

The Integration of Advising With Student Recruitment

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Abstract

Most prospective students and their families would welcome and benefit from effective assistance in their college selection process, when they are pressured by a plethora of recruitment documents, advertising material, and personal contacts from various universities. The paper describes a formal approach adopted at West Virginia University for consistent integration of advising within the recruiting process of engineering students. This recruitment initiative has thus become a truly comprehensive and concerted effort that is aimed not only at reaching out and informing prospective students about all the options and qualities of our educational programs, but it is also intended to assist the candidates with the analysis and evaluation of such information, from their own perspectives. Although it is difficult, in such a multi-faceted undertaking, to pinpoint those specific activities that have contributed the most to the continuing rise in engineering enrollments at West Virginia University, there is no doubt that the personal attention, balanced advice and close guidance have played a dominant role to this extent. The advising of prospective engineering students during the recruitment process ought to extend beyond their considerations for selecting an appropriate educational institution, to address also their decision criteria for an engineering discipline that is suitable to their individual interests and abilities. The importance of this goal is underscored by the recent finding that about half of the 60% of the current freshman class who have identified initially the major of their choice, were no longer confident in their prior decisions three months later, after attending the orientation seminars on specific undergraduate programs offered by the college.

I. Introduction

One major problem that prospective new students seem to face in today's information age is how to utilize effectively the overwhelming amounts of data available to them through various media from multiple resources, about a large variety of undergraduate programs offered by competing universities. The access to such information is no longer a difficult barrier on the road to selecting the right college and the right profession. The tough challenge facing, instead, today's students and their families is the search for the right answers, or choices, through a labyrinth of seemingly endless options and diverse, often conflicting and confusing considerations. An essential key to success in this endeavor is that of searching for the best match between a wide range of evaluation criteria, the characteristics of relevant undergraduate programs and the individual interests, needs, and constraints of each student candidate. Personalized,

unbiased advice about the entire spectrum of available choices, along with an outline of specific considerations, which could be viewed either as potential highlights or drawbacks by a certain candidate, ought to become an essential element of any recruitment program. Most prospective students and their families would welcome and benefit from effective assistance in their decision making process, when they are pressured by a plethora of recruitment documents, advertising material, and personal contacts from various universities. Conflicting advice, which may often be received from colleagues, friends and relatives, makes the decision even more difficult, especially when it must be coupled with considerations of financial constraints and support.

In the face of declining pools of high school graduates in the state of West Virginia, and fierce competition from other universities, the College of Engineering and Mineral Resources (CEMR) at West Virginia University (WVU) has been undertaking lately a sustained, intensive, and comprehensive effort for recruiting new students. The recruitment program is modeled and conducted like in the business world, where the customers are the students and their families, whereas the university is striving to earn their business by offering a high-value educational package, tailored to the specific needs and expectations of every potential customer. The enrollment of engineering freshmen at WVU has risen steadily since this program was initiated, from a low of 268 students in 1995 to the current freshman class size of 448 students (a total increase of 67%), which is the single most credible assessment of its level of success. An earlier, overview article on this topic [1] describes the primary approach, tasks, activities, and outcomes of the concerted recruitment efforts at WVU. The present paper is focused on one particular aspect of the overall, multifaceted program, namely that of including face-to-face discussions, personalized advice and objective counseling, as an integral component of the comprehensive recruitment efforts. Personal contacts between qualified university personnel, prospective students and their parents, play an important role in a "win-win" situation, through which the institution enhances its image, value, and quality of its message, while the "potential customers" gain access to solid, professional advice, geared towards their particular "profiles". The central goal of this paper is, therefore, the analysis and discussion of the important role that such personal contacts play in the decision making process of both students and parents, by providing them with balanced, up-to-date, reliable information, while assisting them, at the same time, with the expert knowledge needed to identify their best choices for both a suitable engineering discipline and an appropriate educational institution.

