring together keen, high-achieving secondary school students from across the province or country. However, some of these programs are quite expensive, so participation does not rest solely on academic ability.

The top-achieving students are fairly well dispersed across Ontario; Figure 2 provides information about the high schools from which these students come. Three-quarters or more of high schools graduate at least one student in the top 5% of applicants in any given year. Hence, only a small minority of high schools has no such students. Fewer schools graduate students in the top 1%; our data show that about two-fifths of high schools graduate at least one such student.



**Figure 2: Proportion of High Schools in Ontario with and without a Student from the Top 1% and 5% of University Applicants**

In data not shown in Figure 2, we found that only five or fewer high schools graduate more than 10 students in the top 1% and that only 25 or fewer high schools graduate more than 20 students in the top 5%. In other words, as measured by high school grades, the academic elite come from a broad range of the province’s secondary schools.

<sup>1</sup> The APP is a curriculum in the US and Canada sponsored by the College Board; it offers high school students standardized courses that are generally recognized to be equivalent to undergraduate courses in university. Participating universities grant credit to students who obtain high enough scores on exams to qualify. For more information, visit <http://apcentral.collegeboard.com/apc/Controller.jpf>.

## How Do Top Achievers Prepare for PSE?

According to those interviewed, high-achieving students, relative to their classmates, begin planning for their PSE quite early. This may stem in part from the fact that for most high achievers, attending PSE is almost a given. Their questions about PSE concern not whether they will attend, but rather where, and what they will study. The academic success of high-achieving students means that a broader range of program and institutional options are open to them than to most students. The interviewees noted that many high-achieving students begin planning and preparing for PSE relatively early in high school because the number of options they have can actually complicate the planning process and create a great deal of stress for some.

Students preparing for and making decisions about PSE are influenced by several factors. Significant influences identified during our interviews include family and peers as well as advisors. For some high achievers, the planning process begins with the very intentional choice of which secondary school to attend.

### *Choosing Secondary Schools and Postsecondary Pathways*

For some high-achieving students, the PSE decision-making process actually begins with their selection of secondary school. We heard how, in making this choice (often with significant parental and family influence), these students considered how well graduating from a particular secondary school could position them for admission to a particular postsecondary institution. This consideration was based partly on the programs offered by the secondary school and partly on the PSE admissions success of previous graduates.

Independent schools, in particular, quite actively promote the success of their students' postsecondary acceptances. The success of a school in helping their students gain admission to university, and particularly elite programs and institutions outside Canada, was viewed as a quality indicator. Attending schools that have strong records of admission lead incoming students to believe that they are likely to follow similar pathways.

Guidance counsellors in public schools indicated that students and their families were keen to learn about the postsecondary pathways of previous high-achieving students because this information is not advertised to the same extent as in independent schools. These students and their families were most interested in learning about which institutions and programs former high-achieving students had both applied for and gained acceptance to as well as what types of scholarships they had received.

### *The Influence of Family*

Advisors agreed that the impact and influence of parents and other relatives on the entire postsecondary decision-making process should not be underestimated. Family members who were highly educated, as well as parents of recent immigrants, were cited as being the most heavily invested and involved in a student's postsecondary planning.

During the early secondary school years, family influence revolves around general pathways to higher education, selection criteria for certain programs, and which courses their child should take to gain admission to different programs. These are not specific, but rather general, discussions that investigate a lot of what if-style questions. Family members, especially those of students enrolled in independent schools, focus early and exclusively on admission to universities and, in particular, elite institutions. They want to know from university advisors how many students went to particular institutions and either what types of jobs they obtained upon completing their degree or what graduate schools they enrolled in.

Interviewees noted that their conversations with students would often begin with "My parents wanted me to ask ..." or "I heard from my parents that ...." Phrasing questions as coming from conversations with their families breaks down students' fear of seeming uninformed.

In addition to parental influences, the influences of older siblings and relatives currently or previously in PSE were also significant. High-achieving students tended to project the experience that their relatives had or were having as being largely similar to what they would expect their own experience to be.

### *Peer Influences*

High-achieving students tend to have high-achieving peers. These peers can be an important source of information on possible postsecondary destinations, the application process and scholarship possibilities. Peer groups that include other high achievers are especially important in cases where students' parents do not have the cultural capital or knowledge of postsecondary options and processes. In the absence of this information from parents, peer groups help fill in some of the information gaps. In independent schools, the influence of secondary school students as mentors of students in elementary school (formal or informal) was described as creating additional awareness of postsecondary destinations and pathways very early on.

### *The Role of Guidance Counsellors and University Admissions Advisors*

While considerable influence comes from parents, family members and peers, postsecondary advisors play a key role for many high-achieving students. Some of the very keenest students approach advisors in Grade 9, but many interviewees noted that the highest achievers begin to have conversations and ask questions in Grade 10, during their Careers class.<sup>2</sup> Many advisors reported that during this time, students begin approaching them individually with questions that demonstrate that they have gone beyond the information given to them by their families.

