

Professional Affairs

WOOD SCIENCE CURRICULA: A PLAN FOR IMPROVED ENROLLMENT¹

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ABSTRACT

A marketing plan for increasing Wood Science and Technology enrollment at Michigan Technological University is outlined. Results of a direct mail campaign are given.

Keywords: Education, Wood Science and Technology, enrollments, student recruiting.

INTRODUCTION

The Wood Science and Technology (WST) profession is beset by the problem of low visibility among the general public. Nowhere is this problem more critical than among high school students making their college and career plans. Most educators are painfully aware of students in other fields who "would have majored in Wood Science if I had only known"

The implications of low enrollment in WST programs have been well documented (Barnes 1979, 1980; Bethel 1979). The shortage of B.S. recipients available for employment by industry and the low graduate student enrollments in WST programs are largely attributable to the small number of college freshmen entering the field. In addition, economic conditions within many universities may endanger the viability of some low-enrollment programs.

Steps have been taken by the Society of Wood Science and Technology (SWST) and other technical and trade organizations to publicize career opportunities in the forest products industry. Universities, industry, and the U.S. Forest Service have also contributed to this effort, and an interchange of ideas addressing the low enrollment problem is underway. This paper is intended as a contribution to

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TABLE 1. Enrollment profile in Wood and Fiber Utilization by class for the years 1976–1981.

	1976	1977	1978	1979	1980	1981
Freshman	3	2	7	9	5	13
Sophomore	8	8	11	3	5	14
Junior	14	13	21	21	15	8
Senior	8	12	12	19	16	15
Total	33	35	51	52	41	50

this effort by outlining a marketing program undertaken during 1980–1982 by the School of Forestry and Wood Products at Michigan Technological University (MTU). Although MTU has since changed its direction in the area of wood science education and now plans to develop dual-degree programs in engineering and wood science, the market plan is adaptable to almost any curriculum and continues to be an integral part of the School of Forestry and Wood Products.

The Wood and Fiber Utilization program had been in existence since 1975. During that time, enrollment remained at a plateau of approximately 40–50 students. (See Table 1.)

Since its inception, the program has maintained an excellent record in the placement of its graduates; Wood and Fiber graduates have consistently received average starting salaries that compare favorably with MTU engineering graduates. It was felt then that both the placement potential of WST graduates and the resources of the program justified a substantial increase in enrollment. As a result, a marketing program was begun in December 1980.

In order to be most effective under limited financial and human resources, a number of “shotgun approach” recruiting methods were rejected in favor of a target market approach. Admission patterns of currently enrolled Wood and Fiber Utilization students were examined and their academic records were studied. The University’s admission representatives, who meet regularly with high school guidance counselors and prospective students, were questioned. The following facts were identified.

1. The 1980–1981 enrollment comprised a sizable number of students who had not originally intended to study Wood and Fiber Utilization, transferring instead into the program in their sophomore or junior year. The most successful of all the students in the program, as measured by G.P.A., were those with solid backgrounds in mathematics, both at the high school and college freshman level.
2. Among high school students, there was little or no awareness of either the wood science discipline or of the careers available. By contrast, awareness of the major engineering fields was high.
3. Counselors, teachers, and parents tended to advise youngsters with aptitudes in mathematics toward careers in engineering. Forestry careers were perceived as scarce, low-paying, and not requiring an aptitude in science and mathematics.

The objective, therefore, was to bring about a change in attitude among three separate markets: prospective students, guidance counselors, and high school

teachers. A marketing plan was developed which targeted each of these three markets.

It was acknowledged that, while there was a need to bring about a relatively quick increase in enrollment, "band-aid" marketing plans are seldom effective when used alone over a long period of time. Thus, the short-term phase of the plan involved a carefully designed direct mail campaign that was intended to double freshman enrollment by the fall of 1982 and that could be repeated for several years if necessary. The long-term phase involved the production of a career filmstrip for loan to high school guidance counselors and career education teachers. This phase was designed gradually to broaden the base of younger students whose career interests could be channeled toward WST. The overall goal, encompassing both short- and long-term phases, was to stabilize the total undergraduate enrollment at 100 students within four to six years, effectively doubling the number of program graduates per year.

Because this plan was more complex than anything attempted earlier, funding for the program (estimated at \$7,000) was needed. In keeping with university directives, outside funding was sought. A proposal, submitted to the Weyerhaeuser Company Foundation, was funded in January of 1981.

THE DIRECT MAIL CAMPAIGN

Before establishing the details of the plan, the following questions were addressed:

1. What parameters best define the student market?
2. How can individual students within this market best be identified?
3. What tools will most effectively interest them in WST?
4. How can they best be motivated from the interest stage to the enrollment stage?

Michigan Tech has been well aware of its overall student profile. Some 95% of its student body are residents of Michigan, Wisconsin, Illinois, or Indiana. The vast majority decide to attend Michigan Tech and decide on a major field of study prior to their senior year in high school. Within this framework, potential Wood and Fiber students also had to have interests and aptitudes compatible with a career in WST. Although WST students and professionals have diverse backgrounds, the MTU program had success in recruiting students who were undecided between a career in forestry or a career in engineering. WST apparently was seen by students as a compromise between two seemingly incompatible career interests, natural science and engineering.

Prospective students contacted in the direct mail campaign were identified through use of the Educational Testing Service's Student Search Service, which selects names of students whose qualifications match those specified by the institution. Students selected for the campaign fit specifications matching or approximating those defined in the previous paragraph. All were high school juniors residing in either Michigan, Wisconsin, Illinois, or Indiana; all had test scores that met MTU admission guidelines; and all had indicated career interests in either forestry or an undetermined engineering field. The Service selected 2,300 students, all of whom had volunteered to participate in the search program.

