E. 10. UNIVERSITY OF WISCONSIN-STOUT
FOCUS 2010 IMPLEMENTATION TEAM 10

Team Name:	Enrollment Management-Modeling
Sponsors:	Chancellor
Charge:	Propose a planning process for enrollment management for both freshmen and transfer students.
Outcome:	A model that predicts more accurately enrollment for the programs and an overarching comprehensive enrollment plan for the university.
Chairperson/Leader:	Dean, John Murphy
Membership:	Cindy Gilberts, Joan Thomas, Bob Johnson, John Murphy, Carolyn Barnhart, Mary Hopkins-Best, Scott Springer, Brad Stafford
Consultants/ Resource People	Chancellor's memo on Special Task Force to Propose Plan for Enrollment Management, April 30, 2004
Training/Information Needed:	
Method of Communication:	
Timeline:	September 1, 2004

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Chancellor's Enrollment Task Force

Final Report

October 6, 2004

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INTRODUCTION

The Enrollment Management-Modeling committee was formed in late April, 2004 and had its first meeting in June, 2004. The committee was charged to "propose a process for enrollment management for both freshmen and transfer students." The expected outcome was to "develop a model that predicts more accurately enrollment for the programs and an overarching comprehensive plan for the university." It became clear to the committee that there was not sufficient, reliable data available to develop a predictive model for individual programs. Therefore, the committee decided to focus its efforts entirely on a comprehensive enrollment model for the university. The committee met on a regular basis during the summer of 2004. Individual members were charged to investigate four areas of inquiry: recruitment/best practices, freshmen year experience, sophomore through graduation data, retention data. The following is a synopsis of the information gathered and the committee's recommendations based upon this data.

RECRUITMENT

A review of national best practices, market research and demographic information, and our current recruitment practices suggests the following initiatives and strategies:

Recruitment
1. Five day response time to inquiries and processing of applications
2. Emphasis on personal touch
    a. High level of contact when Stout is indicated as first choice
    b. Communicate through a variety of modalities
        i. Web chat
        ii. Email
        iii. Personalized contact
        iv. Web site – up to date, innovative
        v. Recruiting publications
        vi. Currently enrolled students
        vii. Alumni
        viii. High school visits
        ix. Movie theater advertisements

    c. AIM software – ACT

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       i.   Personal contact with students who indicate Stout as first, second choice but do not apply
      ii.   Target multicultural student with high enrollment probability
    iii.   Personal follow-up following campus visit

3. Campus visits should be engineered to deliver emotional appeal
   a. Data supports campus visit as one of top reasons students choose to enroll
      i. Small campus
      ii. Close to home
      iii. Friendly atmosphere
      iv. Campus tour
      v. Campus appearance
         1. Upgrade residence halls
         2. Student Center outdated
      vi. Preview Day
         1. Demo E-scholar to prospective students and parents
      vii. Selling Stout to parents – safe, personal, great cost value

4. Programs
   a. Program Director involvement in recruitment process (preview days, visiting with prospective student/families)
   b. Name programs to adequately represent program in terms of career opportunities, student interests and market trends
   c. Increase program array (student choices currently limited)
   d. Ability to implement new programs in timely manner
   e. Need for allied health program

5. Incentives
   a. Scholarships
      i. Minority – Need to offer scholarship to attract qualified applicants
         1. Use diversity funds
      ii. Highly qualified students
         1. No need merit scholarships
         2. Currently offer $1000 for one year if top 5% and 25 ACT. Should increase to $1000 for 4 years.
      iii. Offer three year degree including summer and WinTerM

Many of the above initiatives are currently included in present recruitment policies and practices. Some, such as renaming programs and developing additional programs are outside of the scope of the Admission Offices and need to be addressed as an all-University initiative. It is the committee's suggestion that significant resources should be reallocated to support the best practices outlined above. The entire university community will suffer if adequate student enrollments are not achieved. It is the committee's suggestion that the Admissions Office must have the necessary resources to ensure healthy enrollments. Therefore, it is recommended that resources be adjusted to mirror those in similarly sized universities engaged in best-practices in recruitment.

