BOARD # 192: Helping Students on Academic Probation: Lessons Learned from a Support Program

Dr. Lizzie Santiago, West Virginia University

Lizzie Y. Santiago, Ph.D., is the Director of the Fundamentals of Engineering Program in the Benjamin M. Statler College of Engineering and Mineral Resources at West Virginia University. She holds a Ph.D. in Chemical Engineering and completed postdoctoral training in Neural Tissue Engineering and Molecular Neurosciences. She has managed several NSF-funded educational research projects, including those focused on studying critical thinking, self-regulation, metacognition, problem-solving, and student retention in engineering. Dr. Santiago is an active member of the American Society for Engineering Education (ASEE) and has delivered numerous presentations on improving student learning and retention in engineering. She has received several teaching awards, including the 2015 Teacher of the Year Award and the 2017 WVU Foundation Outstanding Teacher Award.

Work in Progress: Helping Students on Academic Probation: Lessons Learned from a Support Program

Abstract

Engineering degrees require extensive math knowledge and the development of strong problem-solving skills. The rigorous nature of engineering can be particularly challenging for students who have deficiencies in math or struggle with soft skills such as time management and study techniques. Students who earn a GPA below 2.0 at the end of a semester are placed on academic probation, and multiple semesters of probation may lead to dismissal from an engineering program. This study focuses on students currently on academic probation.

The study was conducted in a first-year engineering program at an R-1 land-grant institution in the mid-Atlantic region. Forty-five students on academic probation were enrolled in an academic success skills course and assigned to a student success coach. The coaches in the program were graduate students enrolled in either a master's or doctoral engineering program at the institution.

The GROW Model of coaching was used to structure the coaching sessions. The steps of the GROW Model include: a) establishing a goal; b) evaluating the current reality (what is happening now and what are the effects or results?); c) exploring options and obstacles (what else could you do? What are the advantages and disadvantages of each option?); and d) establishing a will or a way to move forward.

Each coach met with a student in one-on-one sessions 4 to 5 times during the semester. During each coaching session, the student completed a form detailing the challenges faced and the progress made in seeking academic improvements. Each student established a SMART academic goal, which was tracked throughout the semester.

This presentation summarizes the challenges faced by students, the structure of the program, the successes achieved, and the lessons learned. The program has been supported for two years, and data on student successes will be presented. This study will benefit academic institutions seeking ways to support students who are struggling academically in college but still wish to pursue an engineering degree.

Introduction

Academic probation occurs when a student's institutional cumulative grade point average (GPA) falls below 2.0. The process for placement on academic probation is straightforward: a student is placed on probation when their GPA is found to be below 2.0. Although limited information is available on academic probation, Schudde and Scott-Clayton (2016) report that 20% of first-year students have an overall GPA below 2.0.[1-3]

As first-year students transition from high school to college, they often struggle to adapt to the demands of their new environment, including issues with study skills, time management, and math proficiency. This struggle is even more pronounced for first-generation students, who lack institutional knowledge and access to information crucial for success in college.

In engineering, the challenges are even more significant, as students must manage the heavy workload associated with the courses. A student on probation risks suspension if their GPA does not improve to a satisfactory level. Additionally, placing students who have completed fewer than 30 credit hours on academic probation has a detrimental effect on four-year graduation rates.[6] This negative impact on graduation rates is primarily due to the attrition observed immediately after students are placed on probation.[6] The effect was particularly significant among women but not among men.[6]

Various strategies have been employed to support students on academic probation, with mentoring and coaching being one of them.

This study presents a program developed to support first-year engineering students on academic probation. The paper summarizes the components of the program and the initial outcomes from its implementation. This study will benefit academic institutions seeking effective programs to support students struggling in their first semester.

Methodology

This study was conducted at an R1 land-grant institution in the mid-Atlantic region, with 45 students on academic probation participating. The mentoring program included several key components: mentor-mentee ratio, mentor training, and mentor-mentee meetings. A specific plan was developed for each mentor-mentee session, and the data collected from these meetings was analyzed. The study was approved by the Institutional Review Board.

Each student on academic probation was assigned a mentor. The mentor-mentee ratio was kept as one mentor for every 15 mentees. Mentors were graduate students enrolled in engineering or computing sciences programs. Mentor-mentee pairings were made randomly. Formal meetings between mentors and mentees were held five times per semester. A structured program was used, with mentors following a specific form for each meeting.

The mentoring sessions involved:

Meeting 1: Obstacles to Success and Opportunities for Success

This session involved a discussion on what went wrong during the first semester and what opportunities are available for success. It provided an opportunity for the mentor and mentee to meet each other and reflect on the previous semester, highlighting both achievements and missed opportunities.

Table 1: Obstacles to success. Students were asked to complete this section by choosing the top 5 obstacles (number them in order from most important to least important).

	Study Habits		Finding a good place to study		Going to class
	Time Management		Making friends		Social Media
	Organization		Reading for content		Health and Wellness
	Social Life vs Academic Life		Being overwhelmed		Family issues/emergencies
	Concentration		Homesickness		Relationship Issues
	Knowing what to study		Too much sleep		Finances
	Knowing how to study		Lack of sleep		Not interested in classes
	Taking notes in class		Involved in sports, intramurals		Turning in assignments
	Test Taking		Other		Other

Meeting 2: Establishing Short-Term Goals
Students work with their mentor to establish SMART goals—specific, measurable, attainable, relevant, and time-bound.

Meeting 3: Follow-up and Review of Grades and Progress
Students and mentors review the student's grades and progress toward their goals.

Meeting 4: Revisiting and Refining Goals (as Needed)
The mentor and student revisit the goals and adjust if necessary.

Meeting 5: Final Meeting to Reflect on Successes and Areas for Improvement
The mentor and student discuss what went well and identify areas for improvement.

Results

Obstacles to Success: Among the responses received, students reported challenges with time management, study habits, uncertainty about what and how to study, organizational skills, feeling overwhelmed, and submitting assignments late. A few students also mentioned experiencing family and relationship issues. The most reported obstacle was time management.

Areas of Strength: Students identified several strengths, including organizational skills, passion for engineering, taking good notes in class, attending class regularly, and maintaining good communication with instructors.

Goals Defined by Students: Most students set SMART goals aimed at achieving success in their courses. For example, some students identified earning an A in the course by the end of the semester as a feasible goal.

Conclusions

This paper summarizes the first offering of the mentoring program, which was well-received by students in the first-year engineering program. The success of the program relied heavily on the characteristics of the mentor. The mentor needed to be someone who genuinely cares about students and their success, as well as being receptive, non-judgmental, and able to provide appropriate support. Institutional knowledge of resources and rules was crucial in helping students navigate the semester.

Since meetings occurred a few times per semester, the mentor-to-mentee ratio for this program appears to be appropriate. Some students followed up with their mentors more frequently than initially expected.

The program's initial goal was to develop materials for the mentoring sessions and identify the main challenges faced by students. We are currently analyzing the collected data and investigating any signs of changes in student retention because of this program. This data will be included in the final version of the paper.

References

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