

Student Success after Transfer from College to Lakehead University

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Lakehead University

Lakehead
UNIVERSITY

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Introduction

A large number of college graduates enroll at Lakehead University each year to further their education. Within the Ontario University system Lakehead is tied with Ryerson as the university having the largest share of Ontario transfer students compared to its share of Ontario system full-time equivalent students. Because Lakehead is an important destination for college transfer students, it is important to study the success of these students as has been done for traditional direct entry (straight from high school) students. This report compares and contrasts the success of the following three groups of college students entering Lakehead:

- those entering through bilateral or multi-lateral agreements with block transfer,
- advanced standing college transfer students (those who have completed a college diploma and are eligible for transfer credit) and,
- other college students without transfer credits (students who have upgraded their high school credential at a college, those who only partially completed a diploma, or those whose average is below the requirement for transfer credit).

Specifically, this report explores whether there are any significant differences in the success rates and / or profile of the three types of college transfer students. Comparisons will be made with direct entry students. Success will be measured using modifications of measures traditionally applied to first-time, full-time freshmen including retention rate, six-year graduation rate, and grade-point average.

Literature Review

In recent years there has been significant discussion concerning pathways to and through higher education in Ontario. This discussion commenced in earnest with the formation of the College-University Consortium Council (CUCC) in 1996, continued with the signing of the Ontario College-University Degree Completion Accord (The Port Hope Accord) in 1999, and culminated with the announcement in 2011 by the Minister of Training Colleges and Universities of the creation of a province wide credit transfer system in Ontario (ONTransfer 2012a)¹. Throughout this time period, the discussion on postsecondary education pathways has been underwritten by a general discussion of the state of Ontario's postsecondary education system including anticipated challenges and possibilities for system transformation. See for example, Clark, Moran, Skolnik and Trick 2009 and Clark, Trick and Van Loon, 2011.

Within the discussion on postsecondary pathways, much of the initial focus has been on pathways from college to university (CMEC, 2011). In Ontario, there are nearly 520 transfer agreements including 435 college-university degree-completion agreements (CMEC 2011). Credit transfer refers to the ability to apply or "transfer" credits received for a course taken at one institution towards a credential at another

¹ For a more detailed overview of key events in the credit transfer / postsecondary education pathways discussion in Ontario please visit Hazell, C.D., and S. Wilson. (2012). *What Ontario has learned from 40 years of bilateral transfer agreements*. In *Proceedings from the Student Pathways in Higher Education Conference, January 26th and 27th 2012*. Toronto: Ontario Council on Articulation and Transfer. Available at: http://www.ocutg.on.ca/www/index_en.php?page=student_pathways_conference_recap

institution (ONTransfer 2012b). The amount of credit a student receives for their prior educational experience may vary depending on the sending program and institution, the receiving program and institution as well as the year the course was taken and the grades received (ONTransfer 2012b). There are different types of credit transfer ranging from single credits to block transfer. Block transfer occurs when “a group of courses taken at a sending institution are equivalent to a group of courses required by a receiving institution” (ONTransfer 2012b). Block transfer usually occurs when the student is pursuing two highly related programs.

The number of students potentially affected by Ontario’s credit transfer / postsecondary pathway policies is increasing. During the period 2005 to 2009 more Ontario college graduates (27%) continued their education within six months of graduation than in the previous four years (24%)(CCI 2011). Eight percent of college graduates from between 2005 and 2009 were pursuing further education at a university (CCI 2011). “Full-time continuation at university shows an increase of almost 2% over eight years from 2001/2002 to 2008/2009” CCI 2011, p.13. Most college graduates who move on to university are pursuing an undergraduate degree (74%); preparatory / upgrading programs were the most common type of originating program (CCI 2011).

Many future university students choose to attend college first. Thirteen percent of those applying to college, reported “transfer to university” as a major reason for applying (CO 2011), while almost a quarter (24%) said that preparation for university was one of the major reasons they applied to college (CO 2009). In 2007-08 about 6% of all Ontario university registrants had College of Applied Arts and Technology (CAAT) experience (CO 2009). Of the approximately 60,000 college graduates in Ontario in 2006/2007 it was estimated that approximately 4,400 were enrolled in an Ontario university within six months of graduation (CO 2009).

Between 2006 and 2009, over 80% of college graduates transferring to university programs said that they were satisfied or very satisfied with their transition experience (CCI 2011). During the same time period, (2006 to 2009) 85% of college graduates transferring to university programs said they were satisfied or very satisfied with their academic preparation for their university program (CCI 2011).

At Lakehead University, credit transfer students are a major part of the student body. In 2011/2012 Lakehead University accounted for about 2% of Ontario University system full-time equivalent enrollment, but had about 6% of the full-time college transfers. Lakehead is tied with Ryerson as having the highest ratio of share of full-time transfers to share of overall full-time students in Ontario (Decock et al. 2011). In addition, Lakehead University is a major draw for graduates of Northwestern Ontario’s largest college: Confederation College. In 2008-09 about 17% of Confederation College students pursuing further education, either at university or college, attended Lakehead. Attending Lakehead was second only to pursuing further education at Confederation College (CCI 2011).

Methods

We examined the success of transfer students entering Lakehead between 2000 and 2010 using modifications of the traditional success measures: retention rate, graduation rate, and grade-point

average. We compared the success of the three types of transfer students (block, advanced standing and other college) for each of the years. We also compared the success of college transfer students to that of students entering directly from high school. Differences in, and methods of controlling for, characteristics such as full-time/part-time status, program type and length, and demographics are explored².

Data used to address the research question originates from the Lakehead University student information system. To construct the database of college transfer students for analysis, student data was queried from the student information system using the following criteria:

- The student applied to Lakehead University with an anticipated start term between spring 2000 and winter 2011 (i.e., during the 2000/2001 to 2010/2011 academic years);
- The student applied to an undergraduate program or an access program;
- Their application was of type '105';
- The last institution attended (and basis for admission) was a college or bible college within Canada;
- The first term at Lakehead approximates the application term (within plus or minus one term).

Students may have applied to multiple programs or applied over multiple years before eventually being accepted and subsequently enrolling in a program of study; therefore careful scrutiny was necessary to ensure that only those students entering based on an application made from college were included in this database. If a student had multiple applications, admits and enrollments within the 11 years encompassed by this study, only the first program enrolled in and its corresponding application was included.

The program of study was considered to be the first program on record even if the students subsequently switched programs. The process of identifying the type of transfer was hierarchical starting with block transfer students. Block transfers were easy to isolate as there were only a specific number of programs which offer block transfer, namely Engineering, Business Administration, Natural Resources Management / Forestry and Natural Science. Students entering these programs were explicitly coded as transfer students. If students had entered into one of these transfer programs they were classified as block transfer students unless they had advanced standing credits³.

² Finnie and Qiu (2008) show that demographics such as gender and age can effect persistence rates of college and university students.

³ However, it was not always easy to differentiate between block transfer and advanced standing students in these three transfer programs. Those that were in block transfer programs that had no advanced standing credits were considered block transfer students while those showing advanced standing credits were assumed to have insufficient credits for the complete block transfer and were required to complete additional credits but were still entered in to the transfer instead of the regular program. It is possible that the advanced standing credits were granted for a different program meaning we understate the amount of block transfer students and overestimate the amount of advanced standing students. In addition, changes to the coding used by the registrar's office likely resulted in an underestimation of the number of block transfer students especially in the 2001-2002 academic year.

Next we identified the advanced standing / general transfer students. These students were those that had received transfer credit from a college for work completed prior to their first enrollment at Lakehead University. Careful scrutiny was necessary to ensure that advanced standing was actually received prior to first enrollment⁴. Finally, all college students who did not fit into either of the above categories, those not entering into a program with block transfer and those not receiving advanced standing, were assumed to be other college students without transfer credit.

Cohorts are defined by the academic year (e.g., spring to winter) but are labeled by the year of the fall term. For example, the 2000/2001 academic year is labelled 2000. While combining winter entry students with those from the previous spring might cause problems with the analysis, the data show that most college transfer students enter either in the spring / summer or fall of each academic year. A minimal number of students transfer into Lakehead University during the winter term: less than 5% annually since 2002. Any effects on the results caused by this assumption are assumed to be negligible.

To verify the accuracy of the database, a second database was compiled using a different methodology and queried from Lakehead's historical or "frozen files". The similarity of the databases assured the researchers of the absence of systematic or major errors.