II. Why Is Customized Advice Needed?

Why do so many people encounter so many doubts and uncertainties when given the "privilege" of evaluating a myriad of possibilities before they converge to just one educational and career path of their choice? Even though this decision, for a few, may be governed by a single criterion, such as geographic location, family ties, or the "glow of a high salary at the end of the tunnel" through college, in general it is not, by any means, an easy task when each and every option has to receive serious consideration. What about adding other guiding factors, or requirements, when all the alternative career pathways are compared to each other? The selection of a professional major is often coupled with

the choice of an undergraduate institution, and it is rarely driven by a single criterion. It is, rather, a complex, real-life decision making process, which does not take place in vacuum, but it is strongly influenced by the continuous changes in the job markets, as well as by the specific economical or personal conditions of every individual. Most students may prefer, indeed, multiple-choice examinations, where the screening of only about five possible answers is based on only one criterion. They become, however, utterly disoriented and even helpless, when facing the task of sorting through a bulk of information, assessing their own, personal interests, strengths and weaknesses, or steering through a labyrinth of pressures and constraints, on the road towards their optimal choices for college education and professional career. One could survey the reports published periodically in the media about rankings of educational institutions [2], employment markets, or outlook to professional careers, e.g., [3], and feel easily overwhelmed by their levels of complexity.

It is obvious that multiple criteria are, usually, considered simultaneously in the process of selecting a particular profession or undergraduate education program, even though they are not all equally important, and not all can be quantified in the same way. The conventional approach to formalizing the simultaneous consideration of multiple decision criteria is to assign a relative "weighting factor" to each of them, so that these factors add all up to 1 (or 100) for the complete set of criteria [4, 5]. While these weighting factors reflect the perceived importance of every criterion, relatively to each other, they reflect merely the perspective of the "conventional wisdom", which may, or may not, agree with the particular interests, constraints, or objectives of each and every person contemplating the choice of a professional career and, or an educational institution.

The disparate views of individual students and parents regarding the ratings of major considerations, or constraints, in their college selection process, are reflected well and clearly in the responses they provide to written surveys that are conducted regularly by WVU, at the conclusion of every orientation session for incoming freshmen. The parents of engineering students in the 2000 freshman class provided about 75 comments about their particular reasons for enrolling their sons or daughters at WVU, of which 27 (over one third) are related directly to personal contacts with its representatives, either through separate, face-to face meetings, orientation seminars or telephone conversations. There were, approximately, 22 cases (almost 30%) where the parents had merely accepted their son or daughter's decisions to attend WVU, which were often based on non-academic considerations such as athletics, heritage, geographic location, small dorm rooms and class sizes. It is interesting to observe that, so-called traditional criteria for choosing an institution of higher education did not weigh heavily in the parents' replies, with only about 15 (20%) outlining the reputation, quality, and diversity of the academic programs, about 10 (13%) mentioning family links or contacts with friends and alumni, whereas only 2 referring to the financial assistance offered by the institution.

While the financial advantage of engineering education at WVU was mentioned only in one of the 40 responses received from students in the 2000 freshman class, 16 of their answers (40%) referred to their professional interests and the quality of education at

WVU, whereas 17 replies (42%) outlined reasons linked to personal preferences, such as sports, family traditions, or merely convenience, and only 5 (12.5%) highlighted the role of recruitment activities (student competitions, personal meetings and advice) as a dominant factor in their decision to enroll at WVU. Although the samples cited above are too small for a reliable statistical study, they do indicate a significant difference between the perspectives of students and parents on the relative importance of incorporating individualized assistance as an integral part of the recruitment process. The parents appear to appreciate more strongly than the students the value of such an early, customized advice regarding the decisions on educational tracks and professional careers. On the other hand, the responses of the students themselves appear to agree upon their needs, or expectations for consistent, unrestricted personal attention from the faculty, along with direct, unrestricted access to teachers and advisors, throughout their first year in college.

By in large, the students seem to be more prone than the parents to let elements of randomness guide, or influence the process of choosing one career path or another, at one institution of higher learning or another. This observation may be linked, to some extent, with the nationwide high rates of attrition in the freshman year (about 30% of the incoming students), as well as with the high percentage of engineering students who remain still undecided late into the freshman year. A survey of incoming engineering students at WVU reveals that the percentage of students who are undecided as to the major field in which they choose to specialize drops from about 75% during the summer orientations, to only about 50% by the middle of the freshman year. While an overwhelming proportion of about 95% of the new students assert that orientation seminars to various engineering disciplines help them to understand the profession better, over two-thirds of the freshmen reply, usually, that such seminars do not affect their own career choices. Moreover, about half of the students who may have decided, initially, on a certain engineering major, tend to re-evaluate their decision once they learn more details, and comprehend better the specific professional goals and requirements of every discipline. All these conclusions are supported by surveys that have been conducted regularly during the past 3-5 years, and they all point towards the need and the importance of thorough, one-on-one counseling of each prospective student during the recruitment phase. Only through such personalized, expert advising would a student and his/her family learn how to adhere to a rational, rather than instinctive, approach to the challenge of selecting a profession that matches the specific personal attributes of the candidate, and a college that is compliant with the needs, interests, expectations and resources of the individual student.

