Stakeholder Summary
Use of predictive modelling to improve student retention growing

Predictive modelling — the analysis of large data sets to predict future outcomes — remains a small but growing practice among higher education institutions as a means of identifying students who are at risk, and putting in place targeted interventions to improve student retention and success.

A survey of Canadian universities and colleges found that 36% of respondents used predictive modelling as a means of improving student retention and almost 40% indicated that they were considering doing so, according to a new report, *Opportunities and Challenges in Predictive Modelling for Student Retention*, published by the Higher Education Quality Council of Ontario.

 "This data suggests that predictive modelling in Canadian postsecondary education is in its infancy," the report says. "It is clear that institutions using predictive modelling are still learning about the benefits and challenges associated with the modelling process, tools and results."

However, the study found that the number of institutions using predictive modelling for student retention purposes more than doubled from 2013 to 2017.

The study, which was conducted by Plaid Consulting, provides an overview of the use of predictive modelling in Canadian postsecondary institutions with a focus on where and how it is used to improve student retention and success. The authors surveyed 70 respondents from Canadian universities and colleges and conducted followup interviews with several participants.

Predictive modelling makes use of data gathered from learning management systems, student information systems, social media and other digital resources. These systems provide institutions with large amounts of data that can be mined for patterns and predictors, and which can be used to identify vulnerable students, target interventions and promote student-support services.

According to the survey, about half of institutions that had used predictive modelling had done so to inform interventions aimed at improving student retention, such as the promotion of student-support services and individual advising. Some institutions used predictive modelling to inform their strategic enrolment management plan, admission projections and other applications. More than half indicated that the exercise had led to some changes at their institution, including changes to the availability and promotion of support services, curriculum design, admission requirements and retention policies.

The study also identified successes and challenges that institutions had encountered in employing predictive modelling. The successes identified by respondents included a shift in campus culture toward the increased use of data and evidence in decision-making, specifically as it relates to the offering of student services and supports. Some institutions said they changed how they promoted student services

as a result of the exercise and one institution indicated that it had undertaken a full revision of its academic advising model.

"In an environment where evidence-based decision-making and allocation of resources is becoming more prevalent, it is clear that predictive modelling may play an important role in coming years as the models become more refined and mature over time," the study concludes.

Opportunities and Challenges in Predictive Modelling for Student Retention is written by Patrick Lougheed, Andrew Drinkwater and Lynne Jamieson, Plaid Consulting