Limitations

This research investigating the success of college transfer students is a post hoc analysis using data not originally collected for this purpose. This resulted in the following challenges.

- Compiling a longitudinal database was difficult due to modifications to data definitions and interpretations over the eleven year period encompassed by this study.
- For attributes not available for all years, secondary sources were used where available, to piece together the required information (e.g., the FORPOS code was used to identify Engineering transfer students prior to 2004 when the .POST identifier had not yet been introduced).
- Alternate offers of admission were recorded in an inconsistent manner over the eleven year period. Therefore, some students who were likely "alternate offered" in earlier years were removed from the database due to the fact that the first program enrolled in did not correspond to a college application on file.
- Students with complex pathways prior to becoming college transfer students at Lakehead University were not easily captured and are underrepresented in our database. For example, students who applied to Lakehead directly from high school, registered, subsequently dropped out and went to college then re-applied to Lakehead were considered as high school applicants because that was their first contact / experience with Lakehead University. Students who

⁴ For example a college student may have applied and enrolled for the September 2000 term at Lakehead. They may have subsequently left Lakehead University without completing the term, thus receiving no grades or credits, returned to college completed another diploma and reapplied at a later date receiving advanced standing. In this case the student would be entered into the database for their 2000 application and their advanced standing would not be included because it is not associated with their first application.

applied from college, dropped out to go back to college and re-applied to university at a later date are recorded on their first date of entry into Lakehead.

- Term sensitive data, that is data that changes by term, (e.g., program, full or part-time status, year level) was challenging to determine. For example, ideally we would assess the full-time / part-time status at the point of entry. However because many transfer students enter in the summer months on transition programs which have a part-time status, and therefore may not be an accurate reflection of their overall status. We used the first fall term status to determine enrollment and demographic characteristics. This may result in an under-representation of part-time students who did not enroll in the fall term.

Profile of Credit Transfer Students at Lakehead

There are many pathways into Lakehead University that a college student may pursue. For the 2011/2012 academic year there were three areas into which students could enter and receive 'block transfer' credit: Business Administration / Commerce, Engineering, and Natural Resources Management / Forestry. For each of the programs, students with a relevant diploma and the required average could transfer directly into third year, having received a block of credits for years one and two. For both the Engineering and the Natural Resources Management programs, transfer students are required to complete summer transition courses.

Students coming from college and receiving a half or more individual credits for prior college diplomas are categorized as 'advanced standing' students. Lakehead University has multilateral articulation agreements for the Concurrent Education and Social Work programs. These agreements offer up to a full year's credit (five full course equivalents) for students completing a relevant diploma with the required average. Several unilateral articulation agreements also exist between Lakehead University and Confederation College, Algonquin College, Seneca College and Sir Sanford Fleming College in a variety of programs ranging from Political Science, to Applied Bio-Molecular Science to Outdoor Recreation.

Finally, students with prior college experience may apply to Lakehead University for admission based on their previous studies at a college. These previous studies may include upgrading of a high school credential or partial completion of a diploma program. These students are categorized as 'other college' students.

Figure 1 presents the number of students transferring into Lakehead University by the three types of transfer described above.

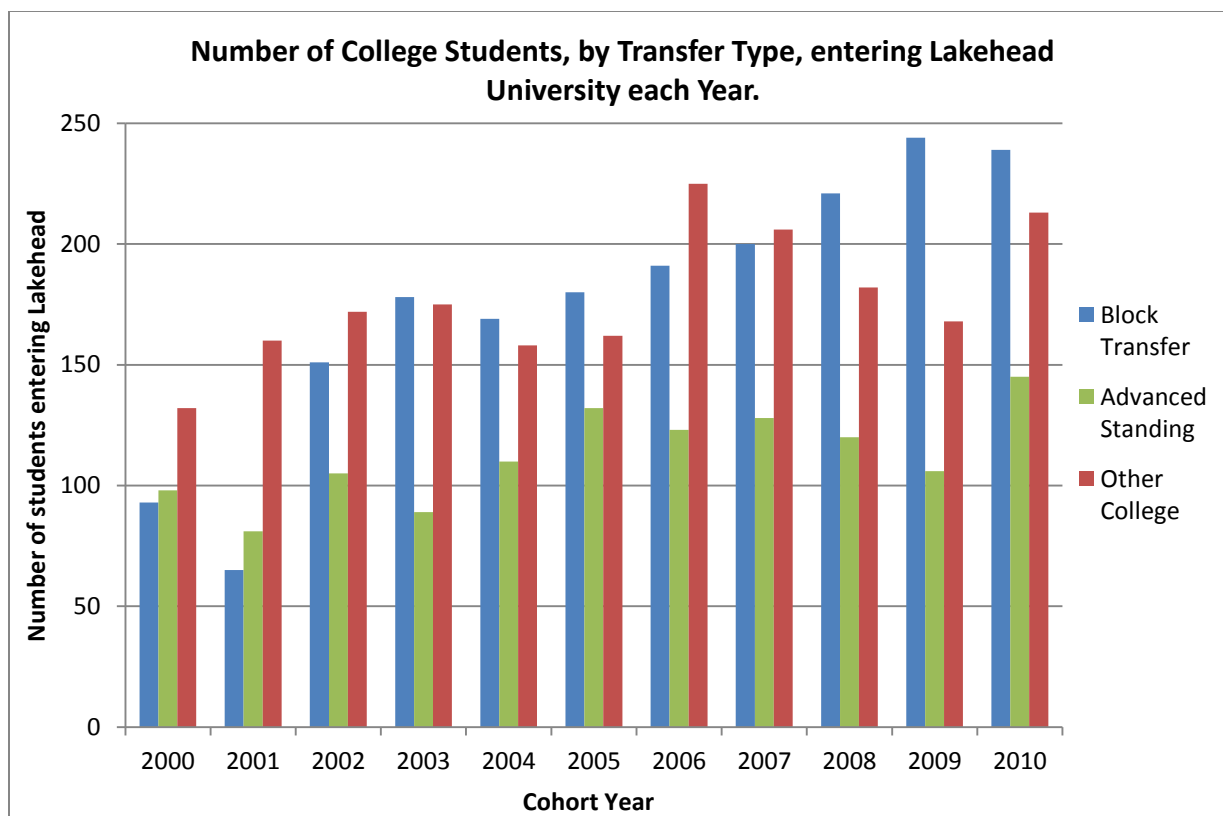


Figure 1: Number of college students by transfer type, entering Lakehead University each year.

Block transfer programs, which are offered in only three areas of study, are the most popular especially in recent years, drawing over 180 students per year since 2005. Engineering (Chemical, Civil, Electrical, Mechanical and Software) is the most dominant areas of study accounting for 87% of incoming block transfers. Most transfer students enter with some type of credit for their prior college work, although between 160 to 220 students per year (about 36% of all transfer students since 2005) enter Lakehead University from college with no transfer credit.

Majors

Of all the students entering Lakehead University as college transfer students since 2000, the most popular areas of study are: Civil Engineering, Electrical Engineering, General Arts and Science, Mechanical Engineering, Concurrent Education, Business, Access/Qualifying Programs, Nursing and Social Work (Figure 2). Combined, Engineering disciplines account for 29% to 42% of all incoming college transfer students in the years between 2000 and 2010, with an average of 37% for the eleven years. General Arts and Science accounts for about 10% of the incoming college transfer students while Concurrent Education accounts for 9.5%. See Table 1 for a list of the top five programs of study and their share of the incoming transfer student population from 2000 to 2010.

Table 1: Top five disciplines into which college transfer students entered at Lakehead University (2000-2010)

Percent of Total Transfers (2000–2010)	
Civil Engineering	13.3
Electrical Engineering	10.7
Mechanical Engineering	10.0
General Arts and Science	10.0
Concurrent Education	9.5

Engineering programs stayed consistently popular with incoming college transfer students throughout the decade. Concurrent Education programs became more popular from 2005-2010, accounting for 12.4% of incoming transfer students (Tables 2 and 3).

Table 2: Top five disciplines into which college transfer students entered at Lakehead University (2005-2010)

Percent of Total Transfers (2005-2010)	
Civil Engineering	14.8
Concurrent Education	12.4
Mechanical Engineering	10.5
Electrical Engineering	10.0
General Arts and Science	9.4

Table 3: Top five disciplines into which college transfer students entered at Lakehead University (2000-2004)

Percent of Total Transfers (2000-2004)	
Electrical Engineering	11.9
General Arts and Science	11.0
Civil Engineering	10.9
Mechanical Engineering	9.1
Access / Qualifying programs	7.3

Within the block transfer category there are only defined programs into which students can enter in the areas of Engineering, Business and Natural Resources Management. Within these areas, the most popular programs of study from 2005-2010 were Civil Engineering with between 62 and 85 entrants per year, Electrical Engineering with between 39 to 78 entrants per year and Mechanical Engineering with between 39 and 54 entrants per year. Business was the next most popular program, followed by Chemical Engineering.

