

College Student Achievement Project



VOLUME 4, ISSUE 2

APRIL 2015

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Acknowledgment:

The College Student Achievement Project is sponsored by the Ontario Ministry of Education and the Ontario Ministry of Training, Colleges and Universities

Final Report 2015: Executive Summary

The CSAP Final Report 2015 presents the findings on the mathematics and language (English and French) participation, achievement and secondary school background of the first semester 2012/13 college student cohort and on their participation and achievement in second semester.

In addition to reporting on the analysis of the data listed above, the project's second goal is to engage members of the college and school communities in discussion centred on ways to increase student success in college mathematics and communication courses, to improve their overall retention, and to make the transition from secondary school to college as seamless as possible.

CSAP includes all 24 colleges and 72 district school boards in the province. It is funded by the Ministry of Education and the Ministry of Training, Colleges and Universities, and lead by a team of researchers based at Seneca College.

The first chapter of this report introduces the project, its research questions and the criteria under study. It also contains explanations of how CSAP has grouped college programs into Program Clusters and how a common CSAP grading system for college grades was created. Definitions of the various types of first and second semester mathematics and language courses are included. Data is available on overall student enrolment by program clusters and sub-clusters and includes a comparison between the fall 2011 and 2012 student enrolment by program cluster. Overall enrolment increased by 2.92% in 2012. Approximately 2% fewer students continued into the winter semester in 2013.

Highlights from Chapter 2, Mathematics, include the following:

- Approximately 40,000 students were enrolled in mathematics courses in the fall 2012 semester; of those, a little over 10,000 were enrolled in either remedial mathematics courses or mathematics courses in foundations programs. In 2008, 17.3% of students were enrolled in preparatory mathematics courses; in 2012, 25.8% of students were enrolled in these courses

- Achievement shows little difference among program clusters, but at the sub-cluster level the differences among groups is more marked
- There is little difference among students types: the achievement of Recent Ontario Graduates (ROGs) and Direct Entry students (DEs) is similar in both college-level and preparatory courses
- When achievement is broken down by age and gender, females consistently outperform males and older students (30-39 and 40-49 age groups) outperform younger students, specifically those in the 23 and younger group
- Approximately 1/3 of students are “at risk” of not completing their program due to their grades in first semester mathematics courses; there has been little change in overall mathematics achievement in the past five years
- As discussed in previous reports, the level of achievement in secondary school courses has a significant impact on success in college mathematics courses –those with over 80% in MAP4C were more successful (76.6% achieved Good Grades [GG]) than those with grades in the 60-69% range, where 46.7% achieved GG and in the 70-79% range 62.5% did so; of those who had taken MCT4C, marks in the range of 70-79% produced success rates of 75.5% and of those with marks of 80% and above, 85.9% achieved GG
- Of students graduating with credits in college-destination mathematics courses, 60.1% of those who had taken MAP4C achieved GG, while 71.4% of those who had taken MCT4C achieved GG
- An examination of three of the Grade 11 and 12 course combinations shows results similar to previous years: MBF3C and MAP4C is the most frequently followed pathway, but only 55.4% of the students achieved GG in college; of those who had taken MCF3M and MCT4C, 70.3% achieved GG; and students with credits in MCR3U and MDM4U achieved the highest rate of success, 77.5% GG
- Grade 9 and 10 course selection is related to college achievement; students who take the academic courses in both grades, the most popular route, have the highest level of achievement in college mathematics (76.2% GG); of students who take the applied courses, 67.1% achieve GG while of those who take Grade 9 academic and Grade 10 applied, only 60.2% achieve GG
- Of students with a Grade 11 mathematics course as their terminal secondary school course, overall only 55.8% achieved GG in any first semester mathematics course; however, of those students who had taken MCR3U, 72.8% achieving GG
- 91.6% of students who achieve good grades in Semester 1 (68.2% of students) continue to second semester while only 60.2% of those with at risk grades in the fall (31.8% of students) proceed to the next semester
- Six different types of courses are available in second semester; most second semester students (11,758) are enrolled in a second semester mathematics course, which can be one of three types, and achieve the highest level of GG at 70.7%
- Second semester students repeating a first semester course have the lowest level of achievement with only 35.6% receiving GG

Chapter 3, Language, analyzes the data on student participation and achievement for both French and English-speaking students together and that on secondary school background separately. English-language students take regular communication courses taught using an expository or vocational writing approach. First level regular French-language courses combine the two approaches. Remedial language courses are offered at four English-language colleges and one French-language college. Developmental courses, for English as a second language students, are offered at four of the GTA English-language colleges.

Highlights from the data include the following, most of which support the findings of the previous year:

- 70,913 students were enrolled in a first semester communications course; from 2011 to 2012 the enrolment increased by approximately 1,000 students, most of whom were enrolled in expository writing courses; the enrolment in remedial courses dropped as only five colleges offered these courses in 2012 while seven colleges did so in 2011
- ROGs account for 60.7% of the enrolment in remedial courses of which 54.9% are DEs
- Looking at achievement by grade and gender, females outperform males at the higher grades (As and Bs); the grading pattern is, as it was the previous year, bimodal with peaks at the A/B and F grades; overall 46.8% of students achieved either an A or B grade and 73.2% received Good Grades (GG – A, B, C, P)
- An examination by gender and age shows females outperforming males in all age groups and those in the 30-39, 40-49 and 50+ groups all achieving more than 80% success rates while of those in the under 23 group 66.9% of males and 75.7% of females achieved GG
- When comparing achievement by course type between the 2011 and 2012 cohorts, there is a slight decrease in the success rate in expository writing courses, no change in vocational writing courses, and a substantial increase in good grades in the remedial and developmental courses
- Looking at achievement based on secondary school courses, for English-language students there is again a substantial difference in success rates between students with a credit in ENG4C (65.4% of ROGs and 66.0% of DEs achieve GG) and those with a credit in ENG4U (76.8% of ROGs and 77.0% of DEs achieve GG)
- An even larger difference is seen between French-language students with a credit in FRA4C (66.8% of ROGs and 65.9% of DEs achieve GG) and those with a credit in FRA4U (79.8% of ROGs and 81.4% of DEs achieve GG)
- Of English-language students who follow the applied/college-destination route from Grades 9 – 12, 63.1% achieve GG in college communications courses; of those who follow the academic/university-destination route, 77.1% achieve GG