III. A Formal Extension of the Advising Process

In most undergraduate institutions, students enrolled in a particular program are required, or in some colleges just guided, to meet periodically with specially assigned faculty members for the purpose of "Academic Advising" on curricular and career matters. Although such advising is an essential element of a successful and productive college education, at all its various stages, it is, usually confined to students who are pursuing, already the professional degree of their choice, and it is viewed by many as an

area in which "students show the least satisfaction" [6]. The integration of one-on-one advising with other tasks practiced consistently by the College of Engineering and Mineral Resources at West Virginia University for recruiting prospective students is a formalized extension of the conventional academic advising, beyond issues of course registration and scheduling for existing students. While expanding, thus, the pool of advisors to college candidates and their families, it also shifts the emphasis of counseling from curricular choices to career choices. The primary goal of such early, customized advising is to help each potential student to recognize and assess fairly his/her personal attributes, [6], both of intellectual and personality, or emotional, nature. The specific interests, skills and abilities of the candidate are, subsequently, ranked relatively to each other and matched systematically with relevant options for selecting an appropriate career path and college. This assistance turns out to be valued immensely by students-to-be and their families, since it helps them to screen out and "digest" rationally enormous amounts of available information, in the context of their particular circumstances and goals.

The formal approach of "weighted factors and objectives", for example [4, 5], is useful in placing such non-academic considerations as athletic opportunities, or such personal inclinations as "technical/ toy tinkering", in a balanced perspective with long-term career, personal, and financial goals. College education is a "school for life" [7, 8], not just a short "horse race", that must prepare and equip the graduate with a solid foundation of knowledge and skills for a successful run through the long marathon of life. A wide range of limitations, either of personal or financial nature, either real or perceived, are factored thus logically into the career or college decision making process, without allowing any particular constraint to drive the selection alone, in one direction or another. The underlying assumption of any advice offered to people who inquire about college education must be that "everyone is good at something" [7, 8]. The real challenge of an effective recruiter, or counselor, is to match the particular strengths of every individual, the work that one can best do, with the school where he/she learns "where", "why" and "how" to do it. Any particular type of intelligence that a person may possess (factual, analytic, numerate, linguistic, spatial, athletic, intuitive, emotional, practical, interpersonal, musical) can be matched with an educational and career choice that offers the best opportunities for its development and utilization.

Face-to-face meetings between students, families and professional recruiters are the only medium through which such customized advice could be provided effectively, to the mutual benefits of the candidate and the university. Early, educated decisions based on formal analysis of complete, current data, in the context of the particular situation of every candidate, are likely to reduce the risks of wrong career choices, thus decreasing the rates of early attritions and transfers, along with the associated losses of time and financial resources. In an era of continuous proliferation of computer-based dissemination of information, "Virtual Universities" [9, 10] and distance -learning, the need for personal contacts and individualized advice appears to become even more and more imperative. These are effective means to stimulate strong motivation and a genuine desire to learn, which are, by far, the most important qualifiers for a successful higher education in general, and an engineering career in particular. Although most prospective students are cognizant of the leadership role that engineering holds in our technology-

driven society [11], they understand it better, and value it further, when given the opportunity to see first hand the diverse, challenging, but rewarding environments of actual engineering education and practice. A highly effective motivator for the current students is the apparently endless string of impressive success stories of the former students, many of whom love their work as engineers, are strongly determined to succeed, and assume leadership roles in their business enterprises, thus proving that, indeed, "leaders are made, not born" [8, 12].

IV. A Sample of Supporting Data

The steady rise in the enrollment figures for the engineering freshman class at WVU, as outlined in a previous paper [1], provides the most impressive and credible evidence to the effectiveness of its recruiting initiatives. This trend continued into the current academic year, when the year 2000 freshman class listed 448 engineering students, a rise of 2.5% over the size of the 1999 class, which numbered 437 students. This outcome is quite astonishing when one considers the steadily declining pool of graduates from West Virginia high -schools, along with a national trend of declining enrollments for engineering degrees. Furthermore, it is important to outline that no academic standard, or criterion has been compromised, or relaxed, in order to facilitate such a growth in freshman enrollments [1].