For those entering with advanced standing the most popular disciplines were Concurrent Education, Social Work, two disciplines for which Lakehead has multilateral articulation agreements, followed by General Arts and Science.

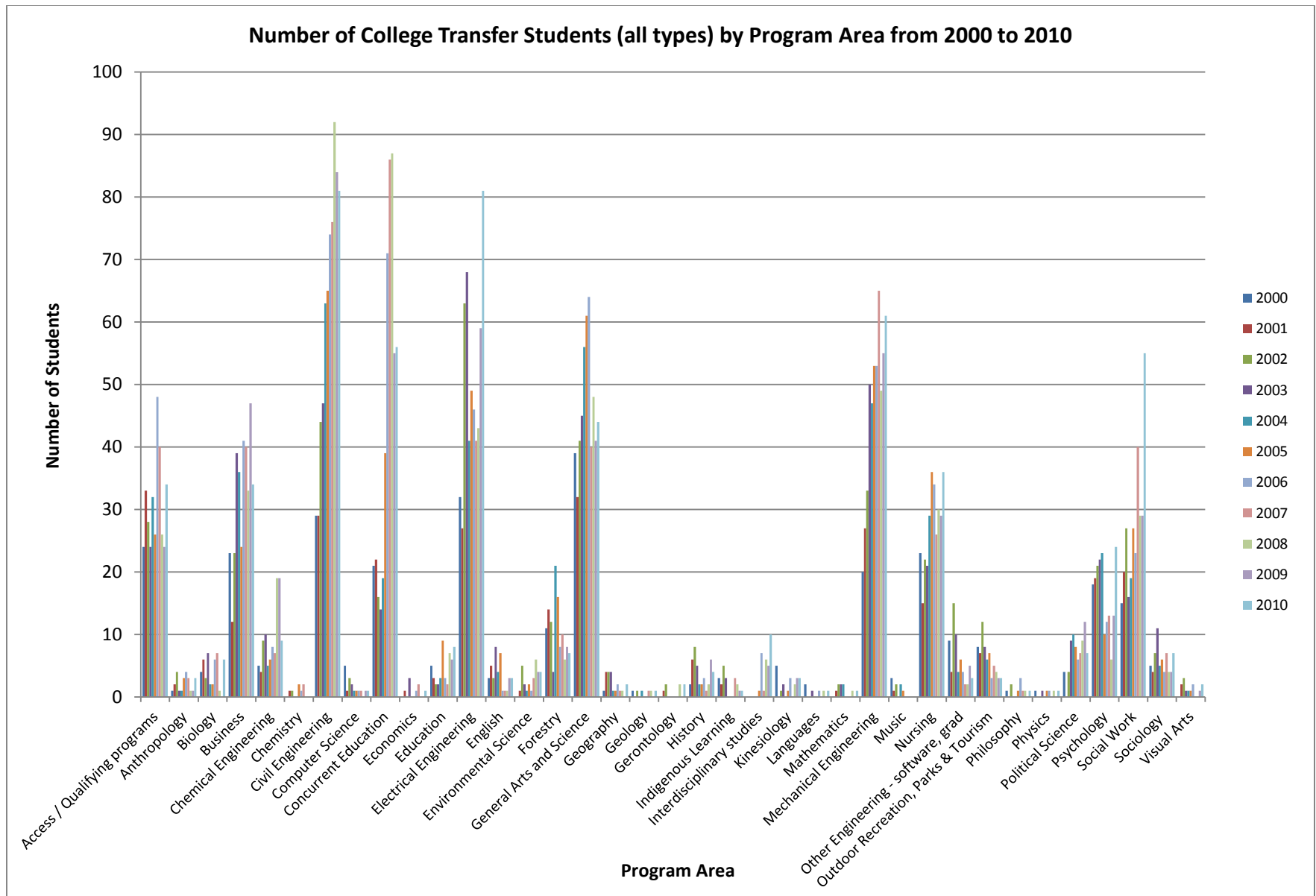


Figure 2: Number of College Transfer Students (all types) by Program Areas from 2000 to 2010.

Table 4: Top three programs into which students with advanced standing entered at Lakehead (2005-2010)

Percent of advanced standing (2005–2010)	
Concurrent Education	26.0
Social Work	17.2
General Arts and Science	9.8

For other college students, the most popular disciplines were General Arts and Science, Concurrent Education and Access / Qualifying programs followed by Nursing.

Table 5: Top three programs into which 'other college' students entered at Lakehead (2005-2010)

Percent of other college (2005-2010)	
General Arts and Science	19.4
Concurrent Education	17.1
Access / Qualifying Programs	15.9

Sending Colleges

Confederation College in Thunder Bay is the main sending college for Lakehead University. Between 100 to 200 students arrived at Lakehead from Confederation College each year between 2000 and 2010 accounting for 34% of the total transfer students. Following Confederation College, Lakehead University has drawn most of its college transfer students from the Ontario Colleges of Humber, Algonquin, Georgian, Seneca, Mohawk, and the British Columbia Institute of Technology (BCIT) (Table 6). Figure 3 shows the number of students by year originating from each of the sending institutions, excluding those that sent less than ten students.

Table 6: Top five sending institutions for transfers to Lakehead University (2000-2010)

Percent of Total Transfers (2000-2010)	
Confederation College	34.1
Humber College	4.1
Algonquin College	3.8
Georgian College	3.8
Seneca	3.7

Students enrolled in block transfer programs come from a variety of sending colleges across Canada. Some of the more popular sending colleges over the last eleven years were BCIT, Humber, Seneca, Mohawk, Algonquin, Southern Alberta Institute of Technology (SAIT), Niagara, and Northern Alberta Institute of Technology (NAIT) (Table 7).

Table 7: Top five sending institutions for block transfers to Lakehead (2000-2010)

Percent of Block Transfers (2000-2010)	
British Columbia Institute of Technology	7.3
Humber College	7.3
Seneca College	6.3
Mohawk College	6.1
Algonquin College	5.5

It should be noted that the Faculty of Engineering, whose programs form the majority of the block transfers at Lakehead, markets its programs across Canada which may explain the presence of BCIT, SAIT and NAIT as dominant sending colleges. If only the last five years of data for block transfer sending colleges is examined, the trend changes with BCIT falling from the list. In the mid-2000s, BCIT began offering Engineering degree programs similar to those found at Lakehead whereby students may opt to graduate with a diploma at the two year mark (BCIT 2010)⁵. This may be at least partially responsible for the drop in students coming to Lakehead from BCIT for the degree completion transfer program.

Table 8: Top five sending institutions for block transfers to Lakehead (2005-2010)

Percent of Block Transfers (2005-2010)	
Humber College	8.6
Seneca College	7.1
Mohawk College	6.4
Algonquin College	5.7
Northern Alberta Institute of Technology	5.5

For advanced standing and other college students, Confederation College was by far the largest sending institution, with an average of 44% of the incoming class of advanced standing students originating from Confederation each year from 2000 to 2010, but falling in the overall proportion to 39% of the incoming transfers from 2006-2011⁶. On average, 57% of other college students arrived at Lakehead University annually from Confederation College between 2000 and 2010. Since the opening of Lakehead University's Orillia campus in 2006 it appears that Georgian College (Barrie) has become the second largest sending institution in these categories, averaging 11% of incoming advanced standing students and 6% of incoming other college students from 2006 to 2010.

⁵ In spring 2009, BCIT graduated its first students from the Bachelor of Engineering (Mechanical). In 2010, BCIT graduated its first cohort of students from the newly accredited Bachelor of Engineering (Civil) program, and Bachelor of Engineering (Electrical) program was ready to graduate students in Spring 2011. (BCIT 2009a, BCIT 2009b).

⁶ The actual number of students originating from Confederation College remains relatively stable over the two time periods averaging 48 to 49 students per year.

