Moving Needles
Using the Student ID and Transaction System Data for student engagement and success
PREDICTIVE ANALYTICS
The use of statistical techniques to analyze patterns in historical and transactional data, identifying risks and opportunities to guide decision making. By capturing relationships between explanatory variables from past occurrences, unknown outcomes can be predicted.

Colleges and universities can analyze available data to determine which applicants are most likely to enroll or which students are at risk of attrition, so intervention steps can be proactively taken.
Data in the past

- ACADEMIC INDEX SCORES
  COMPILED PREDICTIONS OF FIRST YEAR GPA
  BASED ON PRE-EXISTING CONDITIONS:
  - High school GPA
  - High school courses
  - Pre-admission test scores
Data in the present
### NASPA STUDY: Types of student success data

<table>
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<th>Pre-enrollment</th>
<th>Academic</th>
<th>Motivation and Self-efficacy</th>
<th>Use of Support Services</th>
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<tr>
<td>• Demographics • High school grade point average • Parents’ experience with college • Test scores</td>
<td>• Class attendance • First semester grades • Grades in select core courses • Login to student web portal • Midterm grades • Registration for next semester • Use of learning management system</td>
<td>• Comfort with academic ability • Depression • Financial issues • Homeickness • Lack of friends or connections</td>
<td>• Advising • Career services • Counseling • Disability support • Financial aid • Health center • Library • Tutoring</td>
<td>• Athletic team affiliation • Campus membership • Campus residency • Campus Wi-Fi usage • Dining center • Leadership roles • Participation in campus programs • Recreation center</td>
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</table>
Still the report misses the boat on our potential:

“The use of data from swipes of a student identification card may sound simple, but this data collection method presents several obstacles. The hardware needed to collect data with this method is cost-prohibitive for many departments and is somewhat impractical to use at events that several hundred students attend. However, some institutions are making strong progress with collecting identification card data.”

Note copyright date @2017, so they should know better.
Case study
PURDUE
Case study PURDUE

Get engaged in campus activities

Does time on campus relate to grades?

We use network activity as a way to estimate the amount of time students spend on campus both during and outside of class. When compared to GPAs, it becomes clear that more time spent on campus during the week correlates to better grades.

Established research demonstrated a positive correlation between student engagement on campus and academic performance.

What is network activity?

When any of your devices are logged into the PAU or eduroam networks on Purdue's West Lafayette campus, it is considered network activity. Network activity is not your browser history nor your cookies.

Top Ways for you to Get Help

1. Discover new ways to get involved

From studying in the library to joining a student organization, there are many ways to get engaged and spend more time on campus. Check out these tips to help you easily integrate into the campus culture.
Case study NOTTINGHAM TRENT

Individual Engagement Score - Week by Week
Calculated from multiple sources including NOW, library use & building access

- You
- Course Average

Graph showing engagement score over time with specific dates and engagement levels.
Case study
UNIVERSITY OF ARIZONA
Case study
UNIVERSITY OF ARIZONA
Data: DalCard office provides weekly “Low Meals Eaten” report to Residence Life team in Student Affairs

Students eating less than 6 meals per week appear on the report

Intervention: Residence Life Manager reaches out to the student for a Health Check
linked to other data sources such as meal habits, which can show that a student has gone from eating three meals a day on campus to just one, or number of gym visits, which may show a change in activity. In the purest sense, we could have multiple views of a student (this is not that difficult to do, since most institutions link these activities to the ID cards that students carry) with all data integrated, thereby giving us a more holistic view of the individual. Now imagine this at scale, and we have the ability to see data more comprehensively across the entire student population and to perform comparisons across all groups (e.g., freshmen versus seniors, engineering students versus business students).