For a half century, the Canadian Army prepared for conflict in Europe with Cold War scenarios, expecting to meet an invading force coming through central Germany or northern Norway. The threat dissipated in 1989, when the Soviet Union fractured into its component republics and the Warsaw Pact dissolved. The changes in the global strategic situation were greeted with optimism and anticipation of a period of “peace breaking out all over,” as CBC Television’s Wendy Mesley described it, and a general belief that military forces could be relegated to near-obscurity.

Politically, by 1994 the reigning Liberal government had seized the opportunity to become even more parsimonious with defence spending, plunging the Canadian Forces into the “decade of darkness.” During this time, the nearly-impoverished Canadian military was engaged in expeditious United Nations operations in the Balkans, Rwanda, Somalia, Haiti, the Central African Republic and East Timor.

Domestic operations also kept the CF very busy. These included the Manitoba Flood of 1997, the central Canada ice storm of 1998, support for recovery operations for Swissair 111 (1998), and the arrival of 2500 ethnic Albanian Kosovars (1999). The military’s operational tempo continued relentlessly, while their equipment and infrastructure deteriorated.

### Training & Social Trends

Dynamic geopolitical changes had set the Army on a training path for vastly different circumstances. Concurrently, newly-identified social trends among younger Canadians and service personnel have prodded the adoption of new training approaches.

“Blackboards, whiteboards, overhead projectors and PowerPoint presentations don’t excite this generation of new recruits,” says Major Tom Batty, officer commanding the Army Learning Support Center (ALSC). “They don’t learn the same way we learned. They need their senses stimulated and they like to be immersed in the scenarios they are experiencing. This is the reality of the X-Box and the PS3 [Playstation] generation – and perhaps by meeting their learning needs we can develop better teaching strategies for everyone who comes through the Combat Training Centre.”

Preparing soldiers for Canadian military operations in Afghanistan, and the recognition that new recruits and younger soldiers learn differently, converged to open the door to new pedagogical methods within the Army’s Combat Training Centre, headquartered at CFB Gagetown.

“We have entered the era of persistent training, driven by several fundamental trends,” explains Major Batty. “First we have to confront the challenges of attrition.”

Currently, the annual CF attrition rate sits at slightly more than 9%.

The next biggest concern is “the factor of shifting demographics,” according to Major Batty. “The average person changes jobs an average of seven times in his or her lifetime, and if we want to be a competitive employer and be truly representative of the composition of the Canadian population, our teaching strategies must meet the learning needs of our candidates economically, efficiently and effectively. The young Canadians we deal with are tech-savvy and demand that we use new technologies.”

The commander of the Combat Training Centre, Colonel Jim Simms, sets the bar at its highest level. “My goal is 100 percent success,” he says. “We may never
get there, but each unsuccessful student provokes a series of questions for us:
- Is it the student's personal preparation?
- Were they afforded the right opportunities before they came?
- Is it the wrong time in that person's career?
- If not, then is it something in the Army's schools, or training system -- and if so, can we fix it?

The new technologies in the CTC's courses prompts the question: how much simulation and modeling should be included in training? As Col Simms eyes the ultimate goal of increasing numbers of successful students, his response is a question: "How flexible should we be so that we allow the student to take us down a different path to reach that goal? We know that if we can [be flexible enough] then our students will have a more positive learning experience as they advance to course completion and exploit their own career potential."

CTC's staff speak of the changes in learning strategies from the 20th to the 21st century, and making that leap is not always automatic. Some of the students' feedback to the staff's observation are surprising.

Candidates on a recent Armoured 3B course were having difficulty on the section that prepares sergeants to become warrant officers. Coming at a stage in their professional development where they have to adopt a broader perspective, they must take themselves out of the Leopard tank or the LAV [light armoured vehicle] and visualize that they are responsible for more than an individual vehicle and its crew.

"That warrant officer has to understand that he or she is not just a troop warrant officer, but a troop warrant officer within the context of a squadron or a sub-unit," explains Colonel Simms. "Some candidates had difficulty making that leap, and we had an unsuccessful rate of almost 50 percent."

