



What are we doing about our future....

By Greg Robinson, NCSEA President

Recent STRUCTURE® editorials have focused on young engineers. Views have been expressed about the required structural engineering coursework and the ability of young engineers to successfully pass the Principles and Practice of Engineering (PE) examination without the aid of a computer. While the software tools that we work with today are far superior to what we used in the past, are we, the senior engineers, truly doing what we need or could do to help students transition to engineering interns and then to responsible structural engineers?

There is no doubt that graduates today are very bright and learned, often having more coursework than their managers. Yet many graduates walk into the structural engineering workplace unprepared to deal with client communications, project setup, and time management. Should they be expected to arrive with an understanding of such concepts? I do not think so. The universities' role is to give students the basic tools to perform analysis and design. It is up to those of us with experience to share our knowledge on how to communicate, set up a project, and share the secrets of the effective use of time. Would we not gain tremendously if we worked more closely with structural engineering students, to help prepare them for the structural engineering work place?

Many opportunities are available to speak to structural engineering classes, work with students on class projects, and participate in and with existing campus engineering organizations. Through these opportunities, we can share our everyday experiences and help engineering students prepare for the structural engineering workplace. These opportunities are not limited to senior engineers. Often engineers that have just two or three years of experience are better-equipped to relate to students and to be liaisons between novices and more experienced engineers.

The need to work with structural engineering students is evident. Interns often ask senior engineers to speak to their classes and to work with them on their class projects. Their professors and advisors are also pleased when practicing structural engineers display an interest in working with their students. Furthermore, many students who have attended SEA meetings have come to realize the need for a similar organization at the student level. When a structural engineering organization has a presence on the university campus, students are more likely to inquire into, focus on, and learn about the structural engineering profession.

A surprising number of students and interns want to go beyond analyzing and designing members and understand the full design process of a structure. Something that has become a basic instinct for the experienced is often a mysterious

process for the student and novice. Granted, enlightenment of the full design process will come with experience. However, if we took time to speak to student classes and organizations about the entire design process, would we not all benefit, once those students became structural engineers?

Students also need to be more aware of professional organizations outside of the classroom. Doing so affords the student and future employer many benefits. Students and employers gain exposure to each other; and students see first hand the issues faced by structural engineers today and how they work together to overcome those issues.

Another way we could assist the structural engineering student is to make the student aware of the requirements for professional licensure, as well as the options available for fulfilling those requirements. The few years of experience between graduation and applying for licensure go by quickly. A student should have a thorough understanding of what will be required to become licensed by a state to practice engineering and to be accepted by the Structural Engineering Certification Board.

In last month's issue of STRUCTURE, NCSEA's Basic Education Committee had a 21-page section regarding various aspects of education for structural engineers, including the results of the 2006 school survey, the committee's recommended Educational Course Curriculum and Content, and six articles contributed by educators and practitioners. However, how many current and prospective structural engineering students saw this information? What sort of difference would it

make if they had? If our SEA's will take an active interest in the college or university of their choice and pay just \$1 per issue, NCSEA will send in bulk 25, 50 or 100 copies or more of STRUCTURE, for distribution by the university or college engineering department. Structural engineering professors could pass them out in class or just have the students pick them up from the department office. STRUCTURE has become the premier means for disseminating information to the profession. Students hoping to join the profession would benefit, by knowing what issues the profession is focused on.

Structural engineering students are our future. Helping them to understand early what we do, and how we do it, will help them to confirm that they have made the right career choice; and it will better prepare them for the structural engineering workplace. I propose that each of us do something more than we have been doing, to mentor and share our experiences with existing and prospective structural engineering students. ■

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