Advisors give advice on course planning and career advising to all students. This can include arranging or hosting visits to various postsecondary institutions and inviting guest speakers to come and discuss their career paths and the educational requirements needed for their occupations. In addition, sessions on applying to postsecondary programs, OSAP and other scholarships and bursaries are held for parents and students. These initiatives, however, are targeted at the general student population. For the highest-achieving students, guidance counsellors and advisors serve a more important role in helping them apply, gain admission to and receive scholarships and awards at highly selective institutions.

As mentioned earlier, high-achieving students have more postsecondary options than others, and staff who work with them can help to demonstrate how broad their options really are by discussing institutions that are farther from home and those that have not been attended by recent graduates. Advisors all spoke of encouraging students to identify institutions and programs that were the best "fit" for them. For example, they suggested that students focus on unique campus and program features that would make each potential destination a suitable "home" for four years rather than focusing on the general brand, reputation or ranking of an institution.

Filling in their knowledge gaps about applications, especially for institutions or programs with supplemental applications and for institutions outside Ontario, is an area where high-achieving students can truly benefit from some expert assistance. Where supplemental applications are required, students need to understand that these applications are read carefully, taken seriously and require a significant amount of effort and time. Some independent schools noted that one assignment in an upper-year English course was to develop a personal essay that could be used for admission to an Ivy League or small liberal arts institution. As there is a general expectation that many high-achieving students in independent schools would apply to these types of institutions, having this type of help gives these students a distinct advantage over those in public schools. Despite this, even in independent schools, few students or their families were sufficiently aware that strong

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<sup>2</sup> The Careers course is part of the Ontario high school Grade 10 curriculum and is required for graduation.

grades are only a small part of the application to these types of institutions. Extracurricular activities, interviews, admissions essays and SAT scores (where required) are also weighted heavily.

Those who work with scholarship foundations or review some of the supplementary applications noted that while they receive applications from high-achieving students from across the province, it is evident that some students have had significant coaching in how to complete their applications. This was an obvious point of differentiation between public and independent school advisors. Those in public schools rarely mentioned that their highest-achieving students had an interest in or would even consider applying out of province or to an elite American or British institution. However, in independent schools, there was almost an expectation that high-achieving students would apply out of province, if not out of country. The knowledge of how to make strong applications to these different types of postsecondary institutions was much less widespread in public schools.

Public school guidance counsellors are required to advise students on a much broader array of choices, including university, college, apprenticeship and direct workplace entry pathways. Thus, it is not surprising that they do not have the same level of specialized knowledge as individuals in independent schools. Advisors in independent schools can focus nearly 100% of their time on universities, a focus strongly aligned with the expectations of students and their families. In fact, some advisors in independent schools noted that over time, they develop strong relationships with university admissions offices.

Conversely, only a very small number of advisors in public schools expressed an awareness of the steps involved in applying to institutions out of province or country. For example, they were generally not aware of:

- the (sometimes) generous financial aid packages available from some elite American universities
- the need-blind admission process<sup>3</sup>
- Preliminary SAT and SAT applications and strategies, college entrance essays or the interviews that are sometimes a part of the application to elite programs

As a result, students in independent schools have better access to this knowledge and skill set than those in public schools. Thus, high-achieving students appear better positioned for success and entry to elite programs and institutions because they have an advantage that enhances their applications and admission to the institutions of their choice.

## What Types of Programs and Institutions Appeal to High Achievers?

In the time leading up to postsecondary application deadlines, many factors influence students' application choices regarding both institutions and programs. High-achieving students cannot be put into one broad group by field of study or career aspirations. Some high achievers identify a definite career path and a correspondingly specialized and focused program. Others are not yet prepared to select a single path or have a multitude of interests, and their applications give them flexibility and choice in their undergraduate programs. Similarly, some high achievers are primarily focused on applying to elite institutions, regardless of their location, while others are more interested in finding a unique educational experience. These institutions and programs may be found close to home, or at least in Ontario, while others may be far beyond provincial borders. Embedded in these considerations are finances and the recruitment strategies used by the institutions.

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<sup>3</sup> A process whereby the institution ensures that financial constraints are not considered in their admissions procedure.

### ***Narrow and Career-Related Versus Broad and Flexible Programs of Study***

Some of the highest-achieving students were described as having a very narrow, almost entirely career-related focus. In this context, PSE was essentially considered to be preparation for a professional career. Advisors indicated that these students tended to apply to programs with an easily identifiable career path, such as Business, Medicine, Engineering, Computer Science and some of the physical sciences. These students were described as knowing exactly what career they wanted and desired to be in programs that would get them there quickly and with the most elite group of classmates possible. These students focused on a small handful of institutions that, in their estimation, had the best reputation in their chosen field. These students were largely attracted to the brand of the program.

