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Research Notes

Development of a Defence Learning Network for the Canadian Department of National Defence

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Introduction

The idea of an online learning network for members of the Canadian Department of National Defence (DND) has surfaced several times over the past decade and a half, but has never reached the level of development seen in the current Defence Learning Network (DLN) initiative. Past attempts at creating a learning network failed primarily because of the lack of a champion within DND's senior leadership, and the ability of traditional residential learning to meet the training and education needs of the Department. Recently, however, the rising cost of residential learning, coupled with recognition of the benefits afforded by distance learning, particularly learning flexibility and the ability of learners to engaged in requisite learning at their home base rather than at dispersed locations across Canada, have greatly enhanced the attractiveness of distance learning as a viable learning delivery option.

Once fully implemented, the DLN is expected to offer learners, wherever they reside, the opportunity to participate in much of the training and education required for military career advancement and professional development at a home base or at a location anywhere in the world that DND personnel are deployed. Learning services will be provided through a combined Learning Content Management System (LCMS)/ Learning Management System (LMS), or through a blended delivery strategy that includes face-to-face learning at a number of Learning Career Centres (LCCs) located at military installations across Canada. The final version will ensure DND personnel are afforded maximum accessibility and flexibility in meeting their learning requirements.

The Need for a Defence Learning Network

Members of the Canadian Forces (CF) are regularly deployed to the far reaches of the world for peacekeeping, humanitarian, and operational missions. In recent years, reductions to the force structure have increased the number of rotations that individual members must undertake to meet Canada's international military obligations. (Rotations of military members in and out of a theatre of operations vary, depending on the nature of the deployment. Typical deployments are six

months in duration, but prior to deployment members spend approximately three months in specific training for the task. A normal cycle, based on current military force strength, is six months in theatre followed by two years in Canada, at which point a military member is liable for deployment to a theatre once again.)

When the time spent on deployments is coupled with the need to attend professional development courses at locations often removed from CF members' home base, the time members are required to spend away from home may reach levels that can adversely affect quality of life. Although there is little DND can do to directly influence the operational requirements of Canada's defence initiatives (these are political decisions), professional development programs can be reoriented to reduce the time members spend away from home by focusing more on distance learning delivery strategies, and less on residential learning conducted at locations removed from the member's normal place of residence.

The Department of National Defence is unique in its organizational structure in that it contains two distinct yet highly integrated components: uniformed members of the Department (CF), and civilian employees who support the CF in the conduct of DND business. CF members are commanded by the Chief of the Defence Staff (CDS), while the civilian employees of the Department report to the Deputy Minister of National Defence (DMND). Although the need to improve quality of life by reducing time away from home for professional development purposes most greatly affects members of the Canadian Forces, the DLN project will also benefit civilian members of the DND through improved access to a wide spectrum of professional development programs.

Origins of the Defence Learning Network

The DLN began life as two projects: the Defence Distributed Learning System for the CF, and the Learning Career Centre Network for civilians. In April 2001, the CDS and DMND ordered the two projects to merge into the DLN. Representing the best elements of its two predecessor programs, when implemented the DLN will:

- Enhance learners' quality of life by enabling them to study at their home base and, when deployed, to continue to pursue professional and self-development opportunities

- Provide the basis for lifelong learning opportunities

- Combine a number of current activities, thereby eliminating redundancies and enabling the Department to improve training and education efficiencies

- Allow the sharing of learning with Canada's allies and external educational institutions such as universities, community colleges, industry, and professional institutions that offer courses similar to those of DND

- Provide course access to a wider community of learners than previously possible through the traditional residential model

- Provide the opportunity for courses to be offered across the entire rank spectrum, both military and civilian, without the difficulties associated with a similar residential offerings normally encountered within the military hierarchical structure

The resultant network will offer a blended solution to education and training delivery that captures the best attributes of each learning strategy.

The DLN project also represents DND's response to the Government of Canada's 1999 throne speech, which mandated Government departments to affirm themselves as "learning organizations." In the wake of this direction, a development committee composed of Deputy Ministers and Associate Deputy Ministers was formed to shape an ambitious learning agenda for the creation of a public service learning network. DND originally formed two projects for CF and civilian members of the Department; however, as previously mentioned, these two projects were merged to create one project intent on meeting the Government's 1999 direction.

DND recognizes that in today's knowledge-based society it must increasingly provide its members opportunities to expand their knowledge, not only as a means of better serving the Department's needs, but also to compete with industry as an "employer of choice," where access to learning is increasingly viewed as a benefit. Through the provision of learning opportunities, DND hopes to attract and retain the best and the brightest in a highly competitive employment marketplace.

Proof of Concept

The project team of 25 military and civilian members (many with instructional design backgrounds) recognized early in the project that they faced an enormous task in implementing complex learning network, and that they were introducing to a traditionally conservative military institution a new and somewhat radical learning concept. Rather than run the risk of failure, as experienced in previous attempts to develop a similar learning network, the team elected to conduct a "proof of concept" consisting of limited elements of the entire network.

Although the CF has been an integrated force since 1968, many traditions of the former army, navy, and air force remain. In the provision of a total force structure, each element performs a unique role, with each element catering to the needs of its members, not only to retain a sense of identity, but also to nurture team spirit and operational capability. Consequently, the DLN must appeal to three reasonably distinct cultures (four when including the civilian cadre), by ensuring the operational environments of the army, navy, and air force are considered in the establishment and delivery of a DND-wide learning network.

In addition to internal concerns related to military culture, industry experience has shown that the concepts of operations and support structure must also be validated before moving towards full implementation in large conceptual networks. History has demonstrated the risks associated with implementing a comprehensive system such as the DLN, without first applying a proof of concept, can be high. Using the proof of concept approach will allow the progressive introduction of the DLN across the DND and, through the conduct of formative evaluation under controlled conditions, determine the viability and validity of the DLN model.

