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Instituting a Proactive Risk Assessment Model: The Promise and Peril of Predictive Approaches to Student Success

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Instituting a Proactive Risk Assessment Model

The Promise and Peril of Predictive Approaches to Student Success

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WMU Assessment in Action Day - 21 March 2014



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Continuous discovery and lifelong learning

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Background and Overview

- Learning from Peer Institutions:
The Temple University Model
- Prioritizing Advising Resources
- Retention Goals as Part of a Larger Enrollment
Management Strategy
 - CAS Goal - 80% by 2018
 - Potential Budgetary Impact
- Prioritizing Advising Resources

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Designing The Tool

- Retention work in the university has often been driven by measures of high school achievement.
- GPA, ACT/SAT Scores - Still Important
- Used both as measurements, along with students who have a low GPA and a high ACT score.

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Designing The Tool

- More recently focus has shifted to non-cognitive habits of students.
- Attempt to see how the everyday ability of students; how they might adapt to being in college
- College represents a completely new environment for most students; if they do not know how to handle it they will be at risk to drop out.

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Belonging & Communicating

- For many, college is the first time that students are far away from their parents, friends, background
- Social Support
- Do you have someone to talk to in your life about college?
- Do you know someone at Western already?
- Have you begun to form a social network?
- How easily do you make Friends?
- Are you going to be able to form new friendships?

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Belonging & Communicating

- If the student comes to college and cannot form connections the student is going to feel alienated and detached
- Students who cannot share their experience with a caring ear, likely to not know how to act in college
- If we know students have problems connecting to college, advisors can offer two things:
 - An ear for students to talk to
 - A guide to information

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Belonging & Communicating

- Participation
- Students who were active in high school are more likely to be active in college
- Joining group will form social bonds
- First to attend college in the family
- Students who have no one in their family who has been to college, probably lack someone in their family to talk about what the college experience is like
- More likely to view the activities of college as alien and with no one to discuss how to behave and take in the experience

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How Do You Study?

- It may be one thing to have a good GPA or score well on the ACT, but schools have different ways of grading, different measurements of grades, etc.
- Asking about how students approach their studies may be a better way to project college abilities.

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How Do You Study?

- Academic Readiness
- We used a mixture of common measurements of different academic skills
- Focuses on many different aspects, including:
 - How much planning one puts into one's work
 - When one is likely to start doing their work
 - Ability to understand material and pay attention
 - Test anxiety

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How Do You Study?

- We also used three different measurements of how many hours students put into studying:
- How many hours did you spend studying every week in high school?
- How many hours did you plan on studying in college?
- Measurement marking whether how much you will change your study habits?

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How Do You Study?

- We expect students who come in with poorer study methods to have a harder time adapting to how much harder college is
- WMU 30 hours of studying a week
- Many students indicate they barely study in high school
- Students who expect to barely study or expect to suddenly turn into scholars are both concerning.
- If advisors know students have problem studying than they can point them in the direction of the many learning tools we have on campus, such as the writing center and tutoring. They can also push students to spend more time studying.

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Do You Even Want to be Here?

- If in your first semester you are not sure you want to be here, how likely are you to work hard?
- Students who already seem to have questions about whether college is good for them or if a college degree is even worth it are a concern.

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Do You Even Want to be Here?

- We also use a common measurement, Grit, which measures perseverance and consistency.
- Students who have a problem with sticking with school are likely to drop out.
- Students who collapse when they run into adversity are likely to drop out.

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Do You Even Want to be Here?

- Measuring Academic Efficacy
- Students who do not see themselves as having the tools to succeed in college are more likely to turn away from college.
- Asking students whether they can see themselves completing college means being able to see if the student thinks they are qualified.

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Do You Even Want to be Here?

- Learning whether or not the student views college as the right thing for them, something they can stick to, or something they can see themselves completing
- Advisors can help to encourage students, address their fears, talk to them about the advantages in graduating

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C.R.E.A.M.

- Departing from non-cognitive measurements the literature many students face financial concerns.
- We use Family Expected Income Contribution (FEIC) as a measurement of students who might leave college not because of academic struggle, but financial concerns
- We also used an indicator asking students if they had people dependent on them for financial contribution.

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C.R.E.A.M.

- Students with economic concerns often face unique set of circumstances in which the issue is not mental or skill oriented, but rather the day to day ability to pay bills.
- Advisors can keep these students in touch with scholarships and other financial aid issues that could help keep these students in school.
- We also created (although did not use) a separate list of students who we could identify simply on financial issues.
- One thing to lose a student with many issues including financial, it is another to lose a highly qualified student for financial reasons.