Since the engineering recruitment program sustained by the CEMR since 1995 is a broad, multi-faceted effort that comprises numerous different activities throughout the year [1], it is difficult to assess the relative contribution of every separate endeavor to the overall outcome of rising enrollments. It is, obviously, even more difficult to identify the single, most effective means of recruiting new engineering students, though annual surveys of the incoming freshman class reveal, for example, that the proportions of the students who have been contacted first through this recruitment program, were 56% in 1999 and 52% in the 2000-2001 academic year.

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 geographic location and visits to the campus 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 from students and parents during the freshman orientation cycles of summer 1999 and summer 2000 is depicted in Fig. 1 for their assessments on the importance of "Site Visits to WVU" on their ultimate decision to select this institution for an undergraduate degree. Five levels of relative weights were assessed in the survey, and the replies are summarized in terms of percentages from their total numbers for each sample category, which were 436 for students in summer 2000,

256 for parents in year 2000, 406 for students in 1999, and 303 for parents in the summer of 1999. The various bar-columns in Fig.1 show clearly the gap between the percentages of respondents, both students and parents, who consider the site visits as dominant decision factors and those whose selection was not affected by the visits. One may notice, also, that the parents appear to be somewhat more assertive than the students, with higher percentages of "certainty" in their replies, either as definite "Yes" or "No", and lower percentages of uncertain, or "neutral" assessments.

A comparative assessment between the main criteria identified by parents and students who attended the year 2000 orientations for selecting WVU as their undergraduate institution, is depicted in Fig. 2. The factors listed along the horizontal axis of Fig. 2 were presented to the respondents for assessments, and the percentages indicated in the figure are the ratios between the numbers of responses identifying these factors as either "important" (weight of 4 on a quantifiable scale), or "dominant" (weight of 5 on a quantifiable scale) and the total number of responses provided by either the students or the parents for all these decision criteria. It is interesting to notice that the assessments of the students and the parents follow, in general, the same trends, with the only drastic disparity visible for the offering of a general engineering education in the first year in college, which appears to be much more important to the parents than to the students (the parents may "know better" how difficult it is to choose the right discipline for one's abilities and interests). Other factors considered significantly more important by the parents than the students are, as one may expect, the available scholarships, the relatively low costs of education, and the geographic location of the university. Figure 2 provides a clear indication of the fact that some criteria, such as visits to the WVU campus, its geographic location, and the cost of education, play a much more important role than others, like the phone calls from WVU personnel, or the opportunities offered by the CO-Op program, in the process of selecting it as the preferable institution for a college education. As a final note, it is worth observing that the percentage of respondents who feel "neutral" about the relative importance of any decision criteria selected for the questionnaire, reflects the corresponding levels of uncertainty. It remains about the same (20-25%) for most of these criteria, (except the role of the "relatives"), without significant discrepancies between the assessments from the students or their parents (Fig.3). This remark may indicate the fact that about one quarter of the respondents may have selected WVU as their preferred institution for engineering education, for different reasons than those chosen for the survey. The students seem to be, in general, slightly more unsure than the parents, especially in regard with the importance of the "general engineering" format of the first year, the role of scholarships, the "Co-Op" program and the advice or pressure from friends in their decision making process.

Fig. 1- Relative Assessments by Students and Parents of "Site Visits to WVU" as a Decision Criterion in Selecting the University

