



The March 12th, 2016 Ontario Colleges Mathematics Association (OCMA) Professional Development (PD) session at Fanshawe College entitled “Right Sizing” Mathematics Admission Requirements included representatives from Durham, Fanshawe, Humber, Lambton, Mohawk, Saint Clair, Seneca and Sheridan Colleges as well as Vretta, Inc. There were three presentations. Presenters were Alan Warren (Coordinator, Mathematics and Physics – Lambton College), Julian Jarosh (Coordinator, Mathematics; Professor, Health Sciences – Fanshawe College) and Dave Wackerlin (Associate Dean, School of Architectural Technology; Special Advisor, Academic Resource Planning & Allocation – Sheridan College). Presentations will be available on the OCMA web site at <http://theocma.org/>.

After the presentations, attendees broke out into small group sessions to discuss “right sizing” admission requirements from a professor perspective, coordinator perspective and administrator perspective.

Each break-out group then reported to the rest of the attendees regarding the possible answers to the three questions focused on “right sizing” admission requirements below. What follows is a summary of the reports from each break-out group.

1. What information or data would you like to get?
2. Where will you get it?
3. What barriers or outside factors exist that have potential impact once you have the information?

Professor perspective:

- 1) What information or data would you like to get?
  - a) What data are administrators seeing? Full Time Equivalent (FTE) data? Contribution to Overhead (CTO) data?
  - b) Is there a CTO “breakeven point” in terms of retaining a single student for a period of time?
  - c) Student success data
  - d) Is there an admin “math champion” at your college?
  - e) Employers’ perspectives on math skills needed by incoming employees
  - f) Global/national numeracy information
- 2) Where will you get it?
  - a) Administrators
  - b) Administrators/Institutional Research
  - c) Professor records/Institutional Research
  - d) Administrators/Coordinators
  - e) Program Advisory Councils, Key Performance Indicator (KPI) results, employers/employer forum
  - f) Programme for International Student Assessment (PISA: <http://www.oecd.org/pisa/>) results, Toronto Dominion (TD) Special Report (<http://www.td.com/document/PDF/economics/special/CanadaLiteracyAndNumeracyChallengeWorsens.pdf>), Craig Alexander presentation to College Student Achievement Project (CSAP – November 2013)/Heads of Interdisciplinary Studies (HOIS May 2014)

- 3) What barriers or outside factors exist that have potential impact once you have the information?
  - a) Declining numbers of full time mathematics professors
  - b) Effective advising into programs/courses based on students' individual circumstances
  - c) Effective advising into programs/courses based on students' individual circumstances
  - d) Declining overall math expectations at colleges
    - i) Justifying differences in math courses to align with career programs
    - ii) Push for standardization of first-year college math courses

#### Coordinator Perspective

1. What information or data would you like to get?
  - a. Student High School Marks and information about courses
    - i. Both course and overall marks
  - b. Work Ethic Predictors
  - c. Costs
  - d. Information on Implementation Options
  - e. Results From Other Schools
2. Where will you get it?
  - a. Institutional Research, different databases (unique to schools)
  - b. Partnering within schools, with high schools, outreach to students, intake questionnaires
  - c. Statistical Analysis
  - d. Aligning Outcomes
    - i. Incoming to outgoing curricular alignment
3. What barriers or outside factors exist that have potential impact you once you have the information?
  - a. Staff related challenges: Time/effort, funding for data collection and remediation, summer teaching constraints vs. need for remediation in summer term
  - b. Institutional challenges: not all schools have Institutional research, historic business models can be difficult to influence and evolve, drive for program persistence vs. high entry requirement, Scalability of solution, model for streaming needed and unique to school
  - c. System level challenges: data transfer and sharing between schools(including ONCAT), curricular design constraints, competition vs. sharing of data, vagueness of ministry requirements
  - d. Data reliability challenges: grade inflation and variance between schools, behavioural indicators are not easily identified and change over time

#### Administrator Perspective

1. What information or data would you like to get?
  - a. Budget – how do admin decisions align w/strategic plan
  - b. How institutions run “credit recovery” versus the “3 strikes you’re out” rule
  - c. Information on head start programs to prepare students who may not have the pre-requisites or recent pre-requisites
  - d. Creating low cost assessment for “placement”

- e. Degree completion data – what evidence do we need to identify mathematics admission requirement problems?
  - f. Performance of international students; while there is not adequate data, it appears they perform as well as domestic students with respect to retention rate, program rate and graduation rate. If goal is graduation (not A grades) all is good.
2. Where will you get it?
- a. Institutional Research, OCAS
  - b. Other colleges (different sizes)
  - c. Low cost assessment results
  - d. Institutional research
  - e. Post-secondary institutions
  - f. The Ministry of Training, Colleges and Universities; The Ministry of Education
3. What barriers or outside factors exist that have potential impact you once you have the information?
- a. Budget constraints and conflicting project costs
  - b. Smaller institutions may not have as robust an institutional research department as may be necessary to handle data analysis requests
  - c. Conversely, larger institutions may have highly robust institutional research departments but their time and resources may be more focused on other projects
  - d. Competition/market share considerations
  - e. Making the case for those who don't have the expertise to tell if it's the right decision
  - f. Adequately framing the "ask" around bottom line, even when the decision is ultimately around student success
  - g. Risks of sharing and archiving data (privacy laws, data theft), competition/market share considerations
  - h. Be aware that sometimes old data gets "dumped," risks of sharing and archiving data (privacy laws/data theft)

Overall, "right sizing" mathematics admission requirements is a multi-faceted issues. When planning your area's admission requirements, keep in mind the considerations above.