Students with broader sets of academic interests avoided the programs that students in the narrow-focused group chose to pursue. Instead, they chose programs at institutions that allowed for multidisciplinary approaches and flexibility in choosing courses. These students tended to believe that the first year of university was too early to begin closing academic doors. Broadly speaking, this sentiment was shared by many who questioned how a student could know whether a field of study was right for them before taking a course in university.

This was, however, an opinion shared far more often by those in independent schools. It perhaps suggests that these students may not feel pressure to leap into a career-related path because they are in a financial position that gives them time to decide about their future careers. This split between students with broad and narrow focuses was observable in those in both independent and public schools.

### ***Elite, Prestigious Programs and Institutions Versus Unique Educational Experiences***

Another dichotomy was identified in the qualities of an institution considered to be desirable. According to the interviewees, some high achievers are drawn to apply to institutions primarily based on their reputation or perceived “eliteness.” This was a common trait of high-achieving students and appeared to be strongly reinforced by parents and families. In general, few Ontario or Canadian institutions appeared to meet this standard, especially for students in independent schools. There was a general mindset among many students that “I am going to the Ivy League.” Among elite institutions, there is a clear order of prestige, often associated with the *Times Higher Education* or *U.S. News & World Report* rankings systems.

Unlike most Canadian institutions and programs, admission to elite American institutions is not determined solely on the basis of admission averages. Thus, eliteness is identified not by the minimum acceptance average – although SAT requirements are typically very high – but by acceptance rates. For some of the most elite American institutions, for example, acceptance rates are below 10%. Moreover, once legacy, athletic and family-preference applicants are considered, the odds of admission decline further. Interviewees suggested that when students apply to an elite institution, even high-achieving students, they do not fully distinguish the perceived prestige from the actual fit or appropriateness of that institution for them. Instead, there is a general perception that if they are granted admission to these institutions, their reputations make them the students’ best academic choice.

On the other hand, there is a group of students who have a strong desire to attend an institution because of the uniqueness of the undergraduate experience it will provide. Uniqueness stems from program design, instructional methods and general undergraduate experience. In these programs, students are often given considerable flexibility in their choice of courses. This allows students, especially in their early years, to take courses from a broad range of departments without having to be concerned that they are limiting their future choices. These programs also tend to offer courses that cross traditional academic disciplines. For some high-achieving students with broad interests and talents, as well as expertise in multiple subjects, these programs are highly desirable because they can incorporate multiple areas of interest.

These programs also tend to have smaller classes and provide far greater contact with faculty members, even during students' first year of study. In some ways, this is a continuation of the experience that many high-achieving students have had in their secondary school programs. Advisors questioned why a high-achieving student would want to enter a program that could have a first-year class of several hundred students, even if the program and institution had a very strong reputation. The advisors believed that these high achievers would be better served by programs with a small number of students because they can work with them, learn from them and develop social networks among them.

Many individuals who work with high-achieving students bemoaned the lack of programs in Ontario that operate using these structures. Although many very high-achieving students may enrol in prestigious programs, with high entry averages and strong reputations, there was a general concern that these students were not well served, challenged or engaged in their first-year classes. Having minimal contact with faculty, not participating in group work or not bringing interdisciplinary perspectives to course content runs counter to what many of these students experienced in secondary school. While the advisors agreed that the programs in Ontario were of a high quality overall, when students had an opportunity to enrol in programs outside the province that offered a unique undergraduate experience, they encouraged the students to do so. Other institutions have recently developed programs like the four mentioned above, but it appears that this remains a gap in the Ontario postsecondary sector.

### **Where Do High Achievers Attend PSE, What Programs Do They Take and What Role Do Finances Play?**

The overwhelming majority of high achievers who apply to universities through the OUAC go on to attend an Ontario institution. Furthermore, these students tend to be clustered in five institutions, at least throughout the 15-year span of time under review. High-achieving students also tend to differ in their chosen field of study when compared to the broader population. Before actually enrolling in a school, however, students must make sense of the different offers they receive, including early admission and institutional funding.

#### ***Early Admissions and Early Offers***

Early admissions programs permit students to apply and receive an admission decision much earlier than regular admission offers. However, these earlier offers typically come with a requirement to also respond earlier. This means that students may not be able to fully consider their range of postsecondary options. While students typically apply for early admission only to their most preferred program, receiving an early offer can place students in the position of having to make a decision to accept or reject the offer without knowing their application status at other institutions.

Many advisors were concerned that there is increasing pressure on students – from institutions, their families and themselves – to seek out and accept early offers. The advisors also discussed the fact that this creates competition among students to see who has received an early admission offer and which offers are the most prestigious. Considerable pressure is also being placed on students by institutions, as well as by peers, to accept an early offer. Advisors are concerned because this shortens the amount of time that students have to consider different programs. At the same time, some advisors reported that some students choose the timing of their Grade 11 and early Grade 12 courses to position themselves as strongly as possible for early admission. If students receive an early offer, they may drop those later classes in Grade 12 – potentially closing off a future postsecondary program because they do not have the prerequisites.