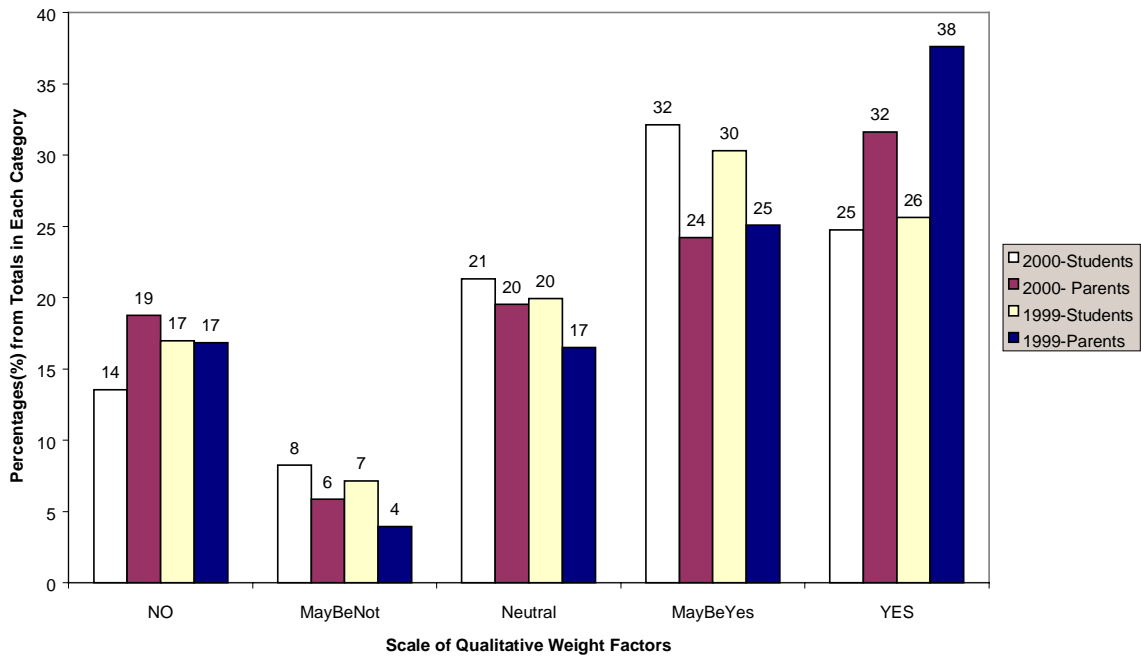


Fig. 2 - Proportions of Students and Parents in Summer 2000 who Assessed the Criteria Listed as "Dominant" or "Important"

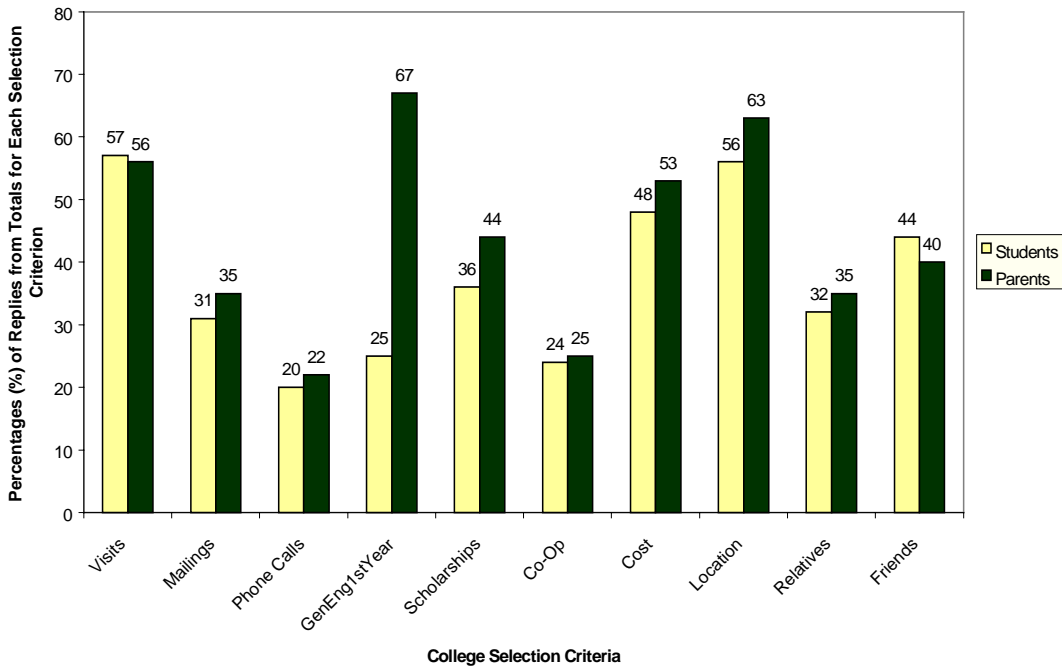
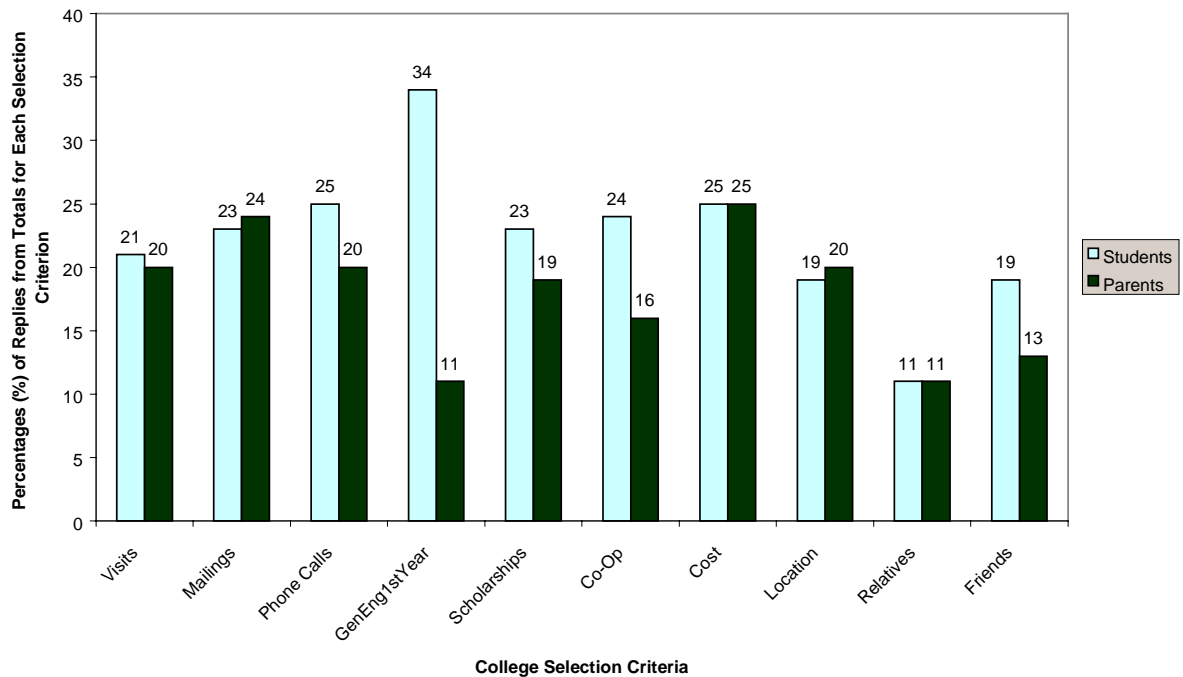


