



Industry Case Studies

Academic Collaboration

An Approach to Identifying “At-Risk” Students in a High Achieving Population

Background: Faculty and administrators at the Missouri University of Science and Technology (MST) wanted a process to identify students who were at risk of withdrawing from the university prior to graduation.

Challenge:

In addition to typical admission criteria such as high school grades, cognitive testing (ACT, SAT), achievements and awards, essays, and letters of recommendation, the university implemented a program to administer the Hogan Personality Inventory (HPI) to incoming students in Fall of 1998. After 4 years, researchers matched students’ ACT scores, high school rank, and university GPA with scores on the HPI. They also examined the relationship between the aforementioned variables and university GPA as well as student retention (see Tables 1 and 2).

	Correlations with Retention	Correlations with MST GPA
HS Rank	.28	.50
ACT Math	.13	.29
ACT English	.13	.25
HPI Sociability	-.13	-.20
HPI Prudence	.14	.21
Cumulative GPA	.53	NA
ACT Science	NA	.13
ACT Reading	NA	.13

Solution: The data indicate that the HPI Sociability and Prudence scales predict student retention and university GPA at a similar level to standardized cognitive assessments. Given these results, MST developed an intervention plan targeted at those students identified as “at-risk” based on their personality profile with two goals in mind: a) increase freshman retention from 85% to 88%, and (b) improve the overall graduation rate from 64% to 75%.

Result: MST implemented a communications campaign using the university e-mail system. They targeted “at-risk” students and provided information about on-campus programs to help promote success. For instance, students with elevated HPI Sociability scores were sent invitations and reminders to time-management seminars conducted on campus (high Sociability students are more likely to develop large social networks, and thus have more conflicting demands on their time). Students with low HPI Prudence scores were sent invitations and reminders to programs for developing good study habits (low Prudence students are less likely to be organized and methodical in their approach to tasks, including studying).