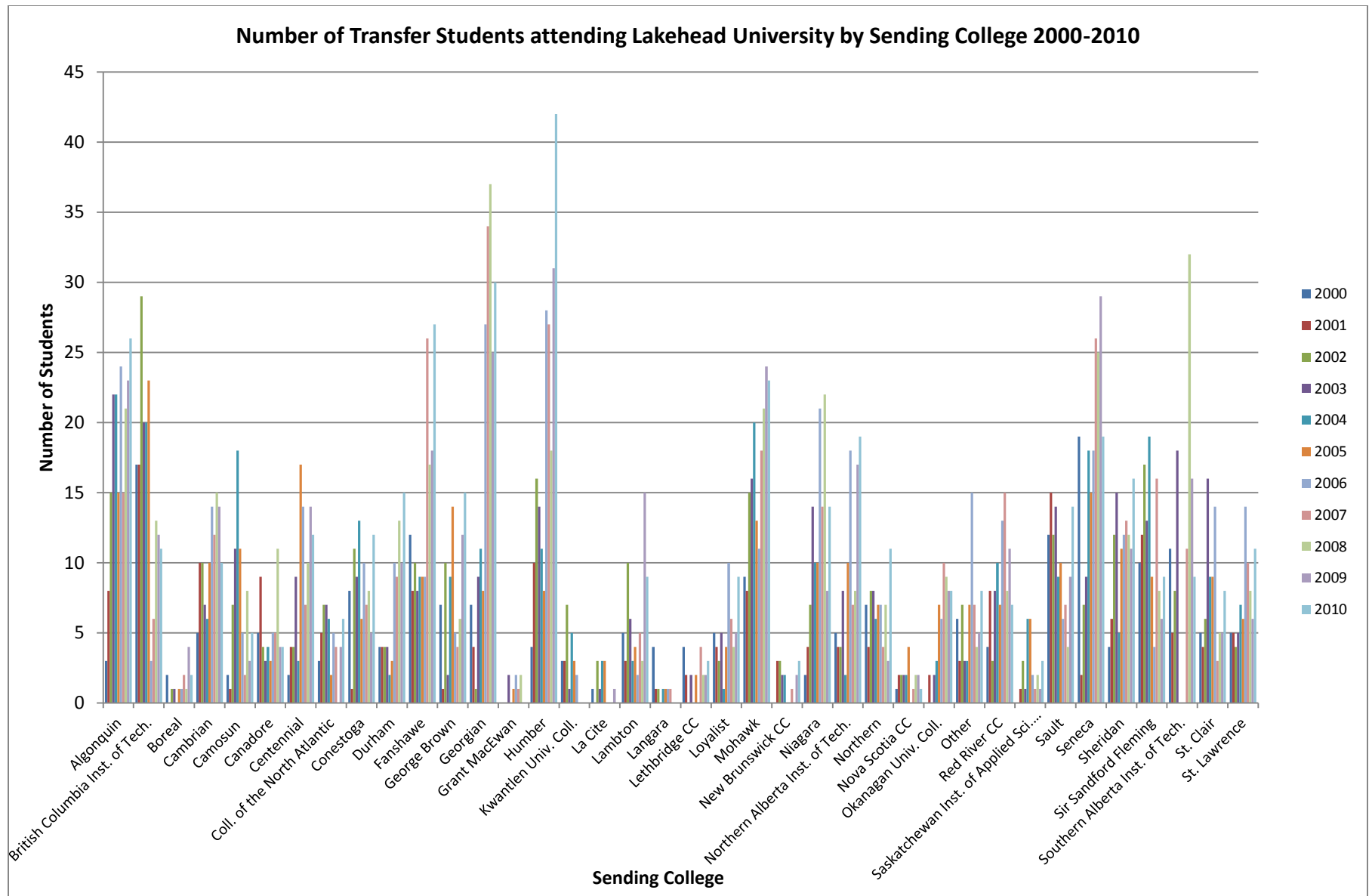


Figure 3: Number of transfer students attending Lakehead University, by sending college 2000-2010, excluding Confederation College and those colleges sending less than ten students in the time period.

Demographics

More males than females transfer to Lakehead University from college. However, this may have more to do with the types of programming offered as opposed to any particular demographic pattern. For example, there are more males than females in block programs but this may be because of the type of programs offered (e.g., Engineering) which is still predominantly a male dominated sector. The Engineering transfer program (all types – Mechanical, Civil, Electrical, Chemical, and Software) is the dominant block transfer program at Lakehead University accounting for an average of 87% of annual incoming “block transfers”. When we look at those transferring in with advanced standing or other college we see that in recent years between 60% and 70% of students are female. (Figure 4).

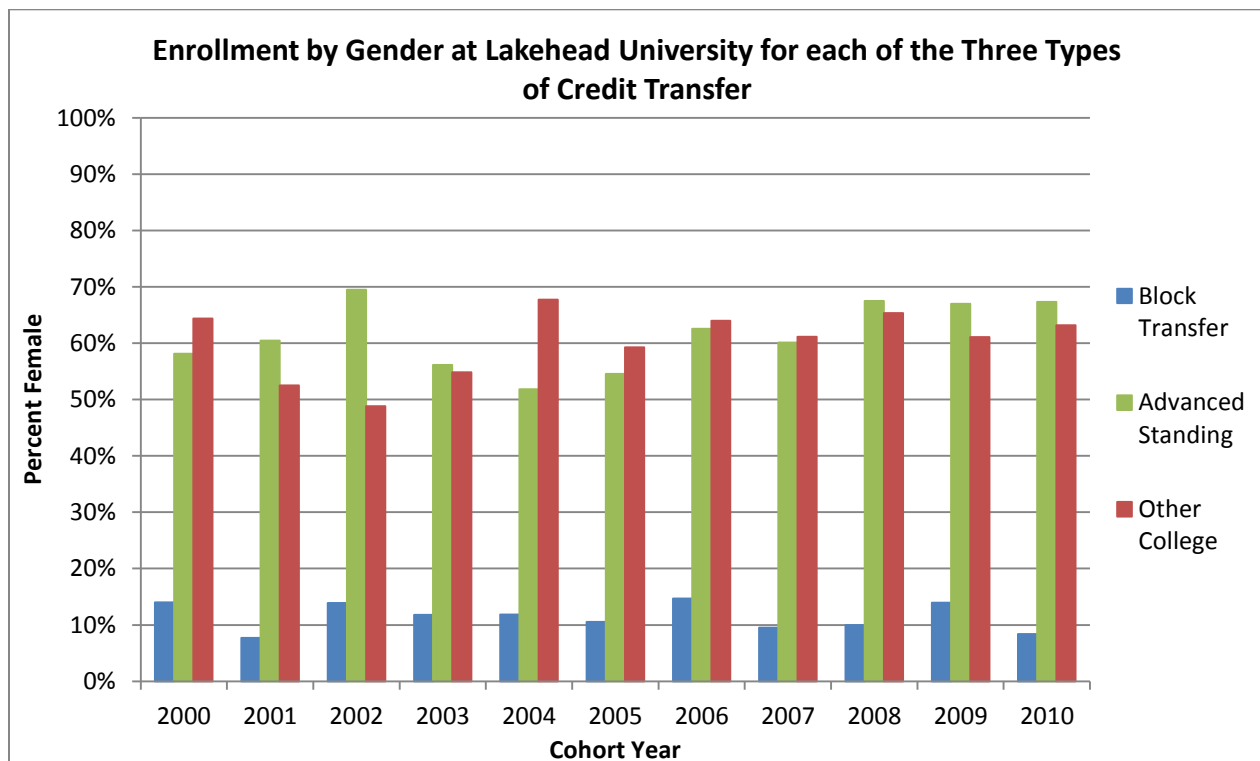


Figure 4: Enrollment by gender, showing the percent female, for each of the three types of credit transfer students

Program Characteristics

Most of the block transfer students come in as full-time students with between 88% and 96% of them entering in any given year⁷. Advanced standing students are the next most likely to attend full-time with about 80% doing so in any given year. Finally other college transfer students are the least likely (about 75%) to be full time students upon first entering into Lakehead University.

⁷ Many college students transitioning to Lakehead University may enter in the spring / summer terms and participate in transition programs (which often result in the student being registered as a part-time student). In order to assess full and part-time status we used the enrollment status at the first fall term.

Students entering Lakehead University with advanced standing, receive on average 3.31 transfer credits. This number rises slightly to 3.35 when only full-time students are considered.

