



Professional development:

A prescription for competence assurance?

In a landscape shadowed by the Walkerton and Enron scandals, professionals in all disciplines face increased public scrutiny. How do engineers measure up when it comes to instilling public confidence?

By Karen Hawthorne

Professionals know they're obliged by their codes of ethics and conduct to practise competently. And almost all do what's necessary to stay relatively current in their fields. But with governments outsourcing more functions to the private sector than ever before, both the government and the public it serves want assurance that the professionals to whom accountability has been delegated know what they're doing. Although professional engineers and other professionals demonstrated high qualifications at the time of their entry into the profession, how is the public to know these qualifications have been maintained in the years following licensure?

And in engineering, specialization is a further complicating factor, says past PEO Councillor Max Perera, P.Eng. "Unlike doc-

Time frames for fulfilling professional development requirements are generally from two to five years. For example, certified general accountants must complete 100 credits in a three-year moving cycle. Several organizations, such as Professional Engineers Ontario (PEO), reported having no mandatory professional development requirements; some of the self-regulatory bodies surveyed were recently established and reported that they had not yet formulated policies in this area.

Technology has permeated every area of our lives, from SMART houses to transportation centres that navigate the airways and roadways to developments in materials sciences and biotechnology, says Leslie Dolman, P.Eng., director, Professional

Development Centre, University of Toronto. The debate centres on whether fulfilling a predefined professional development requirement should be a condition for licence renewal, or whether professional engineers should self-direct their life-long learning on the honour system.

According to a recent survey by the Canadian Council of Professional Engineers (CCPE), engineering regulators in Canada have a variety of approaches to the professional development of their licensees. A few, such as PEO, have no formal program, relying on the threat of the complaints and discipline process to patrol competence. Most have implemented programs to assist and evaluate the continued learning activities of engineers on an

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tors, dentists or accountants, engineers do not have official titles to distinguish them as specialists," says Perera. "The engineer who is a renowned authority on, say, high-rise structural design has the same official title 'P.Eng.' as the engineer who has moved into selling real estate."

In Ontario, mandated professional development for regulated professions is becoming standard, according to an April 2002 survey by the Ontario College of Teachers. The survey found that the majority of the 37 self-regulating bodies in the province require members to take part in mandatory professional development. Many have instituted required learning in core areas, and members usually pay for their own continuing education.

Development Centre, University of Toronto. "Professional development is key to staying competitive in the workforce, whether it's learning technical skills or management skills," she says.

Dolman says administering a mandatory development program for Ontario's professional engineers would be a challenge, given the size and diversity of PEO's 65,000 members. But she notes that other professions have mandated professional development for good reason: "They feel that it really builds the profession."

PD in engineering

When it comes to engineering regulators across the country, all agree that professional development is necessary and valu-

able for the practitioner. To facilitate harmonization of the approaches, CCPE has developed a guideline for a model competency assurance system. Available from CCPE's website (www.ccpe.ca), the guideline is under review by the constituent associations.

"As the umbrella organization, it's our job to provide a guideline to promote best practices," says CCPE Director, Professional and International Affairs Marie Carter, P.Eng. "The terms 'voluntary' and 'mandatory' are being batted around and, ideally, every single association should have a program in place. But often it's a question of mobility."

As Carter points out, mandatory requirements may be difficult to fulfil for

PEO's Professional Profile: Step 1: Data Collection

Since its introduction in May 2002, over 20 per cent of Ontario's professional engineers have responded to a voluntary questionnaire designed to gather information about their areas of practice and professional development activities.

Called the Professional Profile, the questionnaire asks members to provide information not only on their professional development activities, but also on their job functions, areas of expertise, industry sector and perceived requirement for licensing. The

initiative follows a 1997 proposal for a Professional Excellence Program for professional development reporting that was shelved by Council in April 1998 for one year to enable further study of the issue. When the proposal was brought back to Council, it was as a voluntary program to collect both members' professional development and practice information for statistical purposes.