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PROGRAM ENROLLMENT

1. Projections
   a. Remove enrollment limits on individual programs to allow for admission of qualified applicants.
      i. Allocate resources to accompany enrollment growth in high demand programs.
      ii. Focus on and expand programs that respond to the academic and economic market and trends.
         1. Over the past 5 years, there have been several programs where enrollment has been consistently decreasing. Review program allocations.
         2. Hire instructional staff to allow for flexibility.
   b. Improve quality of incoming class by using institutional and national data as predictors of student success.

Program enrollment data was reviewed to determine what, if any, trends in program enrollments were evident and to make recommendations regarding the reallocation of resources in response to these trends. Over the past five years there have been several programs that have experienced consistent declines in enrollment. The committee recommends that appropriate resources need to be allocated to current and future programs commensurate with their size and demonstrated potential for future growth as determined by past trends, current enrollments and future employment opportunities. To do otherwise will jeopardize the University's long-term vitality.

PREDICTIVE MODELLING FOR RETENTION AND GRADUATION

Existing UW-Stout descriptive demographic data on matriculated student retention and graduation rates were gathered. Tests of association were performed on selected variables from this data to find what, if any, variables were significantly associated with retention and graduation. Regression analysis was run on those variables shown to be associated with retention and graduation in order to determine what actual influence these variables had.

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First Semester Freshmen Retention

Regression analysis demonstrated that eleven variables helped predict 24% of the likelihood that a freshman student would be retained into the second year. There were statistically significant differences between retained and non-retained students on all eleven of these variables. These variables were:

1. high school rank (66th percentile vs. 58th)
2. full-time status during first semester (freshman year)
3. math course taken first semester (freshman year)
4. higher scholarship dollars awarded first year (both the actual dollar amount and whether they received any scholarship at all)
5. worked on campus during first year (both whether or not they worked on campus and dollars earned working on campus)
6. independent status
7. higher debt load
8. declared major during first semester
9. higher ACT math score (21.53 vs. 21.03) and higher ACT composite score
10. higher first semester GPA (2.93 vs. 2.69)
11. entered Stout immediately after high school

Returning Student Retention (including first-semester freshmen and transfer students)

Regression analysis demonstrated that nine variables helped predict 24% of the likelihood that any student who began at UW-Stout in fall 1999, fall 2000 or fall 2001 would be retained the following year. There were statistically significant differences between retained and non-retained students on all nine of these variables. These variables were:

1. full-time status during first semester (freshman year)
2. high school rank
3. math course taken first semester (freshman year)
4. higher scholarship dollars awarded first year (both the actual dollar amount and whether they received any scholarship at all)
5. worked on campus first year (both whether or not they worked on campus and dollars earned working on campus)
6. declared major during first semester
7. higher first semester GPA
8. entered Stout immediately after high school
9. higher ACT math score

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Previous Research

Most of the variables identified as predictors of retention at UW-Stout are consistent with previous research. Nationally, delaying enrollment by a year or more and attending part time are risk factors for dropping out of school. Furthermore, previous research at the University of Nevada-Reno suggests that taking and passing math courses and receiving scholarships are the biggest predictors of retention. Similarly, other studies have also suggested that academic preparation, student college GPA, student enrollment behaviors, and student financial need/financial aid are factors that impact retention and graduation (cited in Knight, 2004).

Family income and gender have also been consistently cited in previous research as being predictive of retention and graduation. Family socioeconomic status (income higher than $60,000 annually) is associated with higher overall retention, however, the Financial Aid office statistics indicate that 60% of all dependent student financial aid eligible applicants came from families with incomes of $60,000 or higher. Although these two variables were not predictive at UW-Stout, there are other reasons to suggest that it may be advantageous to treat them as risk factors for non-retention, especially when other risk factors are present. For example, men are academically dismissed more often than women at a rate of 3:1. This, when combined with the fact that those from lower income levels may be at risk, may be used to assess risk of an individual student if they are flagged on one of the other predictive variables.

Students that Graduate

Regression analysis demonstrated that five variables helped predict 6% of whether or not a student graduated. There were statistically significant differences between graduates and non-graduates on all five of these variables. These variables were:

1. full-time status during first semester (freshman year)
2. higher ACT math score
3. declared major during first semester
4. worked on campus first semester
5. higher ACT composite score

NOTE: the regression model for graduation did not include as many variables as the one for retention, because prior to 1999, the University was not collecting data on financial aid variables in the same way that it is now. It should be noted that although these five variables accounted for only 6% of the variance, this result was probably affected by the amount of missing data encountered in tracking students to graduation (which greatly reduces the variables predictability). Never-the-less, there were strong statistically significant differences on these variables when comparing those who graduated with those who didn't.