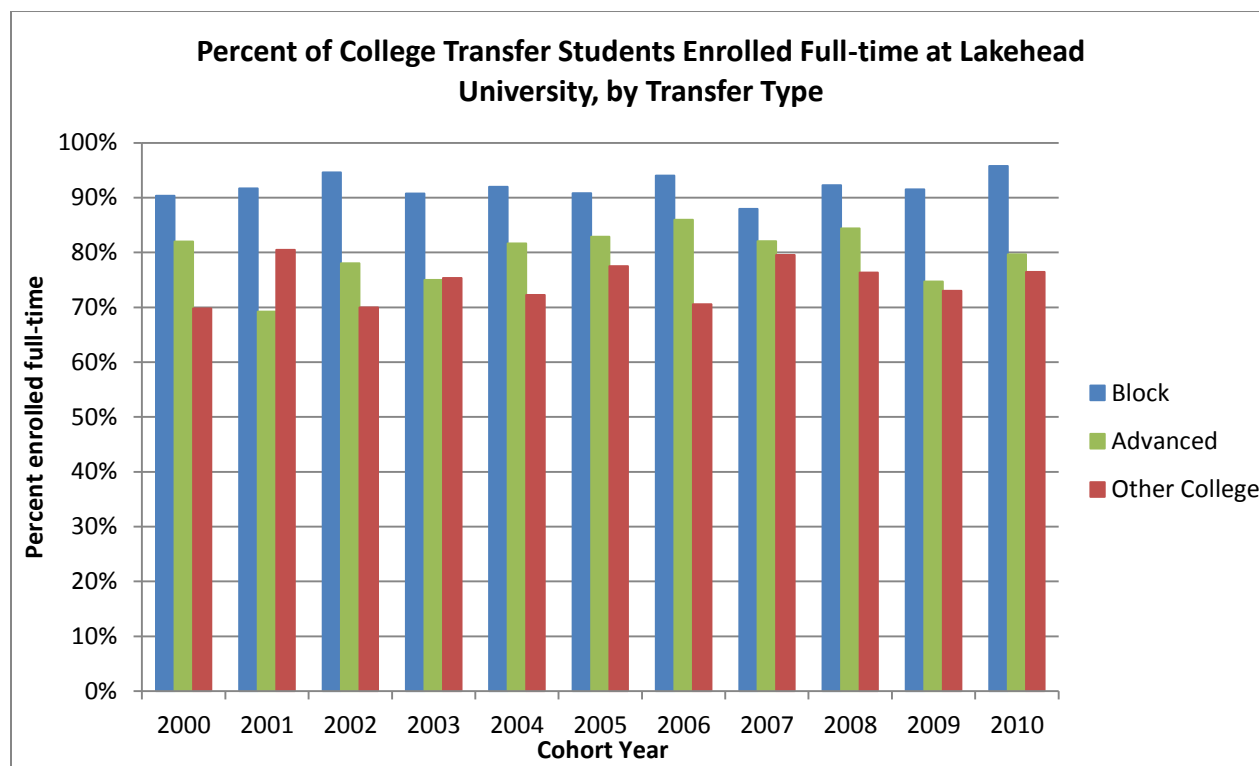


Figure 5: Percentage of college transfer students enrolled full-time, during their first fall term, by transfer type.

Results

The success of college transfer students is gauged by five criteria: retention rate, success rate, graduation rate, common entry year graduation rate and first term grade point average. Comparisons were initially made including both full and part-time students, as part-time students form an important component of the college transfer cohort (nearly 25% of other college students) as compared to 12% of the direct entry cohort. However, to provide a more accurate and realistic comparison, only data from full-time students was used in most of the analysis. Readers should take this into consideration when interpreting these data as part-time students do form a substantial portion of college transfer students.

Retention Rate

The retention rate for college transfer students was initially calculated and compared using the Consortium for Student Retention Data Exchange (CSRDE) formula for first-time, full-time freshmen. In order to make the data comparable only credit transfer students for which we had reliable full-time / part-time status were included.

Those students that received half or more advanced standing credits for their prior college work have the highest year one to year two retention rate of the three types of college transfer students with the average retention rate since 2005 being 82.5%. Block transfers are next with the average annual retention rate since 2005 being 81.2% followed by 77.4% for other college students. See Figure 6.

Compared to direct entry students as measured by the CSRDE method and reported to the Ministry of Training Colleges and Universities (MTCU) (average 86.9% since 2005), transfer students as a whole had a slightly lower retention rate.

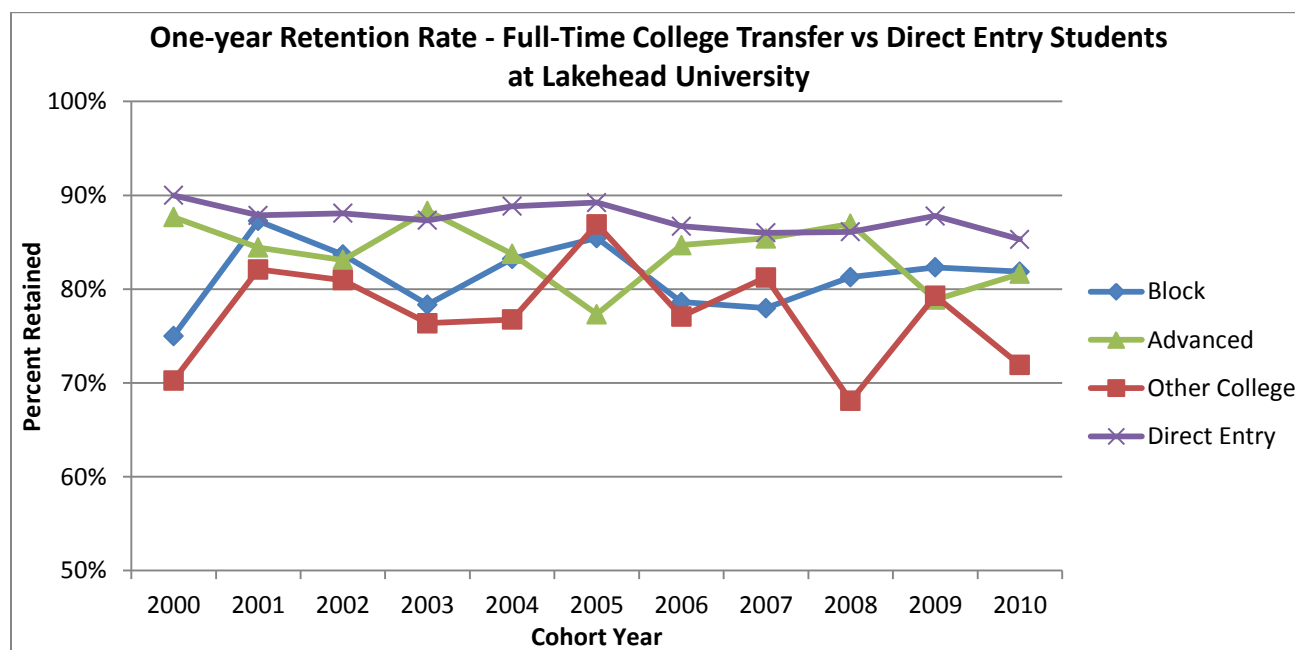


Figure 6: The one-year retention rate measured as “returning the fall term one year from the date of enrolment” for full time college transfer and direct entry students.

However, even when considering only full-time students it was difficult to establish a retention measure for transfer students that would be comparable to that reported for direct entry students using the CSRDE methods (i.e., the fall-to-fall retention of first-time full-time freshmen). First, because transfer students enter Lakehead at numerous entry points, it is hard to calculate the traditional fall-to-fall retention rate that is used for direct entry students (direct entry students overwhelmingly enter Lakehead in the fall term). For example a one-year retention rate might actually be under-reported because for students who entered in the winter of 2001, it would be closer to two years by the time they are counted as retained one year (fall 2002). (The other option would be to overestimate by including those who had been retained for half a year in the one-year retention rate.) Second, year one to two retention rates of block transfer students and students with advanced standing may not be comparable to those of direct entry or other college students. Students who have been granted advanced standing or who have been granted block transfer have already ‘passed’ the year one retention / attrition test and therefore may have a higher likelihood of being retained than those entering with no transfer credits awarded⁸. Third, due to the fact that some transfer students graduate within one year, the traditional measure of retention may not fully capture what it is designed to measure. In addition, because there may be greater likelihood of graduating after one year in a block

⁸ Calculations using Lakehead’s CSRDE data show that attrition is highest in the early stages of university. That is retention rates from year two to three and years three to four are higher than from year one to two.

transfer or advanced standing situation than in an “other college” situation by calculating a one-year retention rate we may be skewing the results.