The proof of concept will also be used to validate the intended governance and policy structure for the DLN. Governance will be managed from within the Assistant Deputy Minister Human Resources group. Because of specific army, navy, and air force requirements, courseware development and delivery responsibilities will remain within each of the three elements. Courses common across all CF elements will be developed and delivered by the Canadian Defence

Academy located in Kingston, Ontario. The civilian group within DND will design and deliver its own professional development programs.

Various policies affect the delivery of distance education in the CF, but the most controversial will be the policy that permits professional development distance learning to take place on company rather than personal time. Traditionally, CF members were required to conduct any distance learning outside their normal workday. Because most professional development is mandated learning that CF members must complete for advancement, quality of life considerations have forced such learning to take place during members' normal work schedule. The idea of personnel undertaking training and education by distance learning during work hours will require a cultural shift on the part of many supervisors. Policies will therefore need to be examined, and changes to the military hierarchy change will need to be managed to ensure that the acceptance of distance learning is viewed as equal to residential learning, which members normally attend away from their home base.

Learning Career Centres

The Learning Career Centre (LLC) is a product of the former civilian distance learning program, that will witness the establishment of learning centres at most military installations across Canada. There is also a proposal to develop mobile learning centres that can be deployed with major Canadian operations anywhere in the world.

The LCC is the jewel in the DLN crown. Each LCC and its subordinate network will offer one-stop shopping to DND employees for a variety of professional development services. CF members and employees will obtain information on DND and civilian courses that meet their professional aspirations, plus undertake various aspects of their distance learning. Each LCC will include a resource centre that offers print and other media products, computer workstations, meeting rooms for small group learning, and staff office space. Each LCC, which will be staffed by several learning advisory specialists, will be capable of advising DND employees or CF members on the wide array of courses and programs available for both professional and self-development.

DND is somewhat unique in that employees and CF members operate in two distinct computer environments. The more commonly used environment is the Defence Wide Area Network (DWAN), a password-protected Intranet requiring specially programmed computers for access. In recognition of the wealth of information available online that DND employees and CF members must use in the conduct of their day-to-day responsibilities, the DND has also begun providing Internet access. The difficulty, however, is that Internet-configured computers cannot access the DWAN. Consequently, civilian employees and members who participate in learning from home cannot access courses and other materials resident within the DWAN environment. The LCC offers a solution to this dilemma by hosting a number of DWAN-configured computers that learners can use to undertake courses hosted on the DWAN, or to search DND documents maintained exclusively in the DWAN domain.

The LCC structure consists of three tiers. The largest element of the LCC structure is the "hub" office, which will contain classrooms, a resource centre, private counselling rooms, a computer centre, a reception area, and support facilities. Hub offices will be located at selected military centres where there are large concentrations of military and DND civilian personnel. The next level down from hub offices are "satellite" facilities, which will be located at smaller DND

installations within the geographic area of a hub. Satellite facilities will have some features of a hub, such as a computer facility and advisory staff, but will lack such hub components as classrooms and a resource centre. At the lowest level in the LCC hierarchy will be the "kiosks," which will be located at individual units and will consist of computer workstations from which learners will be able to access course materials and distance learning instructors. For the proof of concept, six LCC sites will be established across Canada. They will be connected to a Learning Management System, hosted from Ottawa, which will connect learners to a variety of courses delivered by the various elements and civilian organizations within DND.

The Future

The DLN proof of concept began in May 2003 and will continue for 18 months (concluding, if data are sufficient, by October 2004). During that period, a variety of data on learner populations, computer usage, staff consultation, resource centre utilization, technical problems, etc., will be gathered and analyzed in order to refine the DLN system. Once the proof of concept data are analyzed and the DLN concept refined, a separate project will subsequently be funded and launched to expand the DLN into a full DND-wide distance learning service provider (sometime in 2006). By evaluating the DLN concept through a controlled proof of concept project, DND hopes to reduce the risk of costly errors that might otherwise adversely affect the future of a distance learning network across the entire Department.

For the proof of concept, the army, navy, air force, and the Canadian Defence Academy, will host a number of distance learning courses that will be accessed by learners across the Canadian Forces. The DLN project team will gather data generated by the LMS selected for the proof of concept, and by conducting online surveys of learners. Data will also be gathered from LCC, administrative, and technical staff on the functionality of the DLN concept. The resultant data will be analysed by DLN project staff, and will form the basis for documentation that will seek departmental approval for a fully funded Defence Learning Network.

The DLN has increased awareness of distance learning attributes and has helped introduce distance learning as a viable delivery strategy for professional development within DND. As DND personnel begin to recognize the possibilities of the DLN concept, in the form of well delivered distance learning programming, improved accessibility to DND courses, and improved quality of life, the bias toward residential course delivery is slowly giving way to distance learning.

Conclusion

Distance learning is not a new concept to DND. Correspondence style distance learning has existed for years, albeit to a limited degree, as compared to the multitude of residential courses offered by the Department. Previous attempts to move towards a more technically managed and delivered form of distance learning have met with limited success, principally because of an absence of champions within the Department's senior leadership, and due to the cost overruns of previously ambitious programs which moved the distance learning goal posts too far, too fast. Using a proof of concept approach to manage the risks associated with introducing a large-scale distance education offering, the DLN project promises to succeed where previous projects of a similar nature have failed. By constructing and operating a much smaller version of the full DLN, the Department will build a community of support for distance learning, better understand the

attributes and limitations of distance learning, and reduce the risk of the failure associated with previous attempts to move towards full implementation of distance education in one stroke.

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