The students were then mailed packets containing a personalized cover letter,

TABLE 2. Responses to the brochure mailing as of 1/4/82.

	Brochures mailed	Replies	%
Total	2,304	392	17.0
State of residence:			
MI residents	671	174	25.9
WI residents	350	57	16.3
IL residents	862	104	12.0
IN residents	421	57	13.5
Career interest (from Student Search Service):			
Forestry interests	204	55	26.9
Engr. interests	2,100	337	16.0
Sex:			
Women	510	139	27.2
Men	1,974	253	14.1

a postage-paid return card, and a four-color brochure outlining career opportunities in WST and the program of study at MTU. Careful attention was paid to the design of the brochure. It had to be visually appealing in order to attract the attention of the recipient, it had to address the questions most commonly asked by prospective students, and it had to be written in a style understood by the audience without the technical jargon comprehensible only to the professional. The brochure was test-marketed on WF students, particularly freshmen, as well as the MTU Admissions staff, and the Human Resources personnel of the North/Central Region of Weyerhaeuser Company.

The package was intended to elicit a response from the student via the return card. In addition to expressing interest, students also noted whether they had known about MTU previous to the mailing, and whether they had written to the university before. Those who responded were mailed further information about the university, a catalog, and an application for admission. Respondents were also invited to visit the campus during the summer.

In addition, the admissions representatives used the brochure with high school students interested, again, in either engineering or forestry careers, during their regular high school visitations and college night programs.

RESULTS OF DIRECT MAIL CAMPAIGN

A 10% response rate, or 230 returned cards, was established as the goal. This rate was based on the results of a recent study of colleges and universities using the Student Search Service, which showed that the median rate of first response is 10% (Druesne et al. 1980).

However, actual first-time response to the direct mail program far exceeded expectations. Nearly 400 students responded with requests for additional information, resulting in a 16.9% rate. Females accounted for 22.1% of those who received the mailing, and 35.4% of the total respondents. The greatest response, 41.3%, came from Michigan residents. Twenty-nine percent were Illinois residents. Wisconsin and Indiana residents contributed 15.6% and 14.0%, respectively. (See Table 2.)

Of the 25 students enrolled in fall term 1982 in the Wood and Fiber Utilization program, 8 can be positively identified as having been recipients of the direct mail package. Seven are Michigan residents. The remaining students were accepted into the program from a variety of other sources, notably regular high school visitations by MTU admissions representatives who used the four-color brochure in their presentation to students.

TOWARD THE FUTURE—LONG-TERM PHASE

The direct mail campaign is a means for meeting enrollment objectives over the next two to five years. Efforts to increase awareness of WST must be more long-range in order to have a lasting effect upon the profession. Most of the promotional efforts of the technical and trade organizations are long-range in nature. This includes SWST's development of a career slide program and involvement with youth groups such as the Boy Scouts of America. The long-range phase of Michigan Tech's plan involved development of a filmstrip depicting career opportunities in WST.

Career films and filmstrips are not new to MTU. In 1975, the university initiated a loan program with Michigan high schools and later expanded its services to Minnesota and Illinois. The program has been popular but has been limited in scope to engineering disciplines and the earth sciences. Of the 2,000 high schools in Michigan, Minnesota, and Illinois, approximately 300 have participated annually in the program. Feedback from teachers and guidance counselors has indicated that the audio-visual materials are shown to an average of three to five classes, each class averaging 25 pupils. Thus, the potential market for a new filmstrip that explores careers in Wood Science and Technology numbers between 22,500 and 37,500 students per year.

The plan called for the production of a 10-minute narrative filmstrip aimed at a high school freshman and sophomore level audience. This audience was identified from results of surveys of MTU students indicating that most had begun thinking seriously of potential careers during their freshman or sophomore years in high school.

The bulk of production was undertaken by MTU, including photography and the master narrative tape. University students with professional broadcasting experience narrated the script. Actual production of fifty filmstrip-cassette packages was contracted to outside professional services. The script was developed around the text of the brochure used for the direct mail campaign. Little emphasis was placed on the MTU program, the intent of the filmstrip being informational rather than for direct recruiting purposes. Success of the long-term program will be evaluated on the basis of the number of times the filmstrip is requested and feedback solicited from the users.

CONCLUSION

Mark Twain is supposed to have said that everybody talks about the weather but nobody ever does anything about it. For a variety of reasons, WST programs are often on a similar footing in regard to enrollment growth. Faced with the reality of stagnant enrollments, universities generally realize that action must be taken to reverse this trend. But all too often it is unclear who, within a university, must assume the responsibility for designing and implementing a plan. Depart-

mental politicking can then easily cloud the issue, and though the talk continues, little is actually accomplished.

For a plan such as the one used by MTU to be effective, several factors must juxtapose. Faculty and administrative personnel must be committed to the plan. Sufficient funding must be available and sufficient time allotted. Realistic goals must be set and the means for evaluation established. Developers of the plan should be familiar with marketing techniques or should consult people who are. The planners should know what type of student they seek for their program in terms of demographics, aptitudes, and life goals. They must be able both to target that market effectively, and to follow through once the interest has been generated. Their plan must also be flexible to allow for changing directions and trends within the department. Most important, they must realize that the recruitment of students is extremely complex and that while direct mail is one of the best ways of reaching a desired market, it is only part of the mix, and by itself is not always effective.

Amid the expectations for increased enrollment in Wood Science and Technology and the obvious benefit to the profession, one should also keep in mind the intangible benefits of improved marketing of professional education in WST. Younger siblings and friends of students contacted through these efforts may also become interested in WST. High school teachers and guidance counselors may become more inclined to encourage students to consider careers in WST. Perhaps most important, goodwill will be generated between university and industry in a project that ultimately will benefit both.

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