Advisors stress the importance of “fit” among the institution, the program and the student. They try to reassure students that given their grades, other offers of admission are highly likely to come in, and they warn them of the consequences of accepting the first, albeit typically very attractive, offer. Many advisors thought that the

number of institutions and programs offering early admission in Ontario was growing, following the lead taken by many elite American institutions in the late 1990s.

### *Role of Finances, Scholarships and Affordability of Postsecondary Education*

Throughout the entire postsecondary planning, application and acceptance period, the issue of cost and affordability plays a significant role. High-achieving students are uniquely positioned to receive large merit-based scholarships at nearly all Ontario universities. These amounts vary by institution and are in some cases renewable for up to four years as long as a student maintains a certain GPA.

While these merit scholarships were unquestionably welcome and helpful in being able to afford PSE, the general consensus seemed to be that for most students, they did not significantly affect their PSE decisions. Because the highest-achieving students tend to do the most research on their postsecondary options, they were quite confident of the amount of merit scholarships they would receive from each institution they applied to. Even when a student received a very large award from an institution – for example, a president’s or chancellor’s merit award, often worth \$5,000 or more a year – it made only the slightest difference in the student’s decision.

Most high-achieving students, as with most students in general, tend to accept an offer from their first choice in Ontario, despite receiving offers of greater value from elsewhere. This is not always the case for high-achieving students who apply out of province or out of country. Most students applying out of country are quite concerned about tuition costs, which can amount to \$40,000 per year and, when room and board are taken into consideration, can increase to nearly \$60,000 per year. Thus, for students who are considering elite institutions in the US, a consideration of finances is paramount.

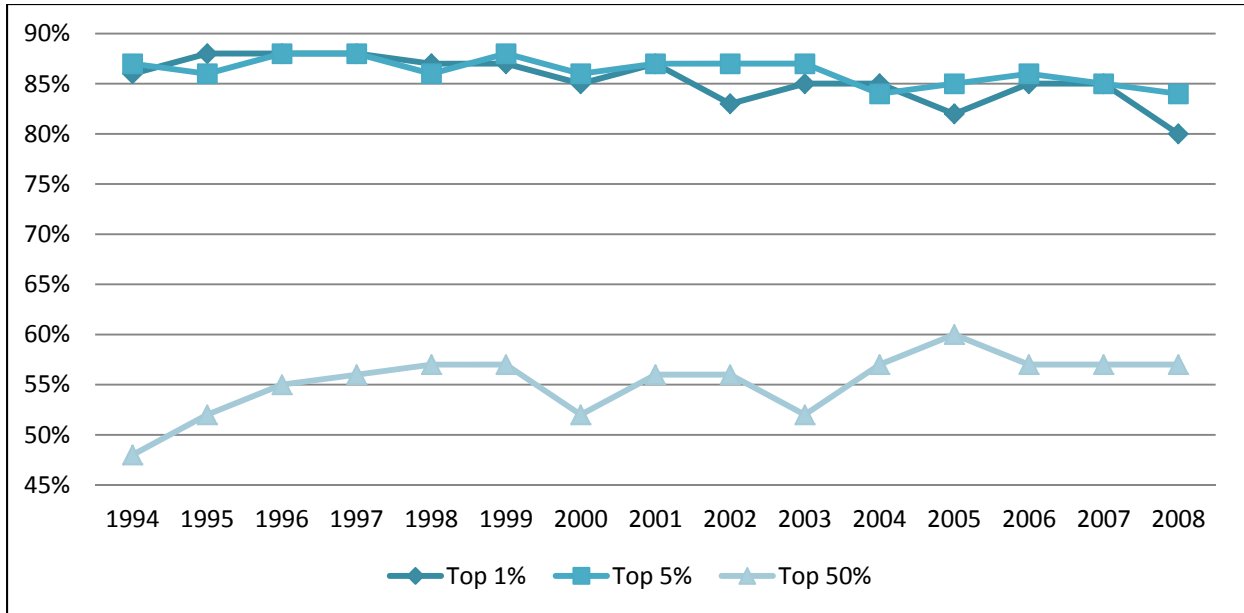
The issue of affordability, especially as it relates to attending school in the US or England was a significant differentiating point between students from public and independent schools. Those in independent schools were much more aware that the “sticker price” of attending most elite American institutions often does not reflect the actual cost and were also much more knowledgeable about the very substantial financial aid programs available. They might also know that some institutions use fully need-blind admissions policies.

Few advisors in public schools were aware of these admissions policies. Thus, it is reasonable to assume that if students believe that the cost of attending an elite institution such as Harvard University is the advertised tuition fee, they will be unlikely to apply. However, students who know more about the full cost – typically those from wealthier families and who attend independent schools – will be more likely to apply. In fact, some advisors noted that students attending an Ivy League institution could likely incur costs that are lower than those associated with their independent secondary school or with an Ontario university because of differences in scholarships and financial aid.