Success Rate

We are ultimately looking to measure the success of a student so we developed a hybrid measure which we call the “one-year success rate”. This measure considers students as being a success if they either graduate within one year or continue to be enrolled in the following year. Examined this way, block transfer students are by far the most successful of the three types of student with an average success rate of 89.0% since 2005, making them more successful than direct entry students (86.9%)⁹. Advanced standing students had the next highest rate of success at 82.5%, followed by other college students at 79.8% (Figure 7).

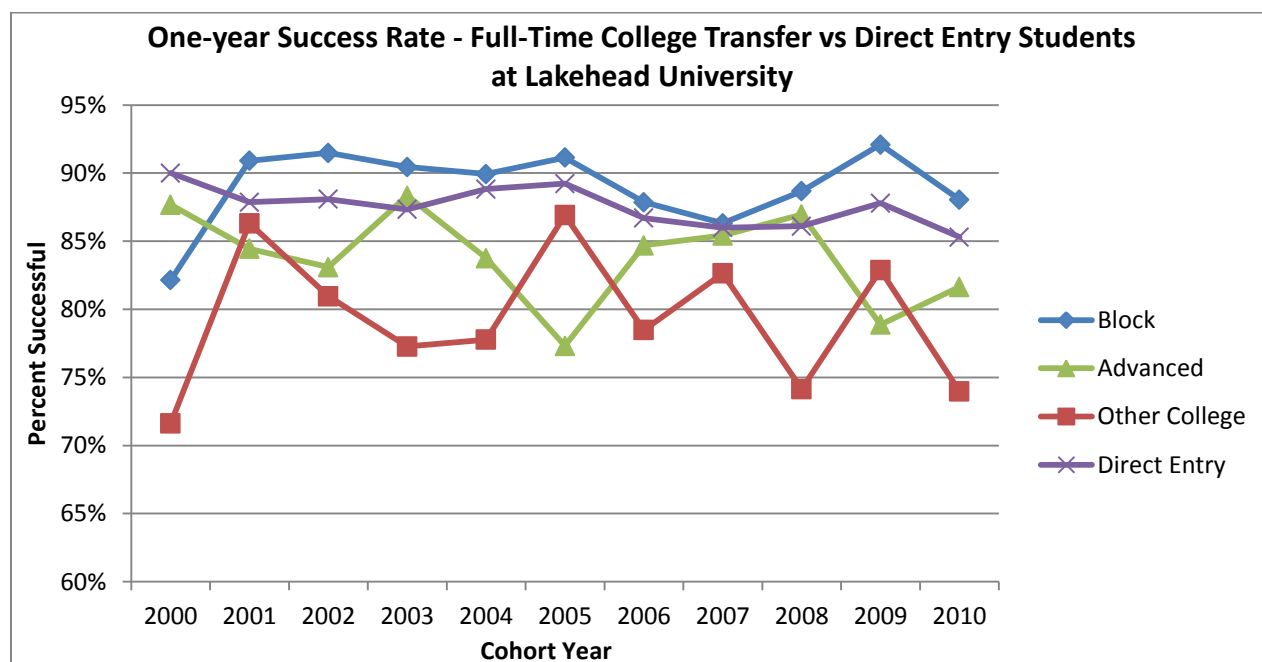


Figure 7: The one-year success rate measured as a student either being graduated or returning as of the fall term one year from the date of enrollment, for full time college transfer and direct entry students.

The one-year success rate measure seemed, conceptually at least, to be robust enough to measure the success of both full and part-time students. (The measure asks only if a student returned and not about how many courses they were taking). However, full-time / part-time status seemed to have a large role to play in the one-year success rate. When all students were included in the calculation, the one-year success rate declined (Figure 8). For example, the success rate of advanced standing students falls from an average of 82.5% for full-time from 2005 to 2010 to an average of 72.3% for part-time over the same time period. Meanwhile the success rate of other college students fell from an average of 79.8% (full-time) to 64.4% (part-time) over the same time period. This drop could be due to the fact that part-time students are dropping out or due to the fact that they simply are not enrolling in fall term courses (the

⁹ The success rate for direct entry students is equal to that of the one-year retention rate. By definition and the nature of the programs offered at Lakehead University, no student entering Lakehead University direct from high school and pursuing a regular course load would be able to receive a degree in one year.

one term they must enroll in each year in order to be counted a success using this methodology). If it is indeed the former, attention needs to be paid as 24% of the other college student cohort and 18% of the advanced standing cohort since 2005 have been part-time students.

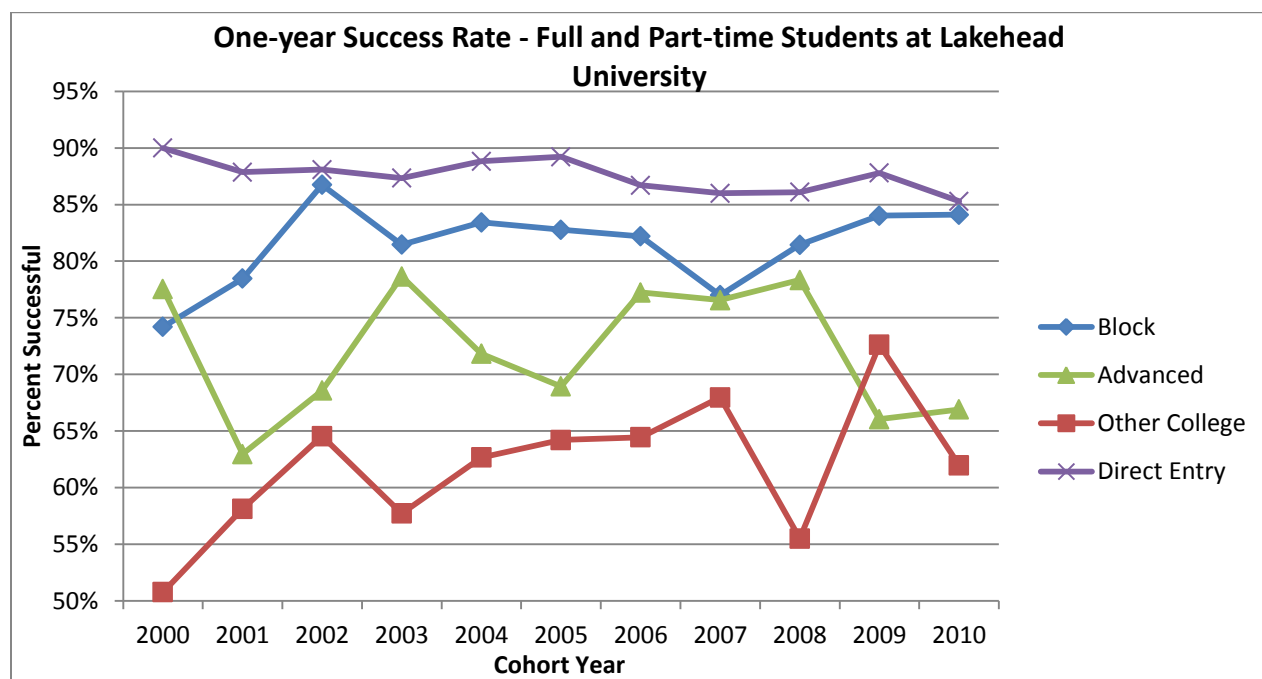


Figure 8: The one-year success rate measured as a student either being graduated or returning as of the fall term one year from the date of enrollment, for full and part-time college transfer and full-time direct entry students.

Graduation Rate

Graduation rate is a popular measure of success and both six year and seven year graduation rates of direct entry students are used in accountability reporting to the MTCU. In order to develop and compare graduation rates, we chose to compute the graduation rate of students two years after the normal time to completion of their program. This was based on the CSRDE's six year graduation rate indicator for four year programs. For the block transfer programs, this means the graduation rate should be calculated three years (one-year programs) and four years (two year programs) after entry into their program¹⁰. Those with advanced standing or other college experience as well as the direct entry comparators would be five (3 year degrees) to six (4 year degrees) years after their date of entry. To reduce errors associated with part-time status, college transfer graduation rates were calculated using only those transfer students who entered with full-time status. The six-year equivalent graduation rate is presented in Figure 9.

¹⁰ This assumes entry into year three with years one and two (or equivalent) completed.

