Rotman used Course Match to eliminate ~10% of offered class seats while improving the quality of its allocation

The Rotman School of Management at the University of Toronto had been frustrated with its existing course registration platform — it used an auction that students found stressful and which required significant manual intervention to ensure that every student received an acceptable schedule.

In the summer of 2017 Rotman switched to Course Match to manage elective registration for all of its MBA programs. The results were dramatic: **99% of students received a top pick class, the school identified 240 unnecessary class seats (~10%), and manual effort was eliminated.**

The Program Office led the deployment and use of Course Match with limited IT involvement. For the fall registration, they ran the algorithm twice: first to register a baseline and then to fine-tune the results.

The first allocation let the Program Office see the "market price" for every section they offered. Using that data (as well as demand and seat capacity), they identified six sections that they could eliminate without affecting student satisfaction. They used the new capacity to add additional seats to the most popular sections.

After running the allocation for a second time, because of these adjustments, they were able to generate an allocation that was 6% more efficient, despite having eliminated what amounted to nearly 10% of the seats they originally offered.

Additionally, because of real-time data and the ability to make adjustments to the allocation before the final assignment, they could identify students who had made errors in their rankings and were able to anticipate and correct most student issues. As a result, student complaints and support requests dropped significantly.

> "Everyone is a little stunned at how positive the results appear to be."

Wharton used Course Match to double student happiness and engage faculty

In 2013 the Wharton School at the University of Pennsylvania decided to change how it ran course registration. No one was happy with its auction mechanism and the results were much less fair than was desired. Students were bothered by the stress and faculty and administrators were irritated by the lack of data that could assist planning.

A committee of faculty, administrators, and students reviewed the market for available options but found that almost every alternative shared the flaws they were trying to fix. Only Course Match offered the promise of superior student outcomes and rich planning data.

Course Match was deployed in 2014. Wharton ran a controlled study to measure how key metrics, like equality and student happiness, changed after adopting the Course Match algorithm.

While Wharton had expected the experience to improve, the magnitude of the results was startling:

Student satisfaction doubled. The share of students who were happy with the fairness and effectiveness of the allocation went from 28% to 65%.

Inequality dropped, dramatically. The Gini coefficient dropped to half of what it had been with the auction (from 0.34 to 0.15).

Faculty and administrators were able to plan and intervene. Wharton used the data to add seats to popular classes and drop unneeded sections, saving on costs and giving faculty reliable demand information.

These results were captured in a peer-reviewed academic publication that proved that it was possible to optimize the distribution of student class schedules in the real-world and Wharton went on to invest in commercializing the Course Match technology.

"Single largest increase in student satisfaction in 20 years."

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