### *Institutional Concentration*

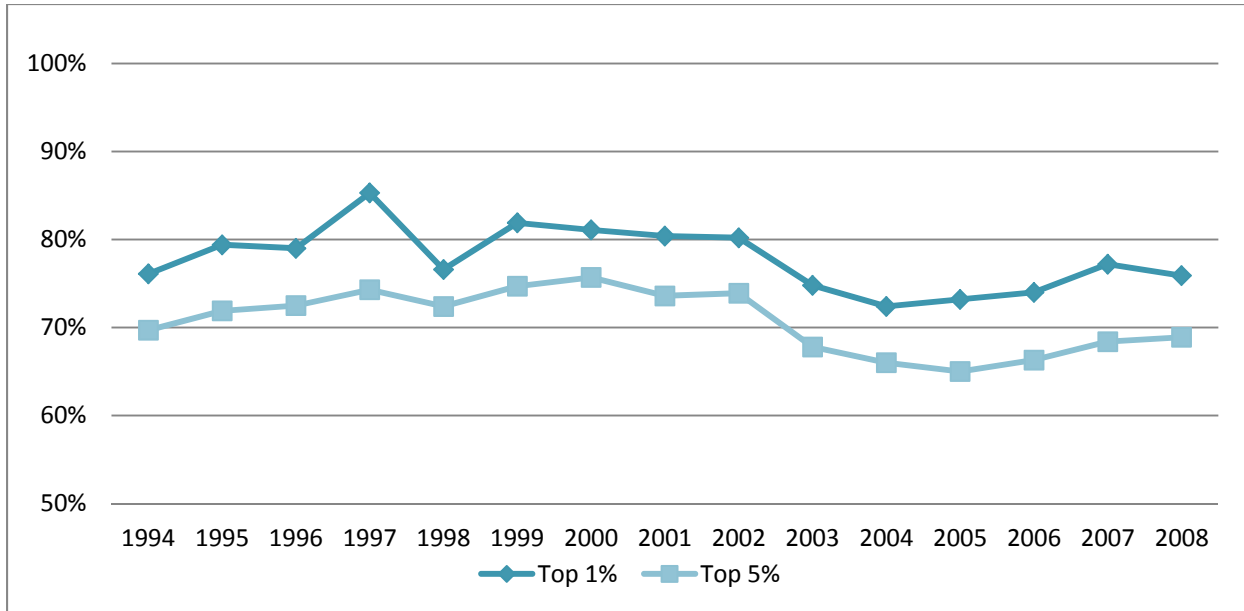
Figure 3 shows the proportion of OUAC applicants registering at any Ontario university between 1994 and 2008. Over those 15 years, the percentage of the top 1% of Ontario students who applied to and enrolled in an Ontario university has decreased by 6 percentage points, and for students in the top 5%, the percentage has decreased by 3 percentage points. On the other hand, the percentage of the top 50% of applicants enrolling in Ontario universities has increased by 9 percentage points over the same period.





**Figure 3: Proportion of top 1%, 5% and 50% of Ontario university applicants who register at an Ontario University**

Figure 4 shows the extent to which the top students who register at Ontario universities are concentrated in a small number of schools. To make this assessment, institutions were ranked in each year by the number of registered students from the top 1%, and the top five such universities were identified. For the most part, the same institutions appear on this list year after year, although the rank order of institutions changes. Figure 4 also indicates that these five universities alone enrol from three-quarters to four-fifths of the top 1% of registrants.



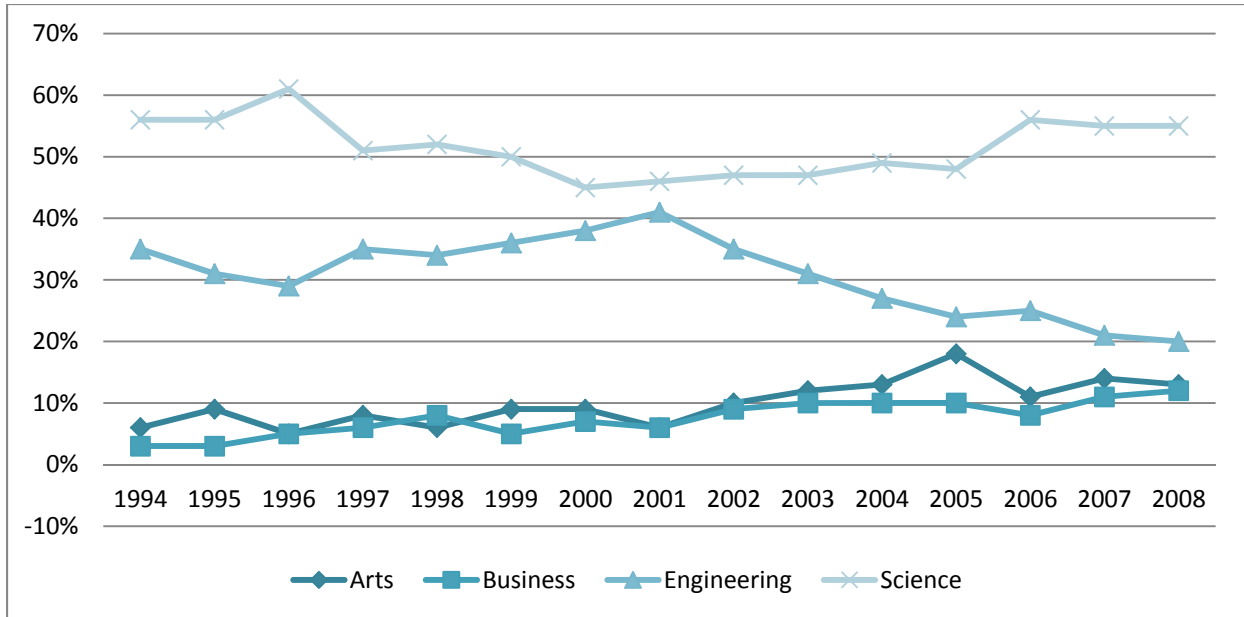
**Figure 4: Percentage of top students who register at the five universities that attract the largest number of high achievers**