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PREDICTIVE MODEL RECOMMENDATIONS

The data discussed above can be used to develop profiles that can be used as a discriminating tool in determining what type of student should be admitted to the University without reservation, what student should be admitted with caution and what student should be subjected to proactive intervention after completing their first semester. *It should be cautioned that, as with any predictive model, these profiles are based on statistical associations that suggest varying degrees of probability, not certainties.* Therefore, the following profiles should be used as an advisory tool and not as absolutes.

Students Admitted Without Reservation

1. high school rank 60th percentile or higher
2. declared major
3. ACT math score of 21 or higher
4. entering Stout immediately after graduation
5. family income over $60,000
6. higher ACT composite score

Students Admitted With Caution

1. high school rank 59th percentile or lower
2. no declared major
3. ACT math score of 20 or lower
4. entering Stout one or more years after high school
5. family income under $60,000
       a. income under $40,000
6. dependent status

Proactive Intervention After First Semester

1. GPA under 2.70
2. fewer than 12 credits first semester
3. didn't take math course first semester
4. ACT math score of 20 or lower
5. no declared major
6. high school rank 59th percentile or lower
7. family income under $60,000

The first two categories should be used as a tool to guide admissions decisions as well as marketing and recruitment strategies. The third category should be used as a tool in determining which students need immediate intervention following their first semester.

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While the above profiles can be useful in deciding who to admit and who to admit with intervention, other research data and anecdotal data from campus experiences, suggest that additional factors should also be taken into consideration. These factors are:

1. **Gender:** University data demonstrates that males are academically dismissed by a ratio of 3 to 1 with females
2. **Faculty involvement:** Best practices demonstrate that faculty are the single most influential person in determining whether or not students succeed and remain in school
3. **Class attendance:** Student attendance has been shown to be directly related to students GPA and their retention
4. **Program array:** Of those students who leave for reasons other than academic dismissal, over 70% transfer to other post-secondary institutions. The majority of this group (54%) transfers because Stout doesn't offer a chosen major.
5. **Geographic location:** National data mirrors that from surveys of Stout students that indicate proximity to home is a contributing factor for student's decisions to leave Stout.

It is the committee's recommendation that these five variables, in addition to those discussed previously, be given serious consideration when developing strategies for student retention.

RETENTION PRACTICES

A review of the literature and of best practices regarding retention at the university level demonstrated several successful strategies and practices. The following are recommendations that the committee suggests and they represent a condensation of best practices found.

1. The committee encourages the campus to continue the following practices with all-campus support and by-in:

   a. Convocation
   b. First year experience
   c. Residence hall initiative
   d. First year advisement
   e. Program recruitment

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2. A review of recent literature by Vincent Tinto (2001) on best practices delineated five factors that strongly influence student retention:

   a. Expectations: students are more likely to persist and graduate in settings that expect them to succeed. "No one rises to low expectations".
      i. Require attendance
   b. Advising: students are more likely to persist and graduate in settings that provide clear and consistent information about requirements and choices in study and career goals.
   c. Academic, social and personal support
      i. Academic assistance
         1. Mentor/Bridge programs
         2. Tutoring and supplemental instruction
      ii. Personal and social assistance
         1. Counseling
         2. Campus involvement
   d. Student engagement
      i. Frequency and quality of contact with faculty, staff, and other students
         1. First year seminar
         2. Residence life first year experience program
   e. Learning Communities/First Year Experience
      i. Block scheduling
      ii. Shared, collaborative learning experiences
      iii. Residence hall learning community structure
      iv. Academic and Student Affairs personnel collaborate in implementation of first year experience

CLOSING STATEMENT

The committee reviewed institutional data and best practices in student recruitment, retention and graduation. Those factors and practices that were demonstrated to be effective in enrollment and retention were used to develop recommendations and predictive models that can be used in addressing the issues of student enrollment and attrition. The committee feels that following these recommendations will help the University predict more accurately those students who are more likely to succeed and graduate. It will also provide a valuable tool for intervention for those at risk. The committee also made recommendations for a retention model that establishes an educational environment that promotes affirmation and the retention of all students.

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