2006-188: FRESHMAN BOXING LESSONS DESIGNED TO "TKO" ACADEMIC FAILURE

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Abstract

No one would argue with the fact incoming freshmen have a great deal to learn in a multitude of areas if they are to succeed in their undergraduate education. In a sense they are "amateurs" in the whole new "ring" of college life.

The high school "training" received will require a significant intensification as the freshmen become competent and mature professionals in their chosen discipline. An entirely new set of "sparring" skills must be developed and practiced if the freshmen are to grow and mature physically, emotionally, and academically over the next four years.

The purpose of this paper focuses on a detailed explanation of the "coaching" new freshmen receive so they can succeed academically during their critical first year in a very demanding technical degree program. The analogy of "boxing" works well since "amateur" freshmen must become "champion" professional seniors in their chosen field.

The University of Pittsburgh at Johnstown (UPJ) instituted a major initiative to enhance the probability of success for all incoming freshmen. The new mandatory one credit course was titled "University Scholarship". Designed to give freshmen basic "boxing" skills to succeed academically, the section of the course offered to Engineering Technology freshmen provides a "one – two punch" through the collaborative efforts of the Engineering Technology Division and UPJ's Academic Support Center.

The "first punch" comes from "boxing" lessons taught by the Academic Support Center and included a variety of "sparring" skills applicable to all college freshmen. These include topics such as academic integrity, personal management skills, testing and test anxiety, diversity, registration process, problem solving and decision making.

The "second punch" comes from "boxing" lessons taught by the Engineering Technology faculty. Their contribution centers on giving freshmen an engineering specific perspective on the profession they will enter upon graduation. "Sparring" skills the faculty teach include subjects such as an overview of the engineering profession, success strategies, personal growth and development, student organizations, the difference between engineering technology and engineering, and employment opportunities.

Introduction

Many incoming college freshmen believe that they have developed the requisite skills in high school to guarantee success in college. However, early in the first semester their level of confidence often begins to decline especially after they encounter their first series of quizzes and/or examinations. The curricular challenge may be more than expected and frequently the learning skills acquired in high school will not allow the student to realize his/her full potential. The student may find that the challenge of college is more than expected because they have not

practiced time management principles in a way that allows them to fully achieve academic success. The student may feel more like a punching bag than a boxer.

A new one-credit course, entitled University Scholarship, has been developed to acquaint all University of Pittsburgh at Johnstown (UPJ) students with the boxing "moves" (habits and actions) that will allow them to balance social and academic demands. While every UPJ freshman is required to take the University Scholarship course, all of the Engineering Technology (ET) students are grouped together in a single section of the course. This grouping of technical students provides a structured environment which highlights the specific skills and pertinent professional information required to succeed in the ET program. The single section is the training camp for the new ET students. It teaches students how to "weave" to avoid some of the punches thrown at them.

Since its inception the Engineering Technology Division has conducted a seminar for freshman students. Topics offered have evolved over time reflecting trends in industry and education. In recent years the Academic Support Center staff has become involved with the ET seminar and presented several of the topics directly related to their area of expertise. These efforts were coordinated by an ET faculty member responsible for the freshman seminar and served as the "Commission."

While both the ET faculty and Academic Support Center possess different abilities and aptitudes, they share the same student centered commitment and the common goal of preparing students for university level classes. Transitioning the traditional ET freshman seminar into the new required University Scholarship course was virtually seamless and without any major problems. This highly successful changeover was directly attributed to the collaboration and cooperation between the two entities responsible for the new course. Their joint single-mindedness coupled with their intense dedication to serving the students provided the motivation for this successful academic venture.

Concept Development

The development of all first-year students has been an ongoing concern at UPJ. Before implementing the one-credit University Scholarship course, the University required all first-semester students not enrolled in the Engineering Technology Division to take a 0-credit course entitled, "The College."[1] The freshman ET seminar was a part of the ET curriculum since its inception and its content was closely monitored from year to year. The seminar was always coordinated by a senior Engineering Technology faculty member, the "promoter" who became responsible for developing a seminar format which would successfully merge and integrate topics related to the division and some of the topics found in The College. For example, the traditional ET seminar was used to introduce students to the Engineering Technology Division faculty, students, and activities. Speakers from other campus locations were also invited to speak. Students learned about Career Services, the Learning Resource Center, Cooperative Education, and the Counseling Center.

Because the seminar was a 0-credit course, no exams were given and students were not required to complete any formal assignments. Attendance was used as the sole means of evaluation and

the grading was on a Satisfactory/Unsatisfactory (S/U) basis. Each student signed in at the start of every class by completing a form on which they identified the speaker of the day and wrote and signed their name. Students were permitted to miss two classes throughout the term. Students that receive an unsatisfactory grade are required to complete an assignment or task determined by the senior faculty member to have the grade changed to satisfactory. Students were never formally surveyed to gauge their reaction to the course content. The training was not very rigorous or tested.