The same exercise was completed for the top 5% of registrants. Figure 4 shows that only five universities enrol from two-thirds to three-quarters of the top 5% of registrants. These same five universities enrol only 40% or less of all registrants at an Ontario university and, hence, account for a very disproportionate share of the top academic performers.

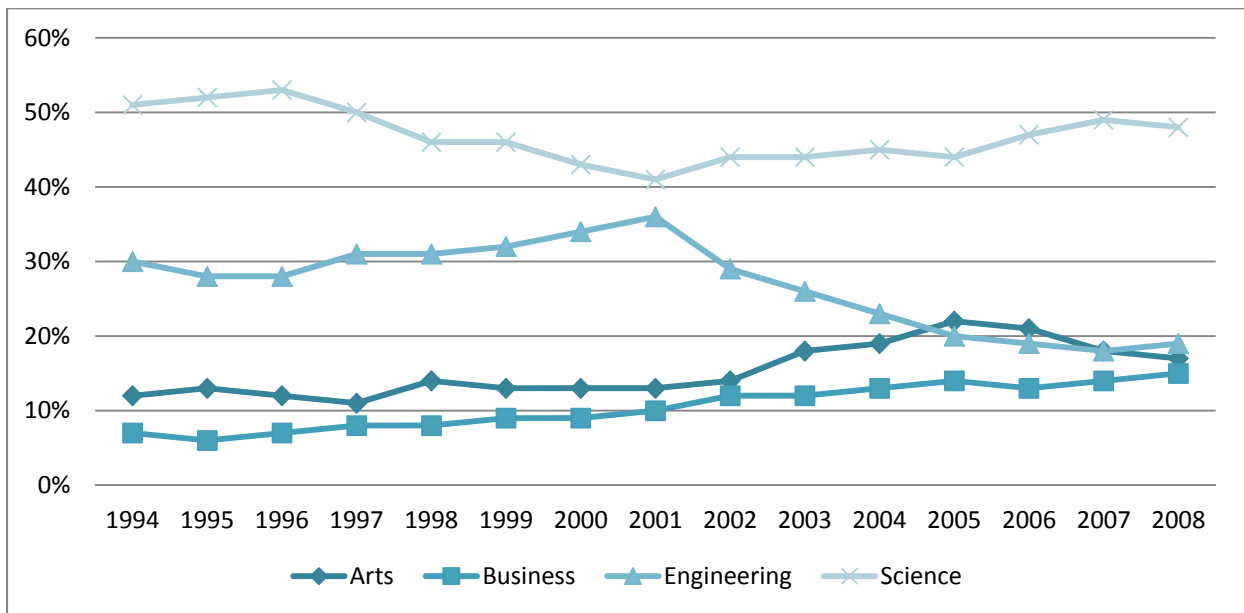
Narrowing the focus further to the top three universities that enrol the largest number of top students, it is found that they enrol one-half to two-thirds of the top 1% of registrants and approximately one-half to three-fifths of the top 5% of registrants.

