

AN INVENTORY OF LEARNING TOOLS

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Introduction

- This document contains an inventory of “organizational learning tools” or, in other words, “operationalized” methods designed to facilitate learning.
- While an attempt has been made to provide a representative cross-section of learning tools, this inventory is far from exhaustive. The learning tools included are those which have been developed, or are currently under development, within the Public Service of Canada and large private sector organizations.
- This inventory addresses four main categories of learning tools:
 1. *Diagnostic tools* are designed to evaluate the learning that takes place within an organization in order to develop prescriptions that enhance learning.
 2. *Instructional tools* use teaching methods in order to build organizational capacities and to share knowledge and ideas.
 3. *Knowledge dissemination tools* are systematic attempts to identify and distribute knowledge and ideas, either through organizational or technological means.
 4. *Research and development tools* are designed to generate new discoveries through organized inquiry.
- Each of these categories of learning tools will be addressed in turn.

1. Diagnostic Tools

- In order to promote learning within an organization, it is first necessary to evaluate the current state of learning and assess current learning needs. By so doing, individuals and managers can determine what learning methods have been most effective and what aspects of learning need to be improved. There are five main diagnostic tools:
 1. *Learning histories* involve chronicling the lessons learned in an organization’s past in order (a.) to determine how learning takes place within an organization; it takes into consideration both successes and learning impediments; (b.) to assess why learning took place