According to the National Survey of First-Year Seminar Programming (conducted by the National Resource Center for the First-Year Experience and Students in Transition, the internationally recognized leader in student transition issues), an institution can accomplish much more with a course if credit is attached to it.[2] Students have a stronger sense of "buy-in" and are much less resistant to out of class assignments, and more likely to strive for excellence in their work. For the same reason, it is best if courses are graded. If the course is evaluated S/U, as Freshman Seminar was, many students will simply strive for "satisfactory" rather than "excellent" work.[3]

The Associate Vice President for Academic Affairs proposed University Scholarship based on student feedback and the need for all students to examine certain topics more closely. The name of the course was selected to emphasize students' academic orientation to college-level work, partly as a result of internal data. For example, the 2002 Cooperative Institutional Research Program (CIRP) Survey given to entering first-year students indicated that UPJ students' drive to achieve and to develop their writing ability is lower than the national level, but that some of their top reasons for attending college are to become better educated and to develop intellectual abilities.[4] The students knew they needed to be able to develop a successful "combination" rather than practicing "covering."

With the campus requirement for total freshman participation in University Scholarship, it seemed appropriate to involve the Engineering Technology faculty and convert the Freshman Seminar into one of the sections. By doing so, the positive engineering technology related aspects of the Freshman Seminar were not lost.

Implementation Phase

In developing the content for University Scholarship, the faculty across the campus incorporated the topics of time management, study skills, diversity, stress management, advising and registration, academic integrity and final exam preparation. This material was to be covered in more depth by adding graded assignments and facilitating class discussions as part of the required coursework.

Because the requirement for the University Scholarship course was finalized after the spring 2005 term ended, preparation for the Engineering Technology section of the course had to take place prior to the start of classes in August 2005. The textbook and weekly topics were selected during the summer. "Studying Engineering, A Road Map to a Rewarding Career" by R. B. Landis[5] was chosen and found to be very compatible with the common University Scholarship topics. A course syllabus was developed and speakers for each week were assigned. The

"training" schedule was in place. Copies of the syllabus were distributed to the freshmen during the first week of class and the purpose of the new course was discussed. Students found that the Freshman Seminar on their schedule had been changed to University Scholarship and that one credit was associated with the course. They had to "roll with the punches."

Table 1 identifies the course topics and source of the speakers. The order of the topics was based on the selected textbook. As a means of introducing freshman students to the ET faculty, ten faculty were designated as speakers. During weeks 2, 4, 6 and 8, two faculty members worked as a team to cover the topics. These speaking assignments also allowed new faculty to become more familiar with the course content. During the tenth week, the Interim ET Director spoke about the organization of UPJ, the Division and the three departments. At that meeting a hardcopy of the ET Mission Statement was given to each student. Because the Division was in the process of reviewing the mission statement, the students were asked to read the statement and suggest changes or indicate their approval. This is not a process that will not be repeated every year, rather it was an opportunity for student involvement that came about because of the review process timing. Before this, most of the students did not know that there was an ET Mission Statement.

A single Academic Support Center staff member presented for the ET section of University Scholarship. The students now recognize the staff member as a point of contact.

Week	Topic	Speaker Source
1	Course Introduction	ET Faculty/Academic Support Center
2	The Engineering Profession	ET Faculty
3	Goal Setting, Time Management and Priorities – Study Skills	Academic Support Center
4	Academic Success Strategies	ET Faculty
5	Test Taking and Test Anxiety	Academic Support Center
6	Personal Growth and Development	ET Faculty
7	Diversity	Academic Support Center
8	Broadening Your Education	ET Faculty
9	New Advising and Registration Process	Academic Support Center
10	Engineering Technology and Our Mission	ET Division Director
11	Problem Solving, Self Management, Decision Making, and Preparing for Final Exams	Academic Support Center
12	ET Student Organizations	Student Officers/ET Faculty Advisors
13	Final Exam	Academic Support Center
14	Industrial Advisory Committee	Industrial Advisor Committee Members and Faculty

Table 1. University Scholarship Course Topics and Speakers

A joint Civil, Electrical and Mechanical Engineering Technology Industrial Advisory Committee meeting was held on the same day as the last class meeting. At the start of the University Scholarship class, the Committee members and ET faculty introduced themselves. The purposes of the committees and the meeting were briefly explained to the students. This was the first time that our Industrial Advisory Committee ever interacted with the entire group of freshmen

students at one time. The idea was to make the students aware of the committee and the backgrounds of the members.

Two weeks before the end of the term, a fifty question final exam was given. It consisted of 35 questions provided by the Academic Support presenter and 15 questions provided by the ET faculty presenters. The questions consisted of 15 matching, 17 multiple choice and 18 true or false questions. Seventy percent of the overall grade for the course was based on the test score. The other 30% was based on attendance with 2% taken off for each missed class. Ninety-two percent of the students passed the course, receiving letter grades of A, B or C. Those that failed the course had poor attendance. It was obvious that "training" was critical for success. The grade distribution is described in Table 2.