- 57.3% of French-language students with credits in the applied/college-destination courses achieve GG while 82.1% of those who take the academic/university destination courses achieve GG
- Similar to the results for mathematics, the level of achievement in secondary school English/French courses impacts later achievement in college; for example, of students with marks in the 60-69% grade range in ENG4C, only 54.3% achieve GG, while of those with marks at 80% and above, 79.5% receive GG; 72.1% of the students with marks in the 60-69% range in ENG4U achieve GG, while 80.6% of those in the 70-79% range and 86.7% of those in the 80+ range do so
- Results are similar although with even more disparity for French-language students; of those with marks in the 60-69% range in FRA4C, 54.7% receive GG while 95.3% of those with grades at 80 and above do so; of those with marks in the 60-69% range in FRA4U, 72.7% achieve GG, and 90.9% of those in the 70-79% range and 100% of those in the 80+ range do so
- 73.2% of students achieve GG in first semester; of those 89.5% continue to second semester
- 26.8% received 'at risk' grades in first semester of which only 59.4% continued to second semester
- There are seven types of second semester English courses and three types of second semester French courses; in both languages, fewer than 50% of students who repeated first semester courses achieved GG

CSAP sponsored a Provincial Forum in fall 2014 and brought together 125 representatives from schools, colleges, universities, government, associations and agencies. After listening to short presentations on the data, participants at each table were asked to answer a series of questions related to specific topics, to record their comments on the laptops that were provided and to submit them to CSAP. The forum was introduced by Assistant Deputy Minister Gallagher, Ministry of Education, who spoke of the importance of using research to find ways to assist students in making the transition from secondary to postsecondary education, among other topics. Dr. Charles Pascal was the keynote speaker and "Critical Friend" and spoke of the many opportunities for improvement in both secondary and postsecondary pedagogy, policies and practices. Details of these speeches, a summary of the deliberations from the table discussions and information on two additional CSAP Projects, the Assessment Development Project and the Learning Outcomes Development Project, can be found in Chapter 4.

The final chapter of the Report is entitled *Recommendations and Supporting Suggestions*. No new recommendations emerged from this year's data. Rather patterns observed over the past five years for mathematics and two years for language were reinforced in the analysis of the data. As a result, the CSAP Research Team decided to repeat a number of recommendations from past Reports and offer supporting suggestions that have emerged

from discussions at forums and other CSAP presentations to assist in the full realization of the recommendations. The recommendations are presented under three main themes: Student Success, Mathematics and Numeracy, and Language and Literacy. The supporting suggestions are presented under the same themes with Student Success being divided into the following sub-themes: Making the Transition to College, Valuing Colleges as Post-secondary Destinations, the School/College/Work Initiative, College Practices, Further Research, and Accountability for Learning Skills. Numeracy and Literacy are combined and broken into two sub-themes: Teacher Preparation and Pedagogy and Curriculum Design.

The CSAP Research Team believes that with the will and cooperation that has led to the many successes enjoyed by the CMP and CSAP, a new vision of the K – Career continuum can emerge that will ensure the seamless transition of students from one educational level to the next and increased success at each stop along the way.

CSAP Database

The College Student Achievement Project (CSAP) collects data on student achievement in first-year college mathematics and language courses and publishes annual reports containing analyses of this data on a provincial basis. It also provides an interactive online database for colleges and school boards to access information relating to their own institutions.

Members of both college and K-12 communities can use the CSAP database for a variety of research analyses. For example, a college community may wish to compare how their students' achievement compares with the provincial aggregate or conduct a detailed analysis of a particular academic program by 'drilling down' past the broad program cluster to the program code level. Similarly, a school board may wish to compare which mathematics pathway provides their graduates with the most success in college or see how the graduates from each secondary school are distributed across college programs.

Access to this information is provided to users authorized on an annual basis by vice-presidents, academic (for college users) and by superintendents (for school board users). Further information is available on the CSAP web site (<http://csap.senecacollege.ca>, click on the 'Research Database' tab and complete the online form).

Assessment Development Project

The final report on the CSAP Assessment Development is now available and can be found on the CSAP website under the Publication tab. The report covers all aspects of the development project including the background to the project, the assessment framework, assessment item development, the test design, the technology platform, the remedial modules and the analysis of field trial data. The CSAP team wishes to express its thanks to the many students and staff of colleges and schools in Ontario for their support and assistance particularly in the trialling of this assessment.

While the assessment tests and remedial modules are complete, arrangements for their use in colleges and schools have still to be completed. Discussions among the colleges (who own the test) are ongoing and the CSAP team hopes that these can be concluded as soon as possible.

To join the CSAP mailing list and receive regular email updates about the project, send us an email at csap@senecacollege.ca.

The logo for Seneca College, featuring the word "Seneca" in a bold, red, sans-serif font.

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