PEO began to mail its Professional Profile questionnaire to members with the May 2002 licence renewal invoices.

engineers in northern parts of Ontario, for example, who don't have the same access to conferences, courses and professional committees as those living in larger centres. In the broader sense, interprovincial mobility is also a concern. Engineers licensed in one jurisdiction must meet the licensure requirements of any other jurisdiction in which they want to practise. If professional development requirements are not uniformly applied throughout the country, mobility could be compromised.

According to the CCPE guideline, while the responsibility for assessing and maintaining an appropriate level of competence rests with individual professional engineers, the regulatory body has a responsibility to be active and to be seen

many technical journals they read or courses they attend," says Roger Barker, P.Eng., PEO's former CEO/registrar. "In many cases, this does help build the competence of the practitioner, but there are no guarantees that the process will weed out those who are not competent to practise."

There are other options to ensure competence, he says, several of which PEO's Council will probably be reviewing in the coming years, including:

- ◆ mandatory or voluntary professional development requirements;
- ◆ periodic examinations or interviews for members;
- ◆ practice reviews (legislated for engineering firms in several provinces and for other professions);

For the most part, PEO Councillors agree the public is well served by professional engineers but, given the climate of a "crisis of confidence" relating to many professions, also concede that it might be time to implement a voluntary program for those who wish to participate. "It could be something as simple as a voluntary declaration of activities in which they have engaged that year that demonstrates enhancing their skill set and knowledge of engineering issues relevant to their line of work," says Perera.

Councillor Allen Lucas, P.Eng., advocates PEO developing a guideline that outlines methods by which individuals can document and monitor their own professional development, and undertaking random checks for compliance.

the motivation of individual professional engineers."

–CCPE guideline

to be active in establishing an approach to ensuring the continued competence of those it licenses.

"It is not enough to rely on disciplinary activities or the motivation of individual professional engineers," the guideline states. "Rather, it is necessary for associations to have systems in place to measure the competence of their members at licensure and throughout their professional careers."

Different strokes

Critics of some of the approaches currently in place across the country argue that logging professional development hours does not guarantee professional competence. "Anyone can fill in a form that details how

- ◆ creation of many more practice guidelines than currently exist (approximately 50), or practice standards, which carry more weight than guidelines; and
- ◆ licensing of engineers by discipline.

If numbers of complaints against professional engineers in Ontario are any indication, the current regulatory system seems to be working. Approximately 30 complaints a year are reviewed by the Complaints Committee and 10 to 12 are referred to the Discipline Committee—extremely low numbers for the number of licence holders—which "gives us some comfort that there is not a widespread problem with incompetent practitioners," says Barker.

"Personally, I believe there is a need for individuals to be able to document what they undertake, to be able to demonstrate, upon request, what they have done to remain current," Lucas says. "PEO does not need to establish a system that assigns "points" to educational development to assess an individual—nor does it need to maintain a record of each individual, as such a system is burdensome with little direct benefit."

The national scene

Across the country, the continuing professional development programs at engineering regulatory bodies reflect a trend toward active monitoring of competence.

In British Columbia, for example, professional engineers can pick and choose

Through the collection of information about its members, PEO hopes to better understand their practice situations and qualifications, so that it is better positioned to provide meaningful assistance to government in formulating legislation that affects the regulation of engineering and to spot emerging trends in the profession, according to Gordon Sterling, P.Eng., the PEO Past President who chaired the task force responsible for developing the questionnaire.

Developing a snapshot of Ontario's engineering community is necessary to guide the government in establishing engineering-related public policy that reflects the realities of today's engi-

neering practice, says Sterling. The accumulated information will also yield "insights that will help us to proactively fine-tune our legislation and guidelines to encompass the wide variety of areas of engineering work, and to capture new and emerging areas of engineering," he says.

"PEO recognizes that it has a responsibility to ensure that only those who are competent to practise are licensed," says Roger Barker, P.Eng., former PEO CEO/registrar.

"The challenge is to find the best way of doing it. Gathering information is a necessary first step."

from 75 professional development courses offered through the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). This number is up from 50 courses in 2002, and also includes two CD-ROMs recently launched by the association: one covering basic law instruction for engineers, the second involving seismic restraints for earthquake study.