Letter Grade	Percent of Students
A	16
B	54
C	12
F	7

Table 2. Grade Distribution

Results and Conclusions

After only one semester, we have already seen several benefits to the new, credit-bearing first-term University Scholarship. Freshmen ET students were surveyed to gauge their reaction. Students were asked to provide written responses to four questions regarding both the Academic Support and ET faculty portions of the course. They were also asked to numerically rate thirteen aspects of the course using a scale from 0, for did not learn anything, to 5, learned a great deal. Students also indicated if they read the ET Mission Statement and identified the number of ET faculty they knew. The questions for both portions of the survey are found in Table 3.

Written response questions:
1. What aspect of the course presented by Academic Support/ET faculty did you find most helpful to you as a freshman? 2. What part of the course presented by Academic Support/ET faculty do you believe could be improved upon? 3. What specific improvements do your recommend? 4. What was the best insight you obtained from Academic Support/ET faculty about your new college life?
Numerical response questions:
1. I now know more about the engineering profession. 2. I now know more about how to effectively use professors and peers. 3. I now know more about UPJ student professional organizations. 4. I now know more about being receptive to change and behavior modification. 5. I now know more about pre-professional employment. 6. I now know who the department chairs are and where to locate their offices. 7. I now know something about the Industrial Advisory Committees. 8. I now know what "academic integrity" means.

9. I now know more about setting goals and managing my time. 10. I now know more about test taking and how to manage test anxiety. 11. I now know more about diversity. 12. I now know more about problem solving, self management and decision making. 13. I now know more about preparing for final exams.

Table 3. Survey Questions

In the written responses, time management and prioritizing were identified most frequently as the most important topics taught by the Academic Support staff. Other aspects identified as important included: how to get tutors, study strategies, stress relief, academic integrity and overcoming test anxiety. The skills learned through these topics gave students the ability to "counterpunch" negative outside influences. Similarly, students indicated that getting to know the ET faculty, learning about the three ET programs, and finding out about the professional society organizations were important aspects of the classes taught by the ET faculty. These topics helped the students develop good "footwork" so that they would be well-balanced. Thirteen students indicated that they joined a professional society as a direct result of the seminar discussion. In the past students did not generally join the professional societies until their sophomore year.

The students generated recommendations for improving the University Scholarship class that included: having activities or projects, providing handouts, introducing some of the tutors, having upperclassmen participate, providing more time for outside speakers, explaining how to get summer jobs, and talking about specific engineering projects. Some of these suggestions are items that were planned for the second term seminar, but not known by the students.

Students identified as "insights" many of the concepts that we hoped to convey to them. They now know that there are many sources of help available on campus and where to find them. They know that if they are feeling like they are starting to lose the boxing match of college, they do not need to fall down, because there are numerous people that can keep them standing. They know that it is important to study and do homework. They know that it takes determination and hard work to succeed. Students do not want to rely on being "saved by the bell." They also know that it is important to get involved in clubs and organizations and make friends and that participation is a way to gain leadership skills, because all work and no play can create the worst college career. One student indicated the perception that the division is like a big family that takes care of each other. Faculty served as "ringside physicians." Another said that college is more diverse and challenging than high school.

The averages for the numerical responses are shown in Table 4. The responses indicate that the Industrial Advisory Committees need to be better explained to students. The students do not fully comprehend why the groups exist. The one time meeting with the Committee members served as in introduction that needs to be expanded in subsequent years.

Though students are now more knowledgeable about diversity, the topic needs to be discussed in other terms and courses to increase awareness. This topic is being addressed on a campus-wide as well as divisional basis.

Average Score	Topic
2.2	Industrial Advisory Committee
2.6	Diversity
2.7	Pre-professional employment
2.9	Receptive to change and behavior modification
3.1	Test taking and managing anxiety
3.2	Engineering profession
3.2	Effective use of professors and peers
3.2	Problem solving, self management and decision making
3.2	Preparing for exams
3.4	Department chairs and where to locate offices
3.5	Setting goals and time management
3.8	UPJ student professional organizations
4.1	Academic integrity

Table 4. Average Scores of Numeric Responses to Survey

Most students indicated they now know four or more ET faculty. They know who the department chairs are and how to find their offices. They understand what academic integrity is all about. They know more about setting goals and time management and why it is important to apply what they learned. They have gained some blocking skills to assist them in the bout between studying and playing.

Obviously, the ET Division plans to evaluate the program in the short- and long-term, not only with course evaluations, but with surveys and focus groups in students' sophomore and junior years. We feel that the students, while they can gauge the effectiveness of the course to a strong degree now, cannot truly evaluate its effectiveness in their college adjustment until they are further along in their academic programs. Student input will be used to shape the course content and the means of content delivery. The University Scholarship course conditions students and makes them better "boxers", preparing them for the next "match."

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