Instructional Technology Update: Using a Corporate Advisory Council to Link Academia and Industry

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Abstract: Instructional technology programs have traditionally suffered from a number of different problems including: 1) staying current with new technologies; 2) a lack of funding for new facilities and equipment; and 3) limited contact with the corporate sector where many graduates of these programs obtain eventual employment. Based on these problem areas, the Institute for Interactive Technologies at Bloomsburg University formed a Corporate Advisory Council that links its academic program wlth business and industry. Results of this linkage include benefits for the graduate program as well as advantages for those companies involved in this partnership.

Resume: La problématique des programmes de technologie éducationnelle tient a un certain nombre de situations, notamment: 1) la nécessité de se tenlr au fait des nouvelles technologies; 2) un financement insuffisant qui les empeche de se procurer du nouveau materiel et de nouvelles installations, et; 3) des contacts restreints avec les entreprises ou, pourtant, nombre de leurs dlplomés et dlplomées sont appelés a se trouver des debouches. Dans ce contexte, le Institute for Interactive Technologies at Bloomsburg University a formé récemment un conseil consultatlf entreprlses-unlversite (Corporate Advisory Council) qui établit la liaison entre les programmes universitaires d'enseignement et de recherche et les milleux d'affalres ainsi que l'industrie. Cette collaboration bénéflcie au premier chef aux programmes d'etudes superieures et procure également des avantages aux firmes qui participent a cette forme de partenairiat.

INTRODUCTION

University-based instructional technology programs have grown considerably since the days of 16mm film and 35mm slides. While once based on the production and use of traditional media, these programs are now moving toward an "electronic era" where computers and other forms of digital technology hold the primary emphasis. This shift is particularly significant because many of these technology forms were unavailable only a decade ago.

Although often difficult to implement, such changes are important for maintaining the innovative edge required by instructional technology departments and for producing effective teachers for education and trainers in indus-

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try. Indeed, with access to the proper people and appropriate funding, instructional technology may prove to be the ideal arena for demonstrating how academia can remain a "leader" in education and training, rather than a "follower."

However, such changes have not come easily. New technology can be extremely expensive and is often difficult to implement, with difficult decisions to make concerning new types of hardware, equipment standardization, and effective utilization, among others. The situation in academia is particularly critical, with limited budgets, a lack of quality time, and potential problems communicating with experts outside the academic realm.

One solution to these problems is the formation of a corporate advisory council, which can act both as a consultant to the program as well as a link between academia and the "outside world" where graduates will eventually need to find permanent employment. Composed of personnel from business and industry, this advisory council can provide needed expert advice to these programs as well as monetary and networking support where warranted. This paper, therefore, focuses on the overall rationale for such councils, suggestions for their formation, benefits to involved institutions and corporations, and the experiences of one instructional technology program which profits from this relationship.

PROBLEMS FACING INSTRUCTIONAL TECHNOLOGY PROGRAMS

One of the most difficult problems currently facing academic instructional technology programs is the high cost of "high tech" hardware and software. While this problem is not new to these programs, it is becoming particularly acute due to the high cost of computers and other related equipment. Such costs are also problematic due to the current belt-tightening that is prevalent in many academic departments.

A second problem concerns the need for these programs to stay current with new technologies and other areas of importance in the field. In addition to the costs associated with the continual updating of equipment, it is also difficult to correctly decide which type of hardware or software to buy and when to purchase it. This continual revamping becomes quite difficult on a year basis, yet is expected by administrators and students since technology is perceived as a field where all the equipment must be the newest that is available. Professionals in the field are also expected to be knowledgeable about every new aspect of instructional technology, regardless of a person's specific area of expertise.

Finally, it is becoming increasingly difficult to provide appropriate "real life" experiences for graduate students within these programs, since such experiences must now encompass such a wide range of activities. Not only are these students expected to gain a significant appreciation for the theory behind

instructional technology (learning theory, instructional design, etc.), they must also learn to use the specific tools required in the work force (computer programming, video editing, etc.). Providing significant experiences in both areas, however, is important for the proper education of students who plan to find employment in the area of educational technology.

EDUCATION AND INDUSTRY WORKING TOGETHER

One solution to the above problems (and similar ones faced by other academic areas) is mutual cooperation between education and industry for the benefit of both groups. In this sense, industry can provide resources (personal expertise, professional contacts, monetary support, etc.) while higher education provides access to university research, insightful professional expertise, and high-quality students who are seeking internship sites and full-time employment opportunities.

A number of ways that industry and education can work together have been described by Brown (1985), Melchiori (1984), and Nelkin and Nelson (1987). Specifically, these suggestions include:

- general research support from various companies (gifts, equipment donations, and endowments);
- cooperative support or knowledge transfer between institutional entities (industrial parks, extension teaching, and research institutes);
- funding consortia;
- free-standing corporations that reach out to universities;
- industry representation on advisory committees; and
- university-industry-government research programs.

Brown (1985), Mai (1984), and Tolbert (1984) have described the benefits that may be specifically available for higher education institutions. These include:

- gifts, grants, and research contracts;
- technology transfer;
- faculty consulting;
- the availability of research subjects;
- the potential use of various materials to enrich classroom teaching;
- the use of specialized corporate facilities;
- insight into current commercial concerns; and
- the possibility for summer or adjunct employment for faculty

While such liaisons can obviously be beneficial to educational institutions, they can also be very helpful to business organizations. According to Melchiori

(1984) and Tolbert (1984) these industry incentives could include:

- the acquisition of new personnel;
- access to new science and technology;
- access to university facilities;
- marketable prestige through using university and scholars' names;
- access to career-long training for technical personnel; and
- insight into new developments in various fields.

