

Broad-based, Sustained Initiatives Benefit Recruitment of New Students

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Abstract

A consistent and diverse recruitment effort, planned to reach prospective students on a regular basis, through a wide variety of communication channels, has paid off for the College of Engineering and Mineral Resources (CEMR) at West Virginia University (WVU). The size of its freshman class has risen considerably in recent years, with the current enrollment exceeding by 62% that of 1995, despite a declining pool of high-school graduates in the state of West Virginia. The paper underscores the importance of combining a broad spectrum of initiatives for disseminating information about the college, over a wide surrounding region, with effective coordination across a broad team of participants, ranging from university faculty, alumni, and administrators to high school personnel, parents, and other relatives of potential students. A study of enrollment trends, as well as response patterns from surveys of admitted students and their parents, indicates that the quality of personal service and attention they receive from the institution is often, at least as critical as the quality of its academic curricula and reputation. Advanced, careful planning of recruiting materials and events is, nevertheless, essential for capturing the highlights of the educational programs offered by the college, with respect to both their contents and methods of instruction.

I. Introduction

The proliferation of advanced technologies throughout the global economy demands changes in all aspects of life, including industrial and academic activities. New market opportunities, competitive pressures, and government regulations have triggered a widespread wave of changes across the industry, in regard with both its technical and business practices. The dynamics of these changes propagates, obviously, also to the area of engineering education, since the industry is the "ultimate customer" of universities, where their graduates are to be employed and expected to pursue professional careers [1].

In response to the emerging needs of industry, modern technologies, and changing demographics of the U. S. population, a systematic reforming process is under way in engineering education [2]. It entails not only major re-alignments of instructional topics and methods, but also updated strategies for student recruiting, admission, services, and development. National initiatives for upgrading undergraduate engineering programs in the U. S. include the "Engineering Education Coalition" [3], task forces for "Engineering Education Assessments"[4], as well as revised criteria for ABET (Accreditation Board for Engineering and Technology) accreditation [5].

Despite the growing demand for engineers in most sectors of the economy, and their highest levels of entry-level salaries, among all professional careers (besides computer scientists), student recruiting remains a tough, but critical challenge, in general, and at West Virginia University (WVU) in particular. As a land-grant state university, WVU must serve the state while operating within the regulations and guidelines established by the state legislature. Student services and recruiting activities have to comply, therefore, with the interests and constraints of the state, whereas, even on a regional scale, the competition between universities for high-quality students is almost as fierce as competitions between companies in the business world. The gradual, but steady transition towards the concept of "Virtual Campus" [6] and interactive, distance-learning, opens up new opportunities for teaching and recruiting, but also changes the dynamics, and even the players, in the competition for new engineering students. In a continuous quest to offer unique capabilities and services to prospective students, more and more universities are expected to include opportunities for off-campus courses, or virtual-learning, as a highlight of their recruiting strategies.

II. Recruiting Approach at WVU

An intensive, multifaceted program, dedicated solely to the recruiting of new students, has been initiated by the College of Engineering and Mineral Resources (CEMR) at West Virginia University (WVU) in 1995, when the freshman engineering enrollment dropped to a low of 268 students. While outside factors, beyond the control of the college, such as the conditions of the national economy, or the population demographics in the state of West Virginia, may have led to the decline, it became evident that a concerted, drastic action is required in order to reverse the trend.

The underlying foundation of the new recruitment program has been identified to be the model of a private business, where the customers are high-school students and their parents, both from West Virginia and the surrounding states, extending to New York, New Jersey, Delaware. Like most other customers, students and their families "shop" for the "best deal" when they explore opportunities for college education. Consequently, the CEMR has to "market" effectively its educational products and services, under the assumption that no effort is redundant when every prospective student has to be reached, well informed, motivated, and guided through his/her individual career considerations.

