Best Practice in Student Retention: Math Early Alert System

A Best Practice / Case Study

► Process Improved:
Over the past three years, the Math Department increased the success of students in their math courses. Their project entails early detection of students, often first-year and transfers, who are struggling in math classes so the students can take immediate action. Not only did the project assist students in their math competencies, it also changed interactions between students and instructors.

► Unit: Mathematics Department

► Problem/Opportunity Statement:
Many students struggle in their math courses due to lack of preparation for the course, being in the wrong course or other circumstances. They end up either failing or dropping the class. This program attempts to prevent such situation by introducing alternatives early in the semester.

► Customers of the Process and Their Needs:
- Students: Awareness of their situation and possible corrective actions.
- Advisors: Awareness of the their advisee’s situation and possible corrective action.

► Changes Made:
- An internal website and automatic online system for referral and the advise was created to handle large number of cases (the Math Department teaches over 5,000 students per year).
- The new TA’s are made aware of the system and its implications during new TA training session.

► Results:
- Number of referrals has doubled every year since the beginning of the program, from an initial 25 during Spring 2004 to over 170 during Fall semester 2006 only.
- Students’ performance improved (referred students perform roughly average, even though they are identified as being at-risk).
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► Lessons Learned:
  • Technology is crucial in handling large number of referrals; it made the system more efficient and even possible.
  • Involving TAs and instructors early in essential in the success of the program, most of them are also very willing to invest themselves in the success of their students.
  • TAs and instructors are made aware of the advising structure of the department, so they know who to consult when a problem arise with a student. TAs and instructors are asked not to advise students themselves.
  • The system acts as an icebreaker between TAs and students, which is especially desirable in the case of freshmen and transfers.

► Next Steps:
  • Create a public web site for the Early Alert System to include the following contents:
    1. Description of EAS and its goals and procedures.
    2. Sample of possible TA comments as a reference for both TAs and students.
    3. Sample quiz questions for TAs to be used as part of initial evaluation by TA's.
    4. List of possible resources for getting help with math courses, such the Math Tutorial Program, GUTS, etc.
  • Give new TA's training (handouts) on what students need to know before entering each specific math course to prepare them for the initial evaluation.

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