According to Brown (1985) and Melchiori (1984), however, there are potential disadvantages to this type of relationship including:

- differences concerning the availability of research results;
- varying organizational structures for each group, with universities tending to be flat while industry is typically hierarchical; and
- concerns about the holder of proprietary rights for current or future products.

Another disadvantage concerns the different time scales used by each organization, with universities using a long-range scope and industry typically focused on a shorter return.

THE ADVISORY COUNCIL AT BLOOMSBURG UNIVERSITY

Based on the benefits to be gained from a relationship with various industries, the Institute for Interactive Technologies of Bloomsburg University has formed a Corporate Advisory Council composed of representatives from various corporations interested in the development and use of new technologies. Chosen from a variety of different firms (including some companies without a specific technological focus), the Council is currently composed of six hardware/software developers, two chemical or pharmaceutical companies, one insurance company, one utility company, and several other firms. The Council meets three times a year with faculty and staff members of the university and is currently managed by the Director of the Master's of Instructional Technology program who coordinates all communication between the university and the council members.

The overall functions of the Advisory Council include:

- enriching the experiences of master's students through a variety of activities (in-class lectures, corporate visits, etc.);
- helping provide future direction for the master's program; and
- acquiring financial assistance to enhance the operational budget of the instructional technology program.

Each of these functions is important for the master's students as well as the welfare of the overall program.

BENEFITS FOR THE INSTRUCTIONAL TECHNOLOGY PROGRAM

Since its formation in 1988, the Corporate Advisory Council has provided a number of specific benefits for the instructional technology program at Bloomsburg University Although the project is still in its early stages, many of these advantages have proven to be extremely useful to faculty, staff, and students involved in the program.

One of the most important benefits that has evolved from this relationship has been a number of on-campus visits from council members to provide lectures to students on a variety of topics (e.g., instructional design in a corporate setting). Information from these professionals is extremely important for students choosing to change careers or update their skills. These informal, in-class lectures provide students with a description of situations where they can apply their new knowledge and adds credibility to the theoretical framework presented by their academic coursework.

In a similar way, visits to corporate sites provide students with a view of their eventual employment potential and helps them better understand the type of work situations for which they are being trained. Such visitations also provide a diversity of experiences that would not typically be available within the classroom. The placement of numerous student interns as well as a number of graduates of the program in these locations shows the significant potential for the utilization of these corporate partners.

The Advisory Council has also been extremely helpful in the promotion of the Institute for Interactive Technologies, a University service center designed, in part, to provide experience for graduate students within the program. In this respect, the Advisory Council has:

assisted with the marketing of several interactive products developed by the Institute;
- contributed cash in excess of $55,000;
- supplied hardware and software whose value exceeds $60,000;
- provided in-kind support (class lectures, travel to Corporate Advisory meetings, etc.) for an approximate value of $170,000; and
- served as a catalyst to obtaining state grants in excess of $374,000 through matched funds.

Finally, the Corporate Advisory Council has been helpful by providing assistance in the planning and implementation ofchanges within the Institute for Interactive Technologies and the Master's program in instructional technology. Such suggestions have included, for example, shifting the emphasis

among several computer operating systems and recommendations for changes in the content of academic courses. This type of assistance is invaluable in high technology programs that must remain current in their field while staying within the budget constraints that are a reality in higher education today

BENEFITS FOR CORPORATE ADVISORY MEMBERS

There are also significant benefits for the corporations who choose to join this Advisory Council. One of the most significant benefits for advisory members is the availability of well-trained students for internships and/or time employment. Although these students could find employment with other companies, they often choose Council members because these corporations are already known to them through class presentations and Advisory Council meetings.

Some Corporate Advisory members are also benefitting by using Bloomsburg University as a test site for company products, including two authoring packages used for developing computer-based projects as well as a system designed for presenting computer-based materials to students in a classroom environment. In this way, the Institute for Interactive Technologies provides personnel and facilities for testing various products that member companies wish to market, an invaluable service for companies wishing to evaluate early versions or updates of their products.

In a similar manner, this relationship provides company personnel with access to various experts in their respective fields who can provide information to help these companies develop and produce a variety of different "high tech" products. Such assistance may include staff and/or students familiar with a specific software package or development expertise for a project being developed by a Council member's company. While sometimes informal, such help is often invaluable to corporations in a highly competitive market where additional information can be extremely important to the success of a product.

FUTURE POTENTIAL OF THE ADVISORY COUNCIL CONCEPT

At present, the Corporate Advisory Council is proving to be extremely beneficial for the instructional technology program, the University service center associated with the program, and the corporate members themselves. In addition to providing significant input into the successful operation of the academic program and its affiliated institute, the Council has generously donated hardware, software, and professional time which has been extremely valuable to all academic personnel associated with the program. The only real problem has been the difficulty arranging meeting times when busy professionals from both groups are available, which has been somewhat alleviated

by planning such meetings far in advance and limiting meetings to two half-day sessions.

The future of this relationship is extremely bright for all involved organizations. Options currently under investigation for the near future include: 1) a graduate student project developed and produced for the Advisory Council with little or no faculty/staffinvolvement; 2) significant student input into the tri-yearly meetings that bring all parties together; 3) an advisory council newsletter; and, finally, 4) an "Adopt a Graduate Student" program, where a corporate sponsor could cover a significant portion of a student's educational program.

Implementation of the above ideas could significantly improve the education of the involved students and their potential within their chosen field as well as help corporate sponsors obtain well-qualified people and experience working with academia. Coupled with successfully implemented past projects, such ideas will help keep this relationship alive and beneficial to all those involved.

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