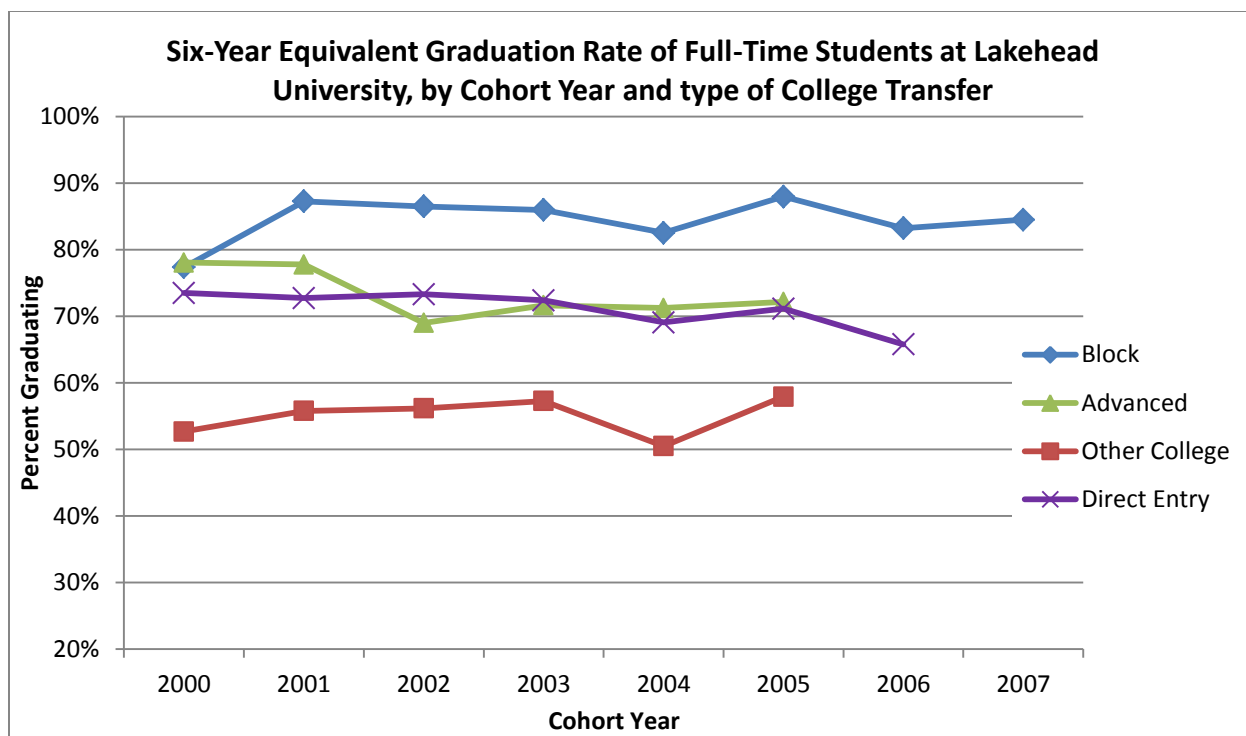


Figure 9: The six-year equivalent graduation rate of full-time students by cohort year and type of college transfer.

When graduation rates of full-time transfer students are compared, the rates of advanced standing students are comparable to those of direct entry students (73.3% average versus 72.0% average from 2000 to 2005), while block transfer students exceed the rate of direct entry students averaging 84.4% since 2000.

It should be noted that the methods used above may inflate the graduation rate for college transfers when compared to direct entry students. Students who have been granted advanced standing or who have been granted block transfer have already `passed` the year one and possibly the year two retention / attrition test. It is therefore assumed that these students are more committed to their education and have more likelihood of succeeding than a student entering first year without prior postsecondary education experience. On this basis we explore refinements to the measure.

Common Entry Year Graduation Rate

In an attempt to take into account attrition in years one and two we modified the six-year equivalent graduation rate comparator. We used the six year graduation rate of first-time full-time freshmen who had successfully made it to year 3 for a comparator to block transfer students (4 years from time of entry into 3rd year)¹¹. This provides a more robust comparison as it tracks the graduation rate of the two sets of students from roughly the same starting point (entry into year 3). Similarly we compared the six year graduation rate of first-time full-time freshmen who had made it to year 2 as a comparator for those who had received at least a half credit of advanced standing. Although the amount of advanced

¹¹ It should be noted that Engineering transfer students do have to complete transition courses that may take up to two summers to complete.

standing credits received varies considerably between students it was felt that having at least a half credit already completed would provide a level of success that approximately corresponds to that achieved when completing first year and would provide similar incentive to continue pursuing a degree as someone who had completed some first year courses. Finally, those with no advanced standing were compared to first-time full-time freshmen entering year one. The results are presented in Figure 10 below.

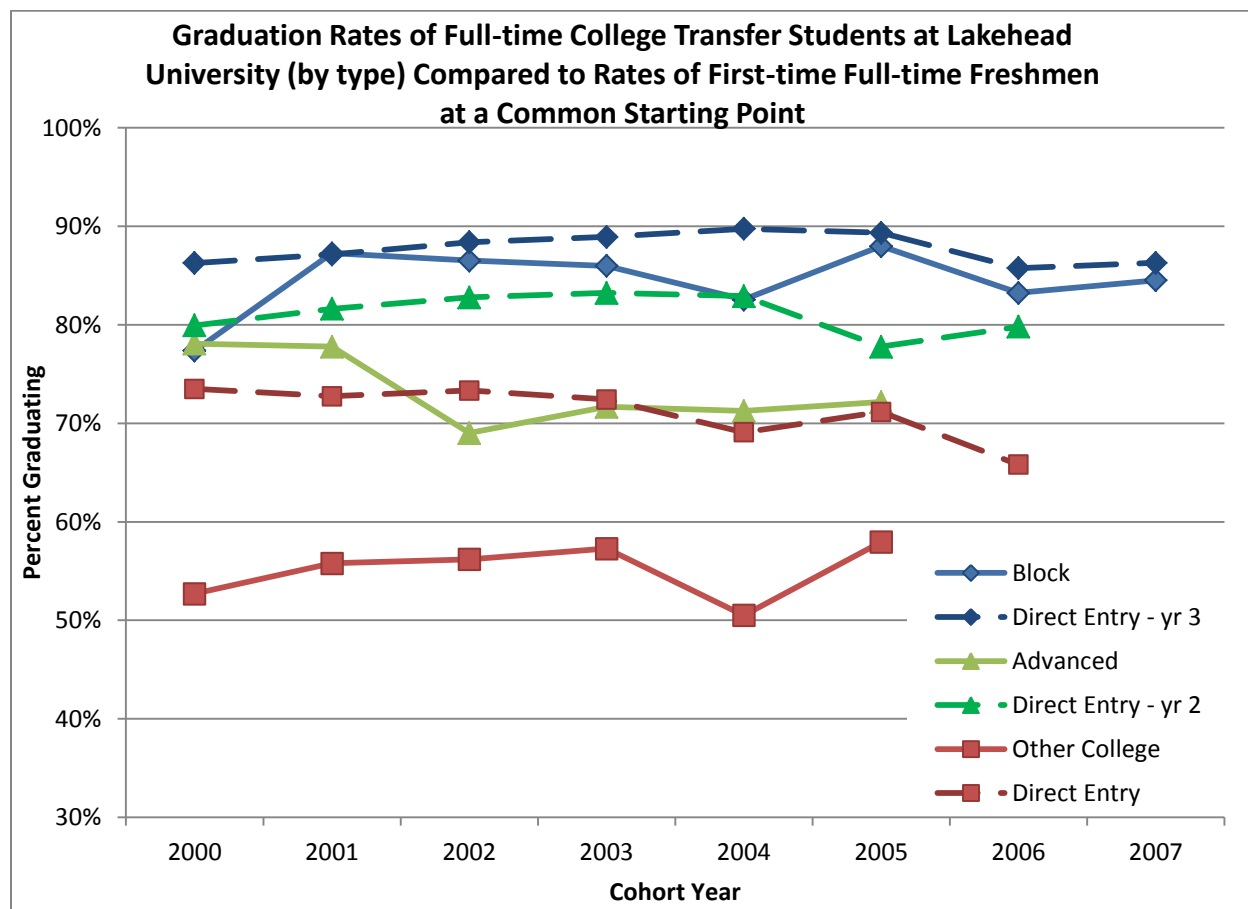


Figure 10: Graduation rates of full-time college transfer students (by type) compared to the rates first-time full-time freshmen taken at a common starting point (e.g., block transfers entering year three are compared with first-time full-time freshmen who have made it to year three).