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The Etc.'s

- Several other items were measured as warning signs.
- Research out of Temple had indicated a strong relationship between parents smoking in the home when the students were children.
- Indicators of students' current use of alcohol and cigarettes.
- Student working full time jobs outside of school (30+ hours a week)

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The Etc.'s

- Often harder for advisors to address, however the literature has shown these to have predictive effects. Therefore they were often indicators for our model, but less important for the advising process
- We also were able to create an indicator for students likely to transfer, a group that the retention numbers often forget, but play at least some role in students no longer attending.
- (This was not used, but will provide important review data that we will hopefully be able to use in the future.)

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Data Collection & Analysis

- Once survey information was collected, each variable given a weighted value.
- Weighing of the values based upon a review of the literature and which variables most consistently show up as having explanatory effect.
- Weighing favored both GPA, ACT score, but also the more accumulated measures: Efficacy, GRIT

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Data Collection & Analysis

- Students in the bottom 5% and bottom 15% of a variable were flagged as concerned for said variable.
- Students compiled a score based on the number of flags they received.
- Students in the bottom 20% (referred to as R1s and R2s) were then indicated as being at risk and their names were given to the advisors.

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Implementing The Protocol

- Building off Temple's Success
- Organizing and Tracking Students
- Emphasis on Coordination

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Early Results

- After the 1st semester we are already to begin looking at the information students have returned to us.
- 630 students classified as FTIAC students, our target demographic (First Time in Any College) in the College of Arts and Science (CAS).
- Survey Ccaught 461 of these students (plus an additional 70 students who either did not attend Western after coming to orientation or have left CAS).

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Early Results

- 81 surveyed students have been put on Academic Probation
- 28 were flagged with warning signs (35%)
- 38 Students have left Western after attending in the fall semester
- 12 were flagged with warning signs (32%)

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Early Results

- We can see certain predictors already having greater impact on negative retention indicators (NRI: dropping out, never attending, probation)
- 48.1% of students flagged with GPA concerns have NRI
- 41.3% of students who have someone dependent on them for financial support have NRI
- The variables addressing social support are high also, 35%+ NRI for each.
- On the other hand, academic related skills related more poorly with academic readiness at about 23% and study hours at 26%.

Early Results

- GPA 48.1%
- Financial Concern 41.3%
- Happy to be at College 37.5%
- 1st to attend in family 35.5%
- Social Support 35.4%
- Know someone at Western 35%
- FEIC 32.4%
- ACT Score 31.7%
- Parents Smoke in the Home 30.9%
- Expected Change in Study Habits 30.7%
- Make Friends Easily 30.1%
- GRIT 30%
- Participation 26.3%
- Study Habits 26%
- Academic Readiness 23.3%

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Early Results

- It is still early and some of these results can be accounted on time orientation of NRI
- For example, we can expect that social support is more likely to be an earlier indicator as students learn fairly quickly if they can adapt to college emotionally.
- The low numbers on academic readiness and Grit might have to do with students having easier core classes in their first semester, but will they stick with it when they have to take Organic Chemistry.

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Early Results

- We also lack a control group to measure the success of the advising department.
- The program in place is meant to reduce retention, however, our measurement on effects are catching them after they have been through some level of advising.
- If the program is working we should expect these students to be getting advising that helps them decide to stay at school.

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Early Results

- Are strong indicators strong because it is harder for advisors to assist students or because weighing is off?
- Are low indicators weak because advising is better at helping those students?
- We still have a long way to go in properly understanding the effects of this program and finding the right formula for increasing our retention rate.

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Lessons Learned

- Mixing Urgency with Patience
- Data is only as good as the records we keep
- Retention is an indicator, not a result
- Why pursue these projects as a graduate assistant?

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Lessons Learned

- Research becomes real
- Sociological research can often be a process of gathering data, analyzing and drawing conclusions
- CAS research gather data and put in play real procedure.
- Research becomes immediate
- Sociological research time is important, but being a perfectionist is important also
- CAS research - you don't always have time to go back and reconstruct your concepts. One shot at gathering the information. If you missed something you have to continue on.

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Lessons Learned

- The GA is in the driver seat
- Sociological research advisors have input and critique your design, they are more likely to mold the research. Focus is on training you how to do the methods
- CAS research: Although Ed and Kevin have input and beliefs of what the research should look like, the design, implementation, and method is mine. I am given a job, they expect me know what I am doing.

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Questions/Comments

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