### *Field of Study*

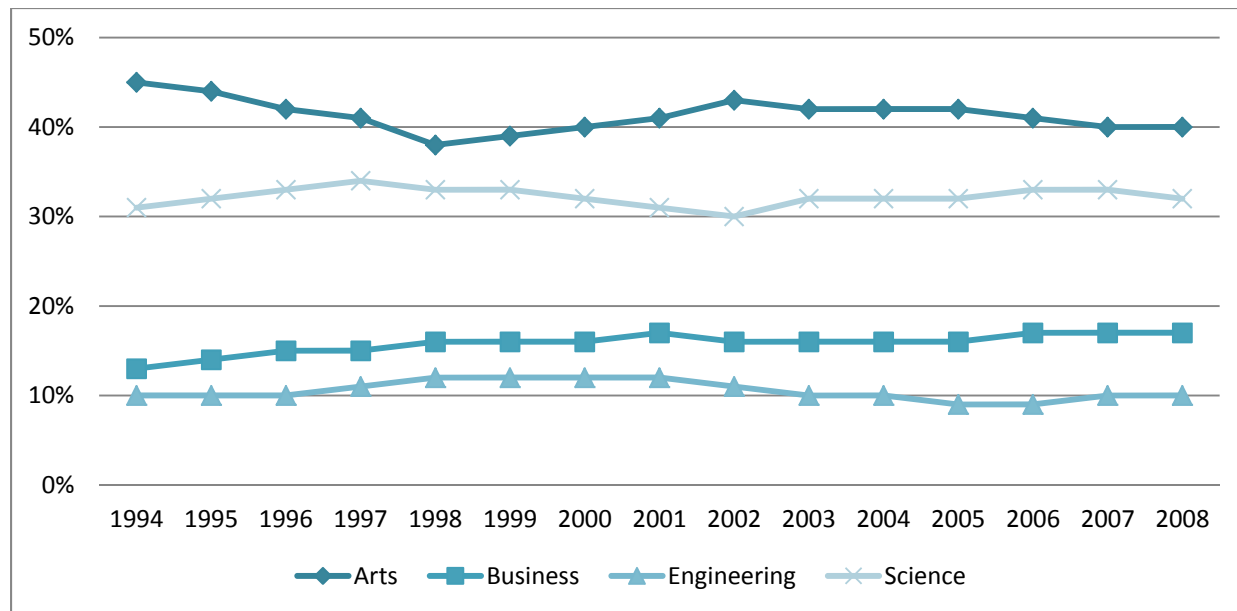
Figures 5, 6 and 7 provide information about program registration among students registering at an Ontario university. All students have been grouped into four subject categories: Arts, Business, Engineering and Science. Students in smaller programs have been assigned to one of these four – e.g., Architecture to Engineering, Nursing to Science, Music to Arts, etc. Figures 5, 6 and 7 graphically depict the distribution of the top 1%, the top 5% and all students across programs, respectively.



**Figure 5: Entrance programs of top 1% of Ontario University registrants**



**Figure 6: Entrance programs of top 5% of Ontario University registrants**



**Figure 7: Entrance programs of all Ontario University registrants**

A comparison of figures 5 and 7 shows that a student from the top 1% of students who register at Ontario universities is more likely to enrol in Science and, especially, in Engineering than the average registrant (Figure 7). About 10% of all students register in this program. The top students register less than proportionately in Business and especially in Arts.

Another clear trend that emerges from Figure 5 is that the proportion of top students entering Engineering is decreasing, while the proportions entering Arts and Business are increasing. Comparing figures 6 and 7 shows that the top 5% of students are also more likely to enrol in Science and Engineering programs. Here too, though, the proportion of the best 5% of students opting for Engineering is decreasing, while the proportion opting for Arts and Business is increasing.

### Looking Outside Ontario

What the data presented do not indicate is how many high-achieving students do not apply to any Ontario universities, nor does it suggest where students may be going – such as out of province or out of country. In reviewing interview data from independent schools, we found that McGill University, Dalhousie University (and the University of King’s College) and the University of British Columbia are the three most common destinations for high-achieving students in Ontario who do not register at an Ontario university. Without a large number of prestigious, elite or highly unique programs in Ontario, applying out of province seems to be the next best option.

The interviewees at independent schools suggested that McGill is the most popular destination for graduating students. Furthermore, in speaking with individuals in both public and independent schools in the eastern part of the province, McGill appeared to be more popular than institutions west of Toronto or in northern parts of Ontario.

Data for students leaving the country for PSE are much more difficult to obtain. The international offices of most American universities publish a document that highlights their international students’ country of origin.

For example, Harvard currently has 147 Canadians registered in their undergraduate programs (Harvard, 2011). Yale University has less than half of that, with 70 Canadians registered (Yale, 2011), while the University of Oxford reported only 18 Canadians currently enrolled (Oxford, 2011). It should be noted that this is not the number of students admitted in the most recent year, but the number in all undergraduate programs. These data provide some insight, but they are at the national, not the provincial, level.

In looking at options outside Ontario, there was again a split between students in public and independent schools. Students in independent schools were far more likely to “look abroad,” and their advisors, while not encouraging them to go, understand that high achievers have more options, especially when they have significant financial resources. Studying in other locations can broaden perspectives and opportunities. On the other hand, few public school guidance counsellors indicated that their high-achieving students considered applying out of province. This trend of applying within Ontario is even more pronounced in the northern, western and southern parts of the province.

Exceptions to this were only when a specific program of study was not available in Ontario (e.g., Marine Biology, which is offered in British Columbia and the Maritime provinces) or when high-achieving students were also being recruited for varsity athletics. A review of the past four years of the *Toronto Star's* annual features on the highest-achieving students in 12 school boards in the GTA underscores this point. Of the more than 40 students in these articles, fewer than 10% indicated that they would be studying outside Ontario despite their high averages (at least 96%) and strong record of extracurricular activities.

