

College Mathematics Project

Guiding Questions to assist School-Board and School-Based Users of the CMP Database

There are many analyses possible using the CMP Database and the following are not intended to limit its creative use. Rather, the following questions are designed to stimulate a variety of possible lines of investigation that users might wish to follow.

1. *Analyses of achievement by program cluster, sub-cluster and program (Data-view D1)*

Note that the CMP database default option in this data-view is to show all students in the CMP database who are graduates of your Board. You can restrict the display to “Recent Ontario Graduates” (under age 23) or to “Very Recent Ontario Graduates” (essentially 2008 graduates) by clicking on the corresponding hotlinks at the bottom of the display. The other default option, “one school per student,” restricts the display to showing only the last secondary school attended by a student. The alternate option would include the student in all secondary schools attended (where this is more than one). This is probably best left at the default option.

- 1.1. Starting from your school-board achievement data by program clusters, compare the achievement (% good grades, % at risk) of graduates of your board with the aggregate achievement of graduates of all boards and in each program cluster. Are there areas of significant difference? Do these surprise you or are there obvious explanations?
- 1.2. Select one cluster and click on it to reveal the sub-clusters. Investigate variations in achievement for each sub-cluster. Repeat this investigation with the other program clusters. Compare these with each other and with the provincial aggregate.
- 1.3. Drill into each of the sub-clusters and review achievement at the program level. See if there is much variation across programs. Can you explain these?
- 1.4. At the cluster, sub-cluster or program level, are there areas in which VROGs (direct-entry from secondary school) achieve significantly higher or lower than ROGs? Can you account for this? Could discussions with local college colleagues suggest reasons for these changes?
- 1.5. Are there any special program-specific initiatives being planned for which CMP 2009 data can be used as base-line data for evaluating the impact of the new initiatives? (It is recommended that the VROG option be used for this).

2. *Analyses of participation and achievement by school (Data-view D1)*
 - 2.1. Click on the name of your school board to reveal the achievement data by individual secondary school. First, consider the numbers of graduates of each school going on to college in each program cluster. At this point, you may wish to use your own locally-available data on either the total enrolment each school or the number of graduates in a given year to compare the proportions of graduates (Be careful to use the VROG option if you wish to compare the total numbers of graduates in a given year). If you have local data on the numbers of graduates going to university this could be added to your overall view of the destination of graduates from each school. Otherwise you may prefer to compare just the numbers of college-bound graduates on a year over year basis from CMP data.
 - 2.2. Repeat the cluster, sub-cluster, and program analyses (as in 1 above) at the school level while remembering that the achievement of small numbers of graduates may be unrepresentative. In addition, publication of this data may inadvertently reveal personal data about individual students which would be an inappropriate use of the CMP database (see the CMP AU Policy).
3. *Pathways analyses (Data-view C1: ROGs and/or VROGs)*
 - 3.1. Drill down into sub-clusters and programs of particular interest to you. Which sequences of mathematics courses in secondary school lead to the highest levels of achievement in those sub-clusters and programs? Which lead to the lowest? Can you think why this might be?
 - 3.2. How do these groups of pathways compare with the mathematics courses offered in schools in your board? (Note that pathways data are not available at the school board or school level.) Does the pathways analysis suggest courses and course sequences that should be promoted in your board.
 - 3.3. Have the patterns of pathway participation (numbers of Ss) or achievement (% Good Grades) of VROGs changed significantly from those of ROGs in specific program clusters, sub-clusters or programs? Can you account for this?

We would like to add to these guiding questions from your experience of using the CMP database. If you have discovered some interesting results by following another line of investigation, or if you have other questions or concerns about the use of the database, please let us know. Write to us at cmp@senecac.on.ca.