Fig. 3 - Proportions of Students and Parents in Summer 2000 Who Felt "Neutral" About the Selection Criteria Listed Along the Horizontal Axis



Conclusions

The College of Engineering and Mineral Resources at WVU lives up to the challenge of marketing effectively to prospective new students its resources and approaches for undergraduate education, through a sustained, pro-active, wide-based, and cohesive program of recruiting initiatives. Its fundamental backbone is the principle of meshing essential elements of a high-value engineering education, with personal interests, abilities, needs, and concerns of potential candidates. An essential component of this strategy is undivided, personal attention granted by qualified WVU personnel to each and every student or parent who express interest in any of the educational programs offered by the university for an engineering degree. Unbiased personalized advice and assistance towards a rational and realistic approach to the selection of a suitable professional career, or an appropriate program for college education, are needed and appreciated tremendously by students and their families alike. 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.

Bibliography

1. M. Prucz, "Broad -Based, Sustained Initiatives Benefit Recruitment of New Students", ASEE Annual Conference 2000, St. Louis, MO, June 2000.
2. "America's Best Colleges, 1999 Annual Guide", a Special Report published in the August 31, 1998 issue of the U.S. News and World Report magazine, pages 61-98.

3. "Best Jobs for the Future, 1999 Annual Guide", a Special Report published in the October 26, 1998 issue of the U.S. News and World Report magazine, pages 63-91.
4. H.S. Fogler and S.E. LeBlanc, Strategies for Creative Problem Solving, Prentice Hall, 1995.
5. R.T. Clemen, Making Hard Decisions-An Introduction to Decision Analysis, Duxbury Press, PWS-KENT Publishing Company, 1991.
6. R.B. Landis, Studying Engineering – A Road Map to a Rewarding Career, published by Discovery Press, Burbank, California, 1995.
7. C. Handy, The Hungry Spirit-Beyond Capitalism: A Quest for Purpose in the Modern World, Broadway Books, 1998.
8. K.A. Smith, "The Academic Bookshelf", ASEE's Journal of Engineering Education, Vol. 88, No.2, April 1999.
9. G. McCandless, "Web Applications: Interactivity Arrives at the Virtual Campus", the SYLLABUS magazine, Vol. 13, No. 4, Nov/Dec. 1999.
10. S.M. Johnstone, "Distance Learning – Does Accredited Really Mean Accredited?", the Syllabus magazine, Volume 14, No. 6, January 2001.
11. D. McGraw, "Grooming New Age Edisons", ASEE's PRISM magazine, April 1999.
12. R. Weingardt, Forks in the Road: Impacting the Road Around Us, Palamar Publishing, 1998.

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