Most companies now realize the day of having qualified candidates standing at their door, college degree in hand and ready to go to work, is unrealistic. Those days have been changed to companies seeking innovative ways to attract potential candidates. Members of the Roofing Industry Committee on Weather Issues (RICOWI Inc.) are using internships and/or co-op programs to explore a way to find new talent.

AGING WORKFORCE
Firms that are seeking to grow their companies understand that America has an aging workforce, and they need to be proactive in their recruitment strategies. As we can see in Table 1, the U.S. Bureau of Labor Statistics is projecting an increase in the median age of the labor force. In eight short years, its median age will be 42.3. The U.S. Census Bureau says that in twelve short years, by 2030, one in five persons in the United States will be 65 years or older! As an industry, we need to wake up and become proactive in attracting future employees. For companies that are looking to grow, alarm bells should be ringing...loudly.

To paraphrase a character in Lewis G. Carroll’s Through the Looking Glass, “When you don’t know where you are going, any road will do!” Several of RICOWI’s members have found that the internship and co-op program roads are good to follow as successful hedges against the growing challenge of finding qualified employees.

One of RICOWI’s member companies, Technical Assurance, is in the initial stages of developing an internship/co-op program as part of their employee development plan. Technical Assurance’s Vice President and General Manager of Technical Assurance Jim Solether has reached out to several local colleges with construction management programs to collaborate on internship programs.

Solether said, “We realize we need a good mix of entry-, mid-, and senior-level employees in our organization as we continue to grow. We want to grow employees individually by providing exposure to all aspects of our business through mentorship. We realize our industry is aging, and we want to be part of extending building sciences knowledge to educate students and...

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Table 1 – Median age of the labor force by sex, race, and ethnicity.
entry-level candidates on our industry.”

In a recent member survey, companies reported that they looked for college students majoring in architecture, construction, or engineering. In addition to college students, high school students are also offered part-time work in the summer shadowing various individuals, perhaps assisting in the field, drafting, and even working in the office.

**INTERNSHIPS**

Interns work an average of 25 to 37.5 hours per week for 25 weeks or less. Internships in the roofing industry are paid. Companies will offer the interns permanent positions after graduation from college if the internship was a good fit for both the company and the intern. Formal internships provide for an evaluation of the interns at midpoint and at the end of the internship. Some companies provide feedback on a more frequent basis. Consistent throughout our membership is the assignment of a mentor for the intern. The mentor helps the intern assimilate into the company’s culture and helps address any issues that may arise.

One of RICOWI’s forward-thinking members requires an exit interview with the intern, asking for a process improvement report to present to his or her manager/supervisor on how to make work tasks more efficient. This report gives the company an outside perspective on their internal processes but also gives the students an opportunity to learn and look for ways to improve. Both interns and companies benefit as interns are introduced to the company’s culture and exposed to various departments in the company. Internships allow both parties to examine if the relationship is a good future employment fit for both.

**Co-op Students at NRC**

The National Research Council of Canada (NRC) normally hires about 200 students per year from various cities across Canada for durations of 16 to 20 weeks. This varies based on the research center requirements and availability of suitable candidates. Their fields of expertise include various disciplines of engineering and science. I have been fortunate to work with many students, some of whom are now vice-presidents and managers of major corporations. Some of them joined NRC after the completion of their studies.

What impresses me most with the interns is:
- They make me think outside of the box and keep my brain cells working.
- They rationalize rather than following a routine.
- They communicate crisply and clearly (texting) without talking (meetings).

What I remind them most is:
- Never restrict yourself in aiming BIG.
- No pain, no gain.
- Google is not always right.
- C’est la vie! – Life is like that!
- Enjoy what you do.
- La vie n’est pas si mal! – Life is not that bad!

In general, co-ops work well as long as there is excitement in the assigned subject area. The interview process is critical to identify a suitable match. Interns work well if a clear project plan is in place and communicated well before they start. Most of the time, a hybrid of routine tasks and challenging deliverables keeps them engaged.

At the end of the day, it is great to bump into youngsters running around the workplace and always asking questions. As my dad told me, “Questions bring new opportunities.”

**Internship Brought Architect to Building Envelope Consulting**

Richard “Rick” Froberg, RRC, AIA, earned his BA in architecture from the University of Minnesota, after which he was offered a summer internship with a local engineering firm’s roofing department. “After that summer, I realized this was the industry I wanted to be in. I wanted to work with a variety of clients, building owners, and engineers to solve potential building envelope issues.”