"This way [with CD-ROMs], anyone can do it on their own time, anywhere in the province," says Janet Guscott, manager of continuing professional development. "We've really tapped into structural, environmental and computer engineers as far as course offerings. The members are saying this is what we need."

APEGBC has made access to professional development courses a priority, in 1999 establishing an on-line database of professional development activities. The association has also implemented an on-line reporting document for easy-to-follow reporting. About 1300 of 19,000 members participated in APEGBC-facilitated courses last year, not including those who attended professional development sessions held at its AGM.



While random selection practice reviews are mandatory for all disciplines, APEGBC's professional development program is voluntary, although a move to mandatory participation is being considered.

It's hoped that if the program is made mandatory, says Guscott, "employers will see its value and take on some of the costs."

Making participation mandatory should also prompt engineers to take the initiative to write down what they are already doing—and utilize what they are doing for their career, says Guscott.

Since 1974, when the Quebec Professional Code came into effect to create its professional system, a system unique by its objective and its approach, 45 professional orders were created to control the practice of 50 professions, notably the Ordre des ingénieurs du Québec (OIQ) for the engineering profession.

"Our mission as a professional order is the protection of the public," says Claude Lizotte, ing., director of professional affairs for OIQ.

The Professional Code instituted three major mechanisms to control the practice of each profession by their respective order or association: admission and registration, professional inspection and discipline.

As in Ontario, the admission and registration process qualifies "who may hold a licence to practise the profession in the province of Quebec while the professional inspection and discipline processes exist to ensure that the holder of such a licence practises with competency and integrity," notes Lizotte.

Of OIQ's 46,000 members, between 1000 to 1500 are subjected to the professional inspection process annually by random selection. The inspection reviews: the individual engineer's knowledge of the laws and regulations governing his or her professional practice; his or her competency in his or her practice (by reviewing engineering projects in which he or she was involved as well as his or her professional records); and to review his or her actions and plans for his or her continued professional development.

It's the mandate of the Professional Inspection Committee to oversee the annual inspection program, and to make further inquiries as to the competence of particular engineers when there

are motives to do so and make the appropriate recommendations to the board of OIQ in this regard.

The Professional Inspection Committee draws up a professional report for each engineer who is the subject of an inspection, including a summary of the engineer's training and experience. Each inspection is concluded by a letter to the individual member on the results of the inspection. OIQ members are entitled under the regulation to consult OIQ's records on them.

Concerning the professional development of its members, says Lizotte, OIQ's current policy is to favour the establishment of a link between its members and the various course providers. "On one hand, OIQ provides information to members about available courses, and on the other hand, once OIQ has identified that a specific training need exists, that is not met by existing courses, to work in collaboration with expert course providers to ensure the development of the appropriate training program to fill that gap." The courses developed on communication skills and on risk management for engineers are two examples of this, says Lizotte.

The mandatory Competency Assurance Program implemented in 1999 by the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB) has turned many sceptics into proponents.

As a lawyer and an engineer, Matt Hayes, P.Eng., had concerns about confidentiality and security of the information collected by reviewers when he was randomly selected for the APEGNB practice review, a significant component of its Competency Assurance Program.

"It was an entirely reasonable process—and not an intrusion," says Hayes, who went on to chair APEGNB's Continued Competency Assurance Program Committee following his own practice review.

"All who go through it realize that it's a process to help them or remind them of their obligation for competence," he says of the 70 engineers who have been selected to date. The review does not check specific amounts of work completed, but the process of the work, such as the access to up-to-date codes and methods.

The benefit, Hayes says, is public protection: "We're not able to review everybody; that's not possible. But it gives people a method to check continuing competence."

Says Tom Sisk, P.Eng., APEGNB director of professional affairs: "You have to have a method to show the public that members are maintaining competency. Not only are they current when they're first licenced, but 20 years down the road when they're still offering that service to the public."

APEGNB's Continued Competency Assurance Program requires continued tracking of professional development activities and presentation of documentation when members are selected for a practice review. Information is reviewed by a peer volunteer, followed by a personal interview.

Professional engineers practising in Newfoundland have undergone annual random audits and reported professional development activities each year since the implementation of the Newfoundland regulator's professional development program in 1998.