## Conclusions and Observations

Discussions with interviewees involved in the postsecondary decisions of high-achieving students in Ontario revealed insights into this rarely examined group of students. First, while high-achieving students are relatively easy to define academically, there is an increasing trend for them to participate in rigorous and demanding secondary programs.

Second, the lack of uniquely challenging programs at the postsecondary level for high-achieving students was a topic that interviewees raised repeatedly. Many indicated that their high-achieving students were more challenged in their final year of secondary school than they were in their first year of university. And while many, if not most, of the high achievers went on to do very well in university, advisors wondered to what degree universities in Ontario are nurturing and enhancing these students.

Third, there was an evident difference in ability between those in independent and public schools to advise high-achieving students. It is noteworthy that while the distribution of top students is relatively equal in these school systems, there seems to be an uneven distribution and availability of advisors in the public system to provide the level of assistance that the highest-achieving students need. Many advisors in public schools suggested that this situation would be improved if they received special training in how to advise these unique students.

A final concern among advisors was the amount of stress that all secondary school students, but especially the highest achievers, are facing. There is growing pressure from family members, peer groups and themselves to score very high academically and to be involved in many extracurricular activities to gain admission to prestigious programs and institutions. This pressure is compounded by the increasing use of early acceptances among Ontario and Canadian universities. Early acceptances push students to make decisions without having complete information about all of their postsecondary choices. Many advisors expressed considerable concern that these students are expected to be supermen and superwomen in order to gain admission to their dream school. And all of them described the negative mental and emotional effects on these students, whether or not they are successful in their postsecondary applications.

More research on high-achieving students is needed. For example, the authors of this paper spoke primarily with those who advised high-achieving students; we did not speak with high-achieving students who are currently in Ontario public and independent schools or who have completed secondary school and moved on to PSE in Ontario, Canada and beyond. Obtaining first-hand information from students about the postsecondary planning process is important, and this is a research topic that has received little attention up to now.

Including socio-demographic variables in the quantitative analysis would shed light on the backgrounds of high achievers and would likely uncover additional trends.

In addition, it would be informative to find comparable data from other provinces to help understand whether the proportion of high-achieving students who leave Ontario for PSE is consistent across the country. This data would also help identify how many high-achieving students are pursuing their PSE outside of Canada.

The data in this paper can be used to strengthen the transition process and postsecondary experiences of all students, but especially the high-achievers, who at the age of 16 or 17 have already had considerable academic success. The findings presented could also have implications for first-year program design in Ontario's postsecondary sectors. If these sectors made changes that enhanced the first-year experiences of the highest-achieving students, Ontario could become a national or even an international leader in PSE for high-achieving students. Ontario could also attract a greater proportion of these students – not just from within the province, but also from across the country and around the world.

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## Appendix A – Questions for Secondary School Guidance Counsellors and Career Advisors

### 1. Definitions and Introductions

How would you define the highest-achieving students?

→ Prompt for academic versus non-academic

What GPA would you classify as fitting high-achieving students?

What percentage of students in a given year fits these descriptions?

How would you differentiate the highest-achieving students who attend college from those who attend university?

### 2. Preparation and Applications

What services or programs do you offer or provide for students to help them with their postsecondary applications?

→ Private school prompts, special trips (in Canada or abroad)

At what point in their high school careers do you think these students begin thinking about or preparing for these applications? At what point are you involved?

Who are the key influencers, or who do the students reference when discussing their options?

→ Prompt for parents, teachers in desired subject area, siblings

How much information do these students have about specific universities and programs?

→ Do they come with university and program ideas in mind?

How does their approach differ from that of other students? How does it differ for college and university applicants?

### 3. Making the Decision

What drives the decision to the schools that these students apply to?

→ Prompt for program, prestige, scholarships, physical location

Have these schools and programs changed over time?

Given the offers these students received, how did they make their decision?

→ Prompt for scholarships, programs, locations, prestige, reputation, legacy

For students who did not stay in the province, what were the key factors that led them to leave?

Given what you know about high-achieving students, is there anything else you can think of that postsecondary institutions, scholarship programs, secondary schools and policy makers should know about this unique group of students?

→ Prompt for scholarships, marketing efforts, small classes, financial aid



## Appendix B – Additional Coding information

The following is an outline of the processes used to code informational interviews:

- All interviews were complete, and all interview notes were reviewed.
- Three randomly selected interviews were coded sequentially.
- These three interviews were subsequently reviewed to compare codes and reconcile inconsistencies.
- A list of codes was developed, and the remaining transcripts were coded.
- When the initial coding was complete, a second full review of the codes was carried out to ensure that the structure had appropriate depth and breadth.
- The codes were shared with a co-worker for reliability, and based on his or her suggestions, the structure was refined.



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