Froberg is now Building Technology Division Manager with American Engineering and Testing, Inc. (AET) in St. Paul, MN, and a Consultant member of RCI.
The benefits to interns should be promoted to encourage students to participate. Interns earn while they learn. The internship opportunity will provide him or her with solid work experience. The exposure to real work experience is in itself an invaluable opportunity to learn, while the internship is helpful in deciding a career path. Monetarily, internships help defray the debt accrued for a degree by giving the intern an “earn-while-you-learn” opportunity. Understandably, some interns decide that this field is not what they expected. Others choose to continue in this field and sometimes even return to a full-time position with the company. Another benefit for the interns is the opportunity to interact with various levels of management and staff on a professional level.

INDUSTRY CHALLENGE

A major challenge companies report is in attracting students to the internships. This challenge

Co-op Experience Gave Education a Purpose

In the fall of 1980, after two years of college, I found myself asking, “Why engineering?” and “Why am I working so hard trying to master coursework for this major if I don’t even really know what engineers do?” At around the same time, there was a chance meeting with Dr. Chuck Remington, director of the placement office at what is now Missouri University of Science and Technology (Missouri S&T), who extolled the benefits of participating in a cooperative education program. Shortly thereafter, I interviewed for a position as a co-op engineering student with TAMKO Building Products (then TAMKO Roofing Products) in Joplin, Missouri, and started what was the first of three co-op rotations with them on January 12, 1981.

So how do students benefit from cooperative education programs or student internships? The answer to this question, for me, is simple. The benefit of a co-op experience in what you believe to be your chosen profession is that it will either solidify that choice or perhaps change your focus earlier as opposed to completing a degree and then finding out you don’t enjoy the work. I know personally that the time spent as a co-op was hugely beneficial—it clearly showed that “school was worth it” and brought a renewed sense of commitment and focus to coursework that at times seemed abstract. And as entertaining as some might find this, it truly did make school fun and graduation not just about getting through to obtain a degree; it was about being able to continue an adventure in the roofing industry started as a young co-op engineer.
My Engineering Co-op Experience as Student and Teacher

I was employed as a co-op engineer for three semesters during my junior and senior years of engineering school at North Carolina State University. The time spent as an employee/student at an engineering firm allowed me to gain valuable experience working in a team environment on a variety of interesting projects. As well as helping pay for school, this engineering experience allowed my résumé to stand out from those of other job candidates who only had an engineering degree. Also, this opportunity provided exposure to numerous professional engineers who are respected in their fields of practice. As it turned out, my eventual career move into forensic engineering and roof consulting came from a connection made years earlier during my co-op engineering experience.

Now, as the owner of a forensic engineering/architecture firm, I regularly employ engineering students enrolled in the co-op program. Our firm provides unique exposure to building failures that most design professionals do not get to experience. The opportunities to learn from failure are valuable to young engineers, whether they make a career out of doing forensic work or not. While employed with our firm, engineering students get exposed to professional engineers with diverse backgrounds. As teachers, we are able to expose students to various aspects of construction (paving, grading, drainage, foundations, structural framing, the building envelope, etc.) in a relatively short period of time—something that would take many semesters in a school environment. Performing field work and observing failures firsthand is invaluable to understanding construction means and methods and building behavior. This is true no matter what stage of your career you are in, or whether you are a student or a teacher.

is not only for this industry, but for all industries. Declining numbers of students, the aging population, and the variety of opportunities all impact finding available students. Companies are all pulling from the same talent pool. With only so many available potential employees, why would they choose to enter this industry? What is in it for them? These questions need to be answered by the companies and by the industry as a whole. If we hope to continue to attract talent, we must promote these benefits to the public.

In some cases, the younger generation brings a special set of challenges to the workplace. One company reports that a challenge has been connecting the interns to real-life work environments versus the interns’ perception of how business works.

Some companies report that an internship program may mean a loss of productivity to a department while training the new intern. However, this does not deter them from continuing their programs. These companies truly believe internships are a long-term investment in their company and the industry.

CLOSING

Do internships result in more qualified candidates and candidates for full-time positions who already have an understanding about the roofing industry. Not all of the interns return as full-time employees after graduation, but enough of them do to make the program worthwhile to the companies. Internships are a valuable resource for recruiting talent and should be considered as one way to help grow the future workforce.

Joan Cook focuses on making a difference through employer-driven workforce and industry initiatives. Her work in addressing manufacturing industry issues has led to local, regional, national, and international recognition. Her background includes successful start-up, turnaround, and operation of private and nonprofit manufacturing industry-backed programs and schools. She has served since 2009 as the executive director of RICOWI, Inc. She also consults as a team leader with the National Institute of Metalworking Skills (NIMS).