An informative and attractive package of facts about the engineering programs available at the CEMR has been developed based on recommendations received from the faculty, alumni, and contacts with industrial companies, government agencies, or other universities. It emphasizes the collaborative, open, modern learning environment, where engineering design and research are integrated, along with engineering sciences, throughout the curricula, starting with the "freshman experience" in the first semester [7]. The three essential attributes identified by the Engineering Deans Council and the Corporate Roundtable of the ASEE [8] for a modern undergraduate program of engineering education, are well reflected in the information presented through CEMR's recruiting material:

- "Relevant" – educational experiences that are relevant to the lifelong career and personal interests of specific students.

- "Attractive" – intellectual abilities are stimulated and developed through exciting knowledge, state-of-the-art facilities, and hands-on projects.
- "Connected" – regular contacts with professionals from industry and the local community allow the students access and exposure to real-life problems.

III. Plan of Activities

A comprehensive, pro-active cycle of recruiting activities combines extensive mailings with frequent visits to high schools, and close, repeated interactions not only with student candidates, but also with their parents, other relatives, teachers and counselors. Special attention is paid to the contacts with high-school officials, who exert, usually, a strong influence on the career decisions of their students. All the recruiting activities undertaken by the CEMR are coordinated closely with other WVU personnel, or offices, involved with student recruiting and services.

The annual recruiting cycle starts in summer, when the College Board and the Educational Opportunity Service provides the CEMR with a current list of high-school students who are interested in the study of engineering, and have qualified for admission into the college. This information is used to update the computer database maintained by CEMR's recruiting office, that includes about 27,000 names of prospective students and high-school personnel, mainly mathematics/science teachers and counselors, from West Virginia and surrounding states. A brochure describing CEMR's undergraduate programs is mailed in the summer to the entire distribution of this database. This, and subsequent, carefully-timed activities are listed below:

- July – information brochures mailed to entire database distribution
- August – letters to high-school teachers and counselors with a request for names of students interested in engineering degrees.
- September – "thank you" letters to high-school personnel who have supported the recruitment of their graduating students for the incoming class of engineering freshmen at WVU.
- October, through June – "congratulation" letters are mailed to students accepted into the CEMR for the following academic year.
- Spring – Second round of letters to high-school teachers and counselors, to request names of students who have expressed interest in engineering.
- Spring – "Telethon" of personal calls from CEMR faculty members to the home of every student who has been admitted to the college for the upcoming academic year.

Frequent visits are conducted throughout the year to various high -schools in the region, to initiate and maintain close contacts with students, their families and teachers. Such interactions are established, usually, in response to phone calls from the school for classroom visits, or for

participation in "career days". Invitations to attend "College Information Nights" offer another opportunity for direct interactions with high school students and officials. A wide range of other off-campus recruiting activities include participation and displays at the state conference of Mathematics and Science teachers, the West Virginia state fair, as well as numerous local public events, such as parades and festivals.

The CEMR facilities and personnel are accessible every workday to students and families who wish to visit and acquire information about its academic programs. Scheduled, on – campus, events include a formal "Open House" offered twice during the academic year, as well as annual hosting of the TEAM+S competition. Between the months of March and May, the CEMR can be visited as part of the "Day on Campus" program, by any group of students from K through 12.

IV. Outcome Assessments

The obvious measure of success for the recruitment program described above is the year-to-year distribution of student enrollments in the engineering freshman class, as shown in Fig. 1. The reverse in enrollment trends after the 1995 academic year, when the recruiting program was started, is rather visible and impressive, totaling a rise of 63%, from 268 freshmen in 1995 to 437 in 1999. The sustained growth in enrollment, that is depicted each and every following year, is a rather remarkable achievement. The size of the freshman class increased by 26% (268 to 339) from 1995 to 1996, by 18% (339 to 399) from 1996 to 1997, by 4% (399 to 413) from 1997 to 1998, and by 6% (413 to 437) from 1998 to 1999. This outcome is even more astonishing when one considers the steadily declining pool of graduates from West Virginia high-schools, along with the national trend of declining enrollments for engineering degrees, during the same time period.

There are other measures of success, as well, for the benefits of CEMR's recruiting program. For example, 56% of the students who have been accepted in the 1999-2000 academic year have been contacted first through this program. Student surveys indicate that about half of those who attend the "Open Houses" hosted by the college decide, eventually, to enroll into one of its undergraduate programs.