When adjusted for entry points / initial attrition we see that other college transfer students have lower graduation rates than their first-time full-time (direct from high school) counterparts. However, block transfer students have similar success rates to their first-time full-time counterparts when taken from the beginning of year three (84.4% versus 87.7%). Although the six-year graduation rate of advanced standing students (73.3%) is slightly lower than that of their first-time full-time counterparts entering year two (81.2%), the difference is less than for other college students. In addition, the graduation rate for advanced standing transfer students might be better represented at the seven year mark since the average full-time advanced standing student receives only 3.4 credits.

Grade Point Average

A final method of determining the success of students is by measuring their grade point average (as a percent) after one term at university. This will pinpoint whether the student has been able to successfully make the transition to university. Although not an ideal measure if there is no pre-entrance GPA as a control, at an aggregate level it is useful, assuming similar distributions of pre-entrance GPAs. The first term GPA of college students tends to be on average lower than that of direct entry high school students (see Figure 11 below).

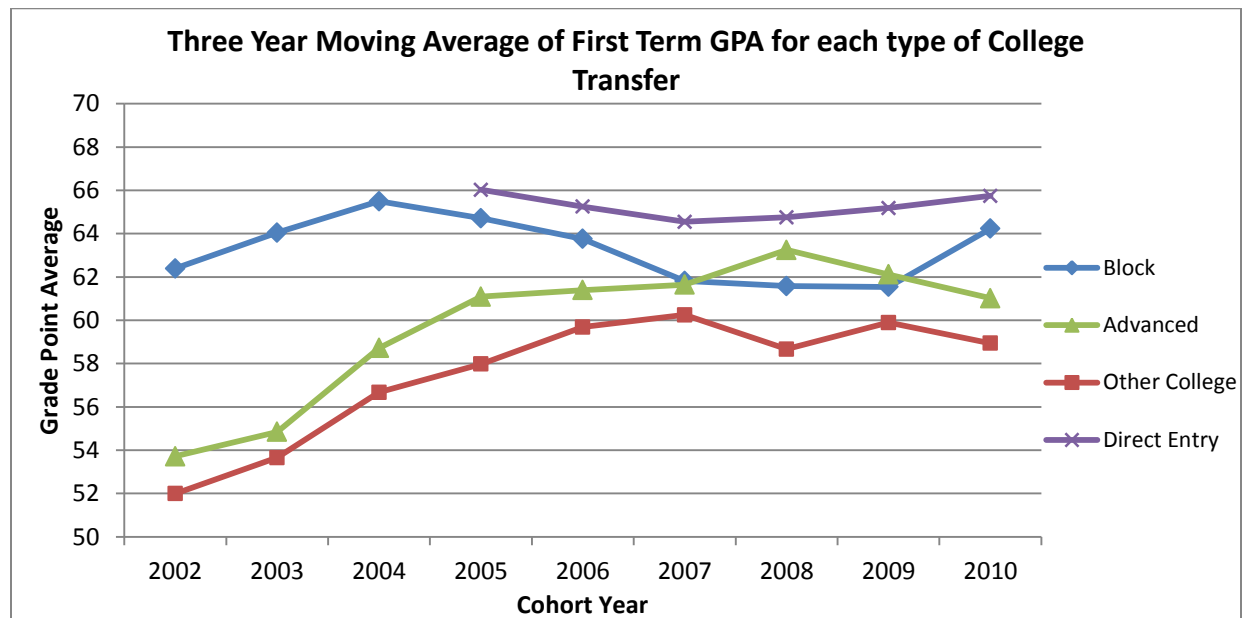


Figure 11: Three year moving average of first term grade point average (GPA) for each of the three types of college transfer students.

However, when only full-time students are considered, the averages climb with both advanced standing and block transfer students having on average a higher average GPA than direct entry students (Figure 12).

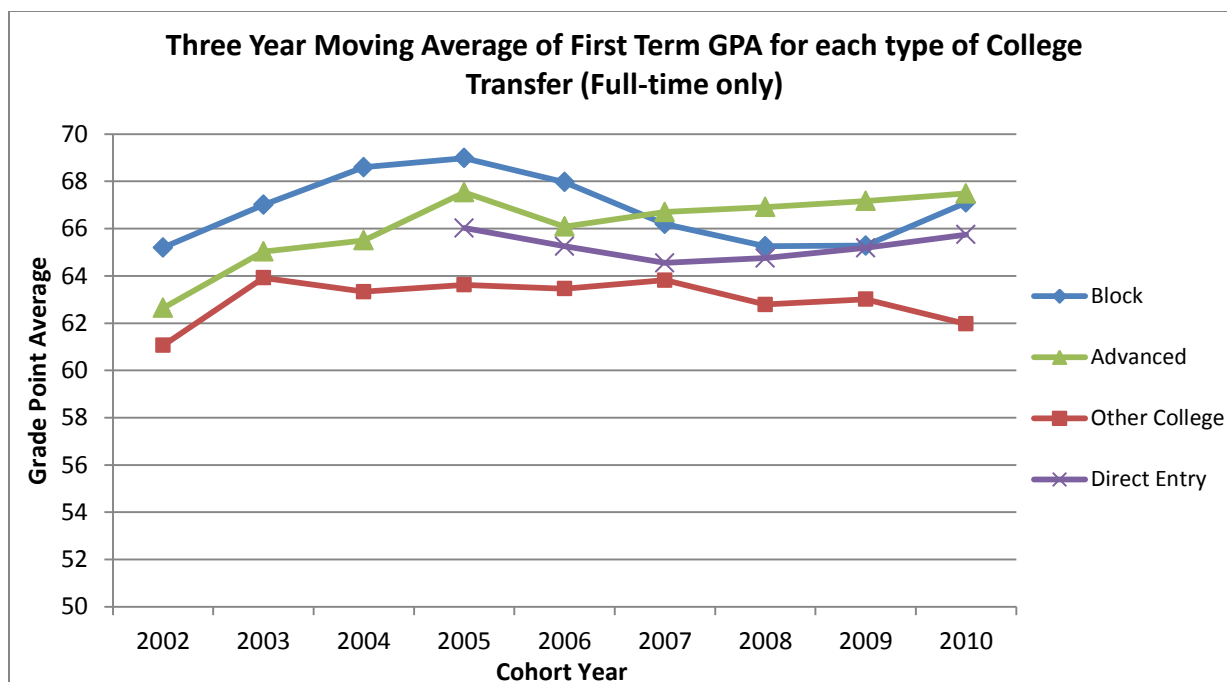


Figure 12: Three year moving average of first term grade point average (GPA) for full-time students for each of the three types of college transfer.

Conclusions and Recommendations

This study shed light on the characteristics and success rates of credit transfer students at Lakehead University. Overall, full-time college transfer students at Lakehead are at least as successful as their direct entry counterparts. In fact, the one-year success rate of full-time block transfer students is higher than that of their direct entry counterparts. Furthermore, the six-year equivalent (relevant) graduation rate for both full-time block and full-time advanced standing students is higher than that for full-time direct entry students. When taken from a common starting point though the success rate of college transfer students doesn't quite match that of direct entry students, most likely because we have removed the element of first year attrition from the direct entry cohorts by starting the comparison in years two or three. The first term GPA for block and advanced standing college transfers was also higher than for direct entry students.

At the aggregate level, students entering block transfer programs are more successful than those entering with advanced standing or those entering with other college experience. Other college students scored the lowest (including compared to direct entry students) on all indicators. Although not explicitly examined, part-time status seemed to lower the success rate and average GPA for all three types of college transfer.

With the limited variables available in this study, we are unable to determine whether the differences discovered here (between full-time and part-time status and between the various types of credit transfer) are due to the credit transfer program or some other endogenous variable. It is impossible to say whether the variations in GPAs, graduation rates and success rates are attributable to factors related

to the college transfer experience (e.g., academic preparation, transition to university, peer support) or demographic variables such as age and financial status, or even entering averages. Similarly, it is difficult to tell whether the greater success rates of block transfer programs are correlated with the presence of formalized pathways and summer transition programs. A more fulsome study where we hold constant some of the entering characteristics of students (such as entering average, demographics) might be able to shed more light on whether the differences discovered here are due to characteristics present in the credit transfer program.

It is encouraging to find that in circumstances similar to those experienced by direct entry students, college transfer students have similar amounts of success at Lakehead University. However, students coming in as part-time students or students without any college credits do seem to have a lower success rate. The university may wish to enhance programs to assist these students.

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