The program is under review, with a new program in development for roll out in January 2004, to shift the focus from meeting a prescriptive number of professional development hours to self-directed learning.

"We'd like to place the focus on the process and the results of the learning, as opposed to meeting a defined quantitative measure," says Daisy Foster, registrar, Association of Professional Engineers and Geoscientists of Newfoundland (APEGN). "We want to move from a 'push' to a 'pull' approach," she says.

APEGN hopes the end result of the "pull" approach will be to generate a culture of continuous professional development within the profession—instead of regulating professional development with sanctions and punitive action, says Foster.

A working reporting and assessment model for such a quality-based program will incorporate some quantitative measures, but focus on the benefits gained, she says.

"Our aim is to promote the benefits of professional development," Foster stresses. "The engineering profession looks to the regulatory body for guidance." ❖

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Professional development programs on the rise

Professional regulators are pumping up requirements for continuing education, says an April 2002 survey by the Ontario College of Teachers that surveyed the requirements of 37 self-regulatory professional bodies in Ontario. Among them:

➤ *Ontario Association of Architects (OAA)* launched its Continuing Education Program in January 1999, phasing it in with Cycles One, Two and Three. For each cycle, licensed architects must complete requirements that comprise professional renewal and self-directed activities. Professional renewal points are obtained by attending OAA Council-sanctioned conferences, sessions, courses or seminars that cover certain core categories. Self-directed points are obtained by independent learning activities of an architect's choosing related to business or architecture, and require no pre-approval from the OAA. Such activities include reading books, teaching, attending trade shows, making presentations or doing research. Points vary according to activity. For example, a half-day OAA-sanctioned event equals five points.

After 2005, the Cycle Three requirements will be the standard. OAA offers some free professional renewal activities, while some firms cover the costs for their employees. Program non-compliance can result in at least a one-year probationary period, after which the case of an architect who is still non-compliant will be referred to OAA Council, which has the authority to refer the matter to the Discipline Committee, which as its harshest penalty can revoke the architect's licence.

➤ Mandatory continuing dental education is part of the Quality Assurance Program (QAP) for members of the *Royal College of Dental Surgeons of Ontario*. Dentists must accumulate at least 90 credit points every three years. Newly registered general dentists and/or specialists who registered with the college the same year they completed their undergraduate and/or postgraduate programs have four years to complete their initial 90-credit-point requirement. Credit points can be earned by attending lectures, conventions, dental society meetings and study club meetings. Reading journals, textbooks, writing articles or textbooks, and Internet use also qualify. One credit point is usually equivalent to one hour of the approved activity, with three credit points per half day, six points for a full day. Members report their continuing dental education annually on the honour system.

Dentists whose practices are randomly selected for review as part of another component of the QAP program will have their continuing dental education records verified. Dentists pay for their own continuing education courses.

➤ In January 2002, the benchers of the *Law Society of Upper Canada (LSUC)* set a recommended annual minimum of 50 hours of self-study and 12 hours of continuing legal education for members. LSUC does not require that members meet the recommended minimum but does require that they report what they actually do. Members filed their first required annual report of activities in January 2003. Self-study includes work-related reading, Internet use, or practice-related videos. Continuing legal education includes law-related teaching, and attendance at courses and seminars.

LSUC formed its Professional Development and Competence Department in the summer of 2001 and is reviewing various forms of professional development. The society offers continuing legal education (CLE) programs to help lawyers enhance their knowledge and skills. CLE includes courses in family law, estates, alternative dispute resolution and virtually every substantive area of law. Members are responsible for the cost of CLE. Some of the larger course providers offer reduced tuition for lawyers making below a certain annual minimum income.

➤ The *Association of Professional Geoscientists of Ontario (APGO)* is new to professional regulation and still developing its membership. Established in 2000, APGO has a Professional Practice Committee that is responsible for developing guidelines and standards for the practice of professional geoscience. The committee is charged with developing an on-going program of professional development as part of the association's legislated responsibility to establish, maintain and develop standards of professional qualifications and practice. Details and a working model of a professional development program are still to be determined.