Creating Relationships with Industry to Advance New Programs

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Abstract

The University of Southern Mississippi created the Workforce Training and Development Program within the School of Engineering Technology at the request of the State Workforce Development Council. In parallel, the School of Engineering Technology also expanded its Masters Degree program to include emphasis areas in Workforce Training and Development and in Environmental Safety. From inception, faculty members working to develop these programs recognized that building close ties with business and industry was important to the long-term success of these new programs. The authors adopted a four step approach designed to involve business and industry in the process of program development. The first step was to define the role that industry should play in the development and growth of the programs. The second step was to identify and contact companies which would be interested in committing their time and talent to program development. The third step was to actively involve business and industry personnel while developing opportunities within industry to augment student education. The final step was to cement the relationship with the industrial partner and to develop long-term commitments to program development. Within the first year, this approach has succeeded in developing solid relationships with business and industry. Members of business and industry have offered support by participating on the Industrial Advisory Committee, establishing paid internship positions, hosting field trips, hosting large group projects, assisting with networking with other businesses, and advising on technical course content. These efforts have combined to create a stronger undergraduate and graduate curriculum while being more responsive to the hiring needs of regional business and industry.

Introduction

The School of Engineering Technology (SET) at The University of Southern Mississippi (USM) developed a Workforce Training and Development (WTD) degree program at the request of the State Workforce Development Council. This action was taken by the Council in response to industry demand for skilled training professionals with technical competence. This unique program affords students at the undergraduate level the opportunity to acquire technical competence in one of four technical concentrations (computer technology, construction technology, environmental science, or industrial/ manufacturing), as well as competence as a training professional. In parallel, SET also established two new emphasis areas in the graduate program leading to the degree Master of Science in Engineering Technology with an emphasis in either workforce training and development or environmental safety. These programs first accepted students in the Fall semester of 1997.

Recognizing the need for industry involvement in the WTD and environmental safety programs, USM SET faculty responsible for development of the programs identified the importance of industrial participation to the successful development of the programs. Early in the first year, USM faculty developed a four-step approach designed to involve business and industry in the process of program development. This approach was successful in building solid relationships with local industry and in receiving a commitment from them to the development of the new programs.

New Programs

The undergraduate and graduate WTD degree programs have been designed to academically prepare training professionals to meet industry's requirements for technical instructors who can identify performance requirements and interventions directly linked to the operational and business goals of an organization. Each curriculum was designed to address the key competencies identified by the American Society for Training and Development (ASTD) and the U.S. Department of Labor.[1] In addition to the ASTD research, the American Petroleum Institute (API) and the National Environmental Training Association (NETA) recently developed trainer competency recommendations.[2] The SET WTD program blends these sets of nationally recognized standards for training professionals.

Within the undergraduate WTD program, students also are required to develop a technical competency by completing courses in one of four technical concentrations. These are computer technology, construction technology, environmental science, and manufacturing/industrial technology. Concurrent with the undergraduate curriculum development, SET also expanded its Masters Degree program in Engineering Technology to include emphasis areas in Workforce Training and Development and in Environmental Safety. The undergraduate and graduate environmental curricula are very similar and are designed to prepare the student to fill positions in the areas of environmental compliance, permitting and safety.

The programs were designed to give students as much exposure as possible to the business and industrial workplace. Undergraduate students, for example, are required to complete a 400-hour internship as part of their degree requirements and both undergraduate and graduate students must complete a project with business or industry.

Industry Contact

As indicated, strong relationships with industry were recognized at preliminary stages of curriculum development to be vital for long-term success. There are several important reasons for this philosophy. First, even though state industry initiated creation of the WTD undergraduate program at USM through the State Workforce Development Council, many organizations in the state are not aware of the undergraduate program and the associated graduate programs because they are so new. Developing local industry contacts is an important method of informing them about these programs. Second, engineering technology, as an applied degree, supports practical work experience and work-based learning projects. This goal is accomplished through the required internship, projects with industry partners, and field trips to

local facilities. Finally, WTD is a new program designed to meet regional needs. Advice from participating industry representatives helps insure relevant technical content.

4-Step Approach

The authors adopted a four-step approach designed to involve business and industry in the process of program development. The first step was to define the role that industry should play in the development and growth of the programs. The second step was to identify and contact companies which would be interested in committing their time and talent to program development. The third step was to actively involve business and industry personnel while developing opportunities within industry to augment student education. The final step was to cement the relationship with the industrial partner and to develop long-term commitments to program development.

Step 1 - Define role of industry partners

The first step was to define the role of industry partners in the process of developing these new programs. Several key goals were identified:
- Solicit input from business and industry on course content in the technical core areas
- Establish industry sites to sponsor salaried internship positions
- Establish industry sites for course projects
- Establish industry sites for class visits
- Identify potential guest speakers from industry

Step 2 - Identify and contact industry

The second step was to identify and contact individuals in industry who would be willing to assist with program development. The following efforts combined to identify and facilitate contact with over 80 potential business and industry partners:
- Local students in the class identified potential industrial contacts based on their knowledge of the area.
- Phone contacts were made by faculty to industry managers responsible for environmental affairs, safety, training and human resources.
- Plant visits were made by faculty to discuss the program.
- Faculty and students networked through local chapter meetings and regional conferences of professional associations such as ASTD, NAIT, and ASSE.
- Faculty networked by attending meetings of the Mississippi Manufacturers Association (MMA).
- Under faculty supervision, students conducted a survey of industrial facilities in Mississippi.

