



## Society for Prehospital Educators in Canada

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# SPEC

Society for Prehospital  
Educators in Canada

## Going in circles: Learning styles and learning cycles

I've never really enjoyed going first. From getting my shots in Grade 9 to giving them in my drug administration skill station, I've always preferred to be second or third in line. I want to see someone else do it—to know that it can be done and to have an example to follow. I have friends who elbow to the front of the line, wanting to get things over and I know others who are just as happy to be the last one through, so everyone's bored and no one's watching anymore.

This tendency to try things sooner or later is an example of a cognitive learning style, which is—almost—the topic of this article. Learning styles are an important part of any instructor program. And the concept gains even more weight when layered into discussions on the ways boomers, gen Xs, gen Ys and millennials approach learning. Learning styles speak to different aspects of how we, as learners, like to obtain, process, and play with information. There are a variety of learning style inventories such as the VAK (do you like visual, auditory or kinesthetic learning activities?) and the Kolb model of cognitive processing.

I'm a fan of Kolb, and his model helps explain my reluctance to be first. Kolb's work on experiential learning is set within cognitive psychology and based on studying how we process information. Writers from this background call on metaphors of computer memory to suggest that we learn by choosing what information to attend to, placing new information in short-term memory. We use a variety of cognitive strategies to move information into long-term memory such

as repetition, organization (PQRST and the ABCs), and story telling (scenarios, simulations and war stories) to relate new information to things we already know.

Kolb proposed that learning involves four phases: Doing things (which he called Concrete Experience); thinking about what

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we do (Reflective Observation); figuring out what it means (Abstract Conceptualization); and deciding how we will use the new skills/knowledge/judgment (Active Experimentation). He also noted that learners can engage with this cycle at any point. In fact some people prefer to learn why before figuring out how. Others just want to do things first and figure out what it means

later. Two other groups prefer to watch and reflect, figure things out, and then try it, while others like to develop alternative approaches, try them and then focus on what they need to get better.

In time-honoured presentations on learning styles, this is where I'm supposed to launch into a discussion on the importance of recognizing different learning styles in your class and the need to match your teaching style and perspective to the learning style needs of your students. I should advise you to include a range of activities to support the various learning styles in your classes. All good points and valuable lessons, but, unfortunately, that's not where I want to go. Kolb's work holds an even more important lesson for us: Learning is a cycle with four activities. Good learning, deep learning—meaningful learning that makes a relatively permanent change in the way we think, act, feel, or value—isn't a straightforward task. Rather, good learning involves a cycle that takes learners in circles.

When we focus on one of Kolb's quadrants (say, doing Internet research and discussing all day, or the opposite extreme of doing simulations with only limited debrief and discussion), we may be providing a rich learning environment that entertains or engages our learners. But if we don't carry on past their preferred learning style, the learning may not stick. It's not enough just to get good at doing things (ever heard the line that “practice without theory is uninformed”?) or to focus on understanding at the expense of activity (how about: “theory without practice is dead”?). >>



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Good, deep, meaningful learning—the foundation of expertise—involves action, observation, reflection and intention. Effective learning is hard work.

And that idea bears thinking about and trying out in our work. Here's a couple examples:

Kolb's learning cycle sits underneath one of the most common approaches to skills development: the 3 Ds. Learners first get a demonstration (a concrete experience), then a description of the steps involved (reflective observation) and then get to ask questions or figure out how to perform the procedure (abstract conceptualization). Next they do the procedure: Trying it out for themselves (active experimentation). The cycle goes through another iteration when the instructor provides feedback, the learner thinks about how to change what she or he did, then tries it out again. The cycle continues as the learners continue to practice, reflect, and refine their performance (effective learning is hard work).

Another example highlights the challenges we face when using distance learning methods. Traditional distance education courses consist of a reading and a set of assignments that the learner completes and sends to the instructor. There

is limited ability to provide feedback and reflection. The Internet allows us to create effective interaction between the learner, the instructor and other online learners. But when we use the Web, we have to remember the learning cycle and not simply create partial learning activities that mimic traditional distance education.

For example, let's say you want to use a case study to get learners to study and apply the principles of pharmacology to a specific condition. One way of doing it is to post the case (a concrete experience) along with some questions that the learners should respond to (requiring reflection and conceptualization). The learners post their responses (active experimentation). Sounds pretty much like the distance education approach at this point. The key to "completing the cycle" is to add a couple steps. The learners should be posting their responses, but then having to read and respond to each other's posts. Ideally, this should encourage them to consider their own responses again, perhaps change how they initially responded and update their answers. Finally, the instructor should summarize the discussions, provide feedback, and end with a thought or challenge to the learners. Approaching online activities in "cycles"

adds time and creates more work (for both learners and instructors), but good, deep, meaningful learning is hard work.

Kolb's learning style model explains why we have learners who would rather do simulations than study pharmacology and why others crave understanding over skill practice; why some want to go first, some want to go third, and others never want to try it out.

And, as traditional learning style discussions point out, it's important to recognize these tendencies in our learners and help structure our activities in ways that acknowledge and support their preferences.

But the model also implies that effective learning requires us to take our learners around the whole cycle. We must ensure that all our lessons and activities provide opportunities for observation, reflection, creating understanding, and active participation.

For more information on Kolb's Learning Styles, try:

- Renner, P. (2005). The Art of teaching adults: How to become an exceptional instructor and facilitator.
- Kolb, D. A. (1983). Experiential Learning: Experience as the source of learning and development.

## Educator's conference recap

The third annual Educator's conference was held in Halifax, NS on July 2 – 4, 2010. The conference started with a one-day facilitator's workshop, led by Society for Prehospital Educators in Canada (SPEC) instructors, followed by two days of presentations that focused on EMS education and research.

Educators from B.C., Alberta, Manitoba, Ontario, Nova Scotia and Newfoundland attended.

In addition, participants heard from representatives from the EMS Chiefs of Canada (Mike Nolan), Paramedic Association of Canada (Pierre Poirier), and the Canadian Organization of Paramedic Regulators (Ben Maartman). The research stream included presentations

on the use of OSCEs, performing qualitative research, research in the classroom and research initiatives in Nova Scotia.

Representatives from Heart and Stroke Foundation of Nova Scotia discussed trends in resuscitation research in anticipation of the upcoming release of new ILCOR guidelines in the fall of 2010.

Topics in the education stream looked at embedding professionalism in EMS curriculum, a fresh look at geriatrics in EMS education, health of the practitioner, use of "school report cards" and field assessment of practitioners, the development of a competency profile for preceptors, and the use of electronic patient care records.

SPEC members reviewed the status of current initiatives and agreed to continue working toward the development of a national instructor resource repository and establishing an online journal. A working group was formed to explore the development of a preceptor competency profile and draft a national preceptor course.

In addition, the Competency and Curriculum Committee will be meeting in the near future to prepare for discussions with PAC, EMS Chiefs, and COPR regarding their initiatives on the NOCP and a national scope of practice.

Planning is well underway for next year's conference, to be held in the first week of July 2011 in Comox, B.C.