CTC introduced simulation as a new step. The candidates still had to do the various tasks and understand their role in a field environment, but this new step allowed them to initially use simulated vignettes prior to working with their peer groups in a leadership role. The new step was Virtual Battlespace II, or VBS.

Surrounded by consumer-quality computer monitors, VBS provides a realistic 180° view of the simulated battlefield. A glance to the computer monitors on the left and right showed the other tanks in the "unit" with which the candidate was advancing, as though the troop warrant officer were moving toward the onscreen objective. The candidate could go through the scenario, first in slow time without distractions, then successively faster, with obstacles and adversaries added, until he or she finally has to deal with the on-screen equivalent of battlefield chaos.

"Our success rate went to almost 100 percent because we gave the candidates the opportunity to not worry about making a mistake in front of their colleagues and to go through the process at a speed that met their personal learning capacities."

An important factor in the development of simulation and modeling is the operational tempo of the scenario.

Maj Batty describes a situation where a soldier trains for nine months and deploys to Afghanistan for six months, after which he or she returns to be reintegrated into the family, "and then that soldier is told 'you just missed 14 months of training, so we're going to send you to Gagetown for three months to get caught up. Oh, and after another nine months you're going back to Afghanistan."

Planning groups concluded that if the residency period for courses could be reduced, soldiers could spend more time at their home garrisons. Distance learning was introduced as a way to solve that situation and, conveniently, helped in dealing with another challenge as well.

Three years ago, the Chief of the Land Staff, Lieutenant-General Andrew Leslie, directed that CTC qualify 1,000 corporals to master-corporal annually, but the Centre could only train about 700. The challenge of finding a way to meet this directive without new capital construction or new facilities was solved through establishing distance learning. By reducing the amount of time that a corporal must undergo training at Gagetown, additional courses could be conducted and more personnel can be accommodated. This was an instant success. In its first year, CTC graduated 1029 new master-corporals without compromising the quality of instruction or reducing the value of field training.

Not all revolutionary concepts in military training require the preparation and development of simulation and modeling. The need for transformative and agile
training mechanisms can sometimes be easily resolved by listening to the student.

Take the example of the 30-year-old sergeant who asked why he needed to sign out 20 books for a two-week course, when he only needed two paragraphs from this one and a chapter from that one. When he’s home, all the books and magazines are loaded onto his e-reader.

“So, why shouldn’t I buy a supply of e-readers and load the relevant references, so that sergeant will have everything he or she needs?” asks Colonel Simms, rhetorically. “That will also go a long way to solve my space problem, and ease my publication budget, but most importantly, demonstrates our own agility to meeting our student’s needs. Of course, we won’t get rid of the books until we know this is a success.”

The Combat Training Centre comprises eight schools, five of which are here at Canadian Forces Base Gagetown. As the hub of training for the Canadian Army, everyone passes through the doors of CTC, undergoes training at Armour School, Artillery School, the Canadian Forces School of Military Engineering, Infantry School, or Tactics School.

Other CTC schools in Ontario include the Canadian Forces Land Advanced Warfare Centre (CFLAWC) at CFB Trenton; the CF School of Electrical and Mechanical Engineering (CFSEME) at CFB Borden; and the Canadian Forces School of Communications and Electronics (CFSCE) in Kingston.

Simulation centres at CFB Gagetown, CFB Valcartier (Quebec), CFB Petawawa (Ontario), and CFB Edmonton (Alberta), provide simulation and modeling services to personnel at those bases.

Each is a recognized centre of excellence that prepares Canadian soldiers for missions in any environment, and equips them for mission success.

Advancements in technology, training and weapons could prompt any soldier of any generation to say, this isn’t the army I joined. Developments in training tools and techniques since the 1990s makes this a more significant statement than at any time in the past. Modeling and simulation haven’t replaced exercises and field work, but have supplemented, reduced and refocused them to great effect.

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