The survey was an effective method for identifying individuals with a potential interest in the WTD and environmental safety programs. The survey project was conducted as a special project with three students enrolled in the program. From a list of Mississippi manufacturers, students identified over 300 large and mid-size companies which would likely be interested in environmental affairs, safety and training. With faculty assistance, they developed a questionnaire designed to identify current and future positions in these areas, current and future educational levels, current and future specialized training, future hiring plans, and openness to

establishing internship positions. Over 60 responses were received and analyzed. Responses provided valuable input related to curriculum content in the technical core areas. However, equally important, the responses provided a target audience of individuals interested in the program. Letters were sent to 35 of these respondents inviting them to participate on the program's Industrial Advisory Committee (IAC). Fifteen of these joined the IAC and ten were able to attend the November meeting of the IAC.

Future efforts will include submitting articles for newsletters for the MMA and for local industry and business development groups such as chambers of commerce and county industrial development commissions. The MMA is an excellent source for reaching large numbers of industrial firms in the state and for learning about issues important to them. The MMA is a professionally managed organization with over 1,600 corporate members, with committees dedicated to environmental affairs and industrial training. Among the other professional organizations which have not yet been contacted are ASME, AWMA and SME.

Step 3 - Build partnerships
The third step was to build partnerships with industry that would meet the goals established in step 1. First contacts were often made by telephone or at professional meetings. These contacts very often led to extension of an invitation for a field trip to the plant site. Most of the students enrolled in this program have limited exposure to industrial settings, so field trips to plants and meetings with plant personnel are an integral part of the educational process. An additional benefit is that these field trips offer an excellent opportunity to educate local industry about USM's program, to showcase the maturity of the students, to develop industry interest in the program, and to build rapport. Field trips to four nearby major industrial companies were the first personal contacts made with these facilities. Management from each of these facilities now serve on the IAC.

By the second meeting of the IAC for this program, 25 members of business and industry were able to attend. The group consisted of professional trainers, environmental compliance managers, safety and health managers, manufacturing managers, human resource managers, and engineering managers. At the IAC meeting, committee members provided advice on technical core content, curriculum development and internships. The meeting also provided an opportunity for USM faculty to describe the goals and organization of the new programs. Members were enthusiastic about the accomplishments of the meeting and look forward to working together in the future to continue efforts to develop these programs.

Two important outcomes resulted from the first plant contact, a pulp mill. First, the plant's environmental affairs department agreed to sponsor an ambitious group project in which six students developed a draft ISO 14001 environmental management system for the plant. This project involved weekly contact between plant engineers and scientists and the students, and provided excellent practical experience for the students. They became familiar with the setting of a large industrial plant. They developed first-hand experience with waste treatment systems, disposal issues, environmental and safety compliance, permitting, and environmental management. They also were able to work as a group on a major project for a real client. The students demonstrated excellent work ethics, produced a superior document, and gave an

excellent presentation to plant and corporate management. Second, the plant sponsored two new salaried summer internship positions, one in the environmental affairs department and one in the training department. The student's performed well during these internships and were invited to continue working there part-time during the following school year.

Student internships are an important part of the student's education and it is therefore important to continue to develop relationships with business and industry which lead to the creation of internship positions. Mississippi's gaming industry could become a strong supporter and internship sponsor. In the first year, one student completed a computer training internship at a casino. A manufacturing plant has offered to sponsor a salaried internship position for Summer 1999 related to environmental affairs and health and safety.

Business and industry partners also provide an excellent resource as guest speakers.   Guest speakers have included health and safety managers, training consultants, engineers, and state permitting officers. On-campus presentations provide an opportunity for students and industry representatives to interact and strengthens our partnership with industry.

Finally, an aspect that was not intentionally pursued by USM faculty involved with this program, but which has turned out beneficially involves making contacts with industry and business managers who are alumni of USM. Not surprisingly, USM alumni tend to be committed to helping with the program.

Step 4 - Establish long-term commitments
The final step is to gain long-term commitments from business and industry partners. The goal is to build relationships which will foster the long-term growth of the academic programs. Specific long-term support needed from industry includes the items outlined in step 1, plus assistance with job placement, scholarships, material donations, and funding support.

Industry will support the development of new programs that are important to their business interests, but regular contact is necessary. One way to continue long-term relationships with many organizations is through regular communication with the IAC member. This is being accomplished by maintaining monthly communication with the IAC members through mailed correspondence. Program visibility in industry is also enhanced by active faculty participation in local chapters of professional organizations, community groups, and groups such as emergency planning commissions. Student participation through field-trips, course projects, internships and part-time employment directly benefit the students and strengthen the university-industry partnership.

Conclusion

USM SET faculty responsible for development of the new undergraduate and graduate programs in workforce training and development and environmental safety recognized the important role of industry in the successful development of these programs. Faculty members first defined the desired role of business and industry in the process of developing these new programs, then systematically identified and contacted individuals within business and industry to become

active participants in the task of building the programs. Business and industry have responded at both the individual and corporate level by jumping in to actively support program development. Within one year the IAC has grown to over 30 members with diverse, but compatible backgrounds. Four internship positions were established by the second semester of the program, with more now being offered than there are students to fill them. Plants have supported major class projects and graciously hosted field trips. Personnel have served as guest speakers. These first-year accomplishments have greatly enhanced the educational experience of the students and the growth and development of the new programs.

Bibliography
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