Faculty Internships in Industry*

Claudia House
Nashville State Technical Institute/SEATEC

Faculty internships in business and industrial settings serve both the academic and the business communities. The Tennessee Exemplary Faculty for Advanced Technological Education (TEFATE) project, funded by the National Science Foundation, utilized faculty internships as a fundamental component in two of its focus areas: (1) faculty development and (2) instructional product/case study development. The mission of the TEFATE internship program is to assist in the development of faculty who are prepared to utilize a team-oriented and cross-disciplinary approach to curriculum development and delivery.

Interdisciplinary teams made up of faculty from mathematics, English, science, Engineering Technology, and Information Systems were formed at each of five participating two-year colleges in Tennessee. Partners from Engineering Technology departments at four-year colleges in the southeast, secondary schools (Tech Prep), and industry augmented these faculty teams.

Establishing, implementing, and assessing faculty internships in the TEFATE project yielded many lessons. Pilot internships allowed project staff to identify the challenges to be faced in conducting an internship program, as well as techniques that were successful in developing and managing internship activities. Faculty served in various internships at sites including Nortel, Oak Ridge National Laboratories, Smith and Nephew, Lockheed Martin and MCI. TEFATE interns performed a variety of tasks for the host industries including training, establishing Intranets, installing cabling, conducting marketing studies, network administration, and designing networks.

The philosophy driving faculty internships, regardless of the type of business or activity, is based in the belief that the best curricula are developed in an environment where the faculty have

- participated directly in that business,
- utilized the business's cutting-edge technology, and
- applied this knowledge with the highest possible academic standards.

It is important that both industry and faculty understand the issues involved and share ownership of the internship and the benefits that derive from it. One way to foster this shared ownership environment is to compile a list of the benefits to the various parties

involved in the process. Clearly communicating the benefits of the internship permits the successful achievement of the desired outcomes and makes everyone involved in the process aware of expected results. If all parties know the intended outcomes of the internship, unrealistic expectations and misunderstandings can be avoided. The experience of the TEFATE interns has also shown that it is important to know the corporate culture of the proposed site and to blend the work habits and attitudes of the intern into that climate. A mismatch could inhibit the company/college relationship.

TEFATE internships enriched the personal and professional experiences of the faculty, exposing them to novel technology-related applications through intensive involvement in various industry locations. TEFATE participants agreed that their internship experiences in business could be translated into meaningful classroom learning via the case study approach. Several participants noted the value of the technical knowledge gained during their internships. Such knowledge helped them to develop more factual cases based on real life technical problems. Faculty re-entered the classroom with renewed work-based experiences with which to motivate and energize their students. The role of industry as partners in the project adds value to the curriculum development process as well as to the insight gained by faculty into the needs of the workplace. Furthermore, the success of the project has strongly relied on the industry site visits and internships for faculty. These would not have been possible without the support of the industry partners. Internships served by faculty benefit the host businesses, the faculty interns, the colleges, and ultimately, the students in the classroom.

College Benefits:

- The internship promotes the college's initiative and innovative orientation.
- Industry is shown that the college is interested in industry training problems and is willing to bring industry job skills to the classroom.
- Contacts made through the internship create opportunities for recruitment of adjunct faculty from industry.
- Industry contacts are created for other college activities such as fund raising and advisory committees.
- The faculty and college are updated on current business trends in areas such as software and organizations trends.
- New projects can be implemented with relevant and current technology.
- The internship creates possibilities for off-site facilities for research or available infrastructure.
- Contacts might provide possible equipment resources.

Industry Benefits:

- Improvements in curricula, along with the creation of a direct line to the curriculum development process by industries, will produce better prepared graduates.
- Industry's public image as a community partner is enhanced.
- Companies become more aware of degrees available from an institution and the knowledge behind them.
- Companies are able to participate directly with the college in an advisory role.
- The intern may fulfill a role, complete a task, or fill a knowledge gap not currently

satisfied by the company's internal resources.
- The internship may help to support or create a co-op internship program.
- The internship may help to satisfy a company's community service obligation.
- Contact with academia may encourage the company's employees to continue their own education.

Faculty Benefits:
- Faculty skills are added to or updated in new technology or other areas of professional development.
- The faculty become familiar with current trends in industry such as team building techniques and new manufacturing processes.
- Industry contacts are made which will provide resources for everything from infrastructure to guest lecturers for the classroom.
- Case studies from industry can be incorporated into the classroom.
- Immersing faculty in technology accelerates their learning process.
- Separating themselves from the desk or classroom provides opportunities for the faculty to learn in a concentrated environment.
- The sharing of internship experience with other faculty will have a positive overall effect.
- Extra compensation may be earned.

Student Benefits:
- The student receives improved delivery of curricula by receiving up-to-date knowledge.
- The student benefits from internship contacts as a source of possible employment.
- Case studies from industry can be incorporated into the classroom to emphasize "real world" problem solving techniques.

One of the major goals for faculty internships is to impact the curriculum and the classroom experience in a positive way. The TEFATE interns discovered several ways to begin this process during the course of the internship:
- Keep a list of new technologies encountered and the ways in which they will affect students once they are in the workplace.
- Solicit specific input from co-workers and other contacts about how particular majors, courses, or topics could be changed to better reflect the current situation in industry.
- Record specific incidents that occur for use as case studies in the classroom along with the company's solution or decision in that regard.
- Ask the faculty intern's supervisor to serve on the institution's advisory board or to suggest other employees that may be willing to serve in that capacity.

Vickie Ballance, executive director of Hospital Hospitality House, believes that the TEFATE intern at her site worked out so well because the faculty intern had knowledge and skills needed by Hospital Hospitality House and was able to gather information to produce a case study. The internship between Hospital Hospitality House of Nashville and the TEFATE project were of mutual benefit for all involved due to a well-planned

experience with expectations and outcomes clearly communicated before the internship began. Continued conversation and discussion based on the questions and the observations that arose as the network project proceeded insured that each partner's agenda and issues were addressed.

Performance of the internship can be rewarding, informative, challenging, and, at times, even fun! The intern will gain knowledge and experience each day and will make many fruitful contacts.

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Biographical Information

CLAUDIA HOUSE has a B.A. and M.A. in English from Middle Tennessee State University. She is currently an instructor at Nashville State Technical Institute where she teaches writing. She co-developed and co-teaches Technical Writing courses for employees at Nortel in Nashville, Tennessee. She has several publications and most recently presented at the South East Case Research Association conference.

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