It is important to outline that no academic standard, or criterion, whatsoever, has been compromised, or relaxed, in order to facilitate such a growth in freshman enrollments. To the contrary, the quality of incoming freshmen appears to have increased during the last four years, along with the rise in enrollments. This trend is illustrated by their academic achievements in high-school, as well as in the standardized ACT or SAT exams, as shown in Fig. 2.

Extensive orientation sessions are organized every summer on campus by WVU for incoming freshmen and their parents. During this event, the attendees are asked to fill out questionnaires about the various factors that played a role in their decision to choose WVU in general, and CEMR in particular, for engineering education. These surveys are valuable tools of outcome assessments, since they point towards the most effective aspects of the recruiting program, from the viewpoints of both students and parents. In general, they indicate that mailings and visits often play a dominant role in the college selection process, though the other activities also bring

significant contributions in numerous cases. A distribution sample of responses collected during the freshman orientation cycle of summer 1999 is depicted in Fig. 3.

Fig.1 - Freshman Enrollments in the Fall Semesters

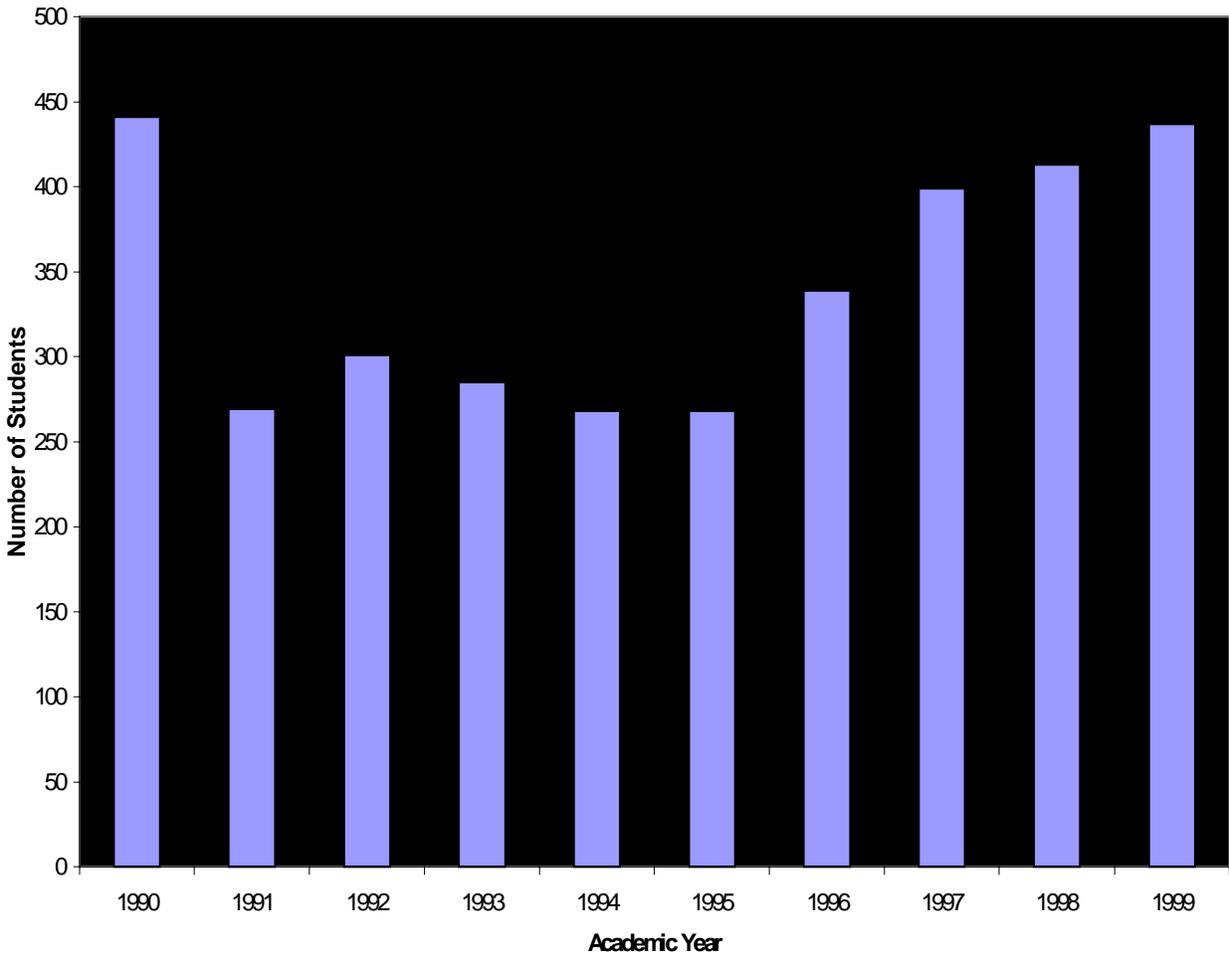
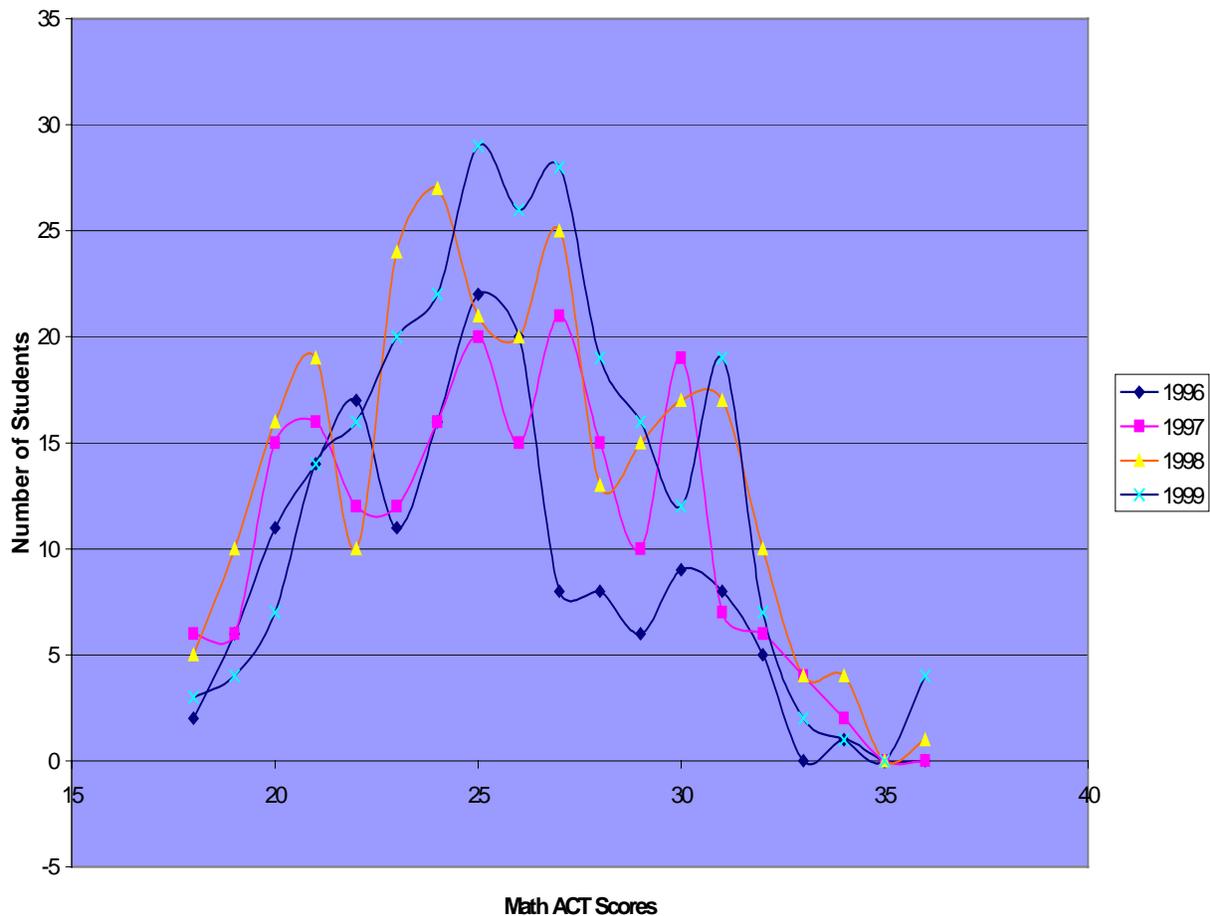


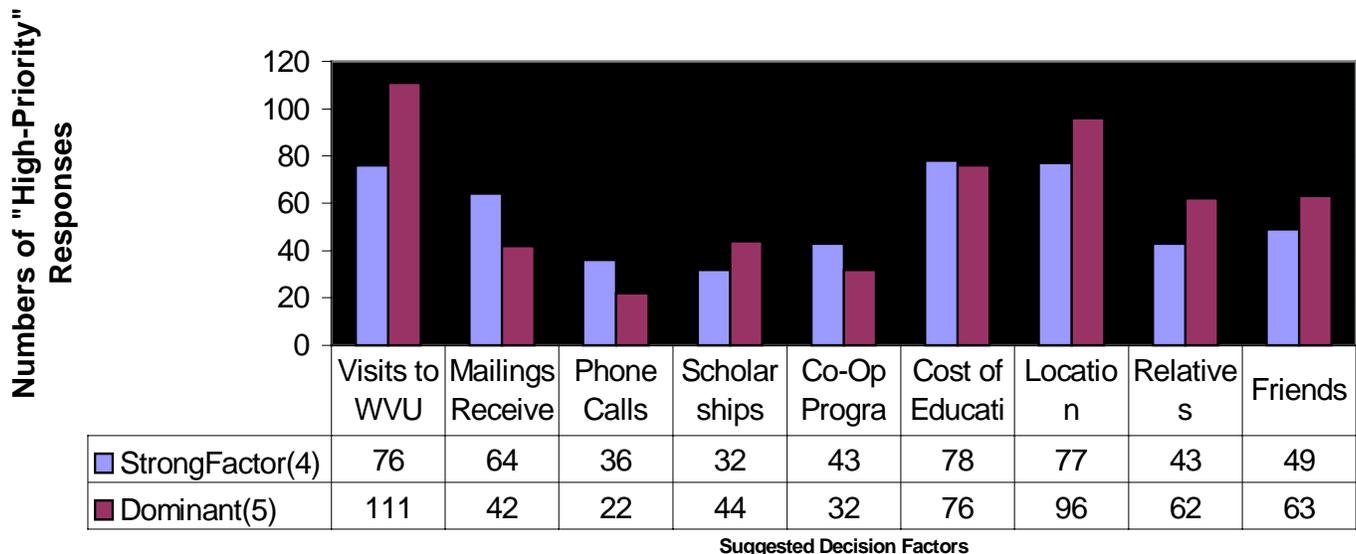
Fig.2 - Frequency Distribution of MATH ACT Scores for Incoming Freshmen (WV RESIDENTS)



Conclusions

The competitive environment of the business world is spreading, gradually, to the field of high-level education, where many universities struggle to expand and enhance their student population through innovative, aggressive methods of recruiting, complemented by high-quality educational programs. The College of Engineering and Mineral Resources at WVU lives up to this challenge by "marketing" effectively its resources and approaches for undergraduate education, through a sustained, pro-active, wide-based, and well integrated initiative for recruiting new students. Its fundamental backbone is the principle of meshing essential elements of a high-value engineering education, with personal interests, abilities, needs, and concerns of prospective candidates. The remarkable successes that such a recruitment program have yielded so far at WVU prove unequivocally that the required levels of resources, institutional support, personal commitment and dedication are worthy "investments" in the future growth and viability of its engineering curricula.

Fig. 3 - Ratings by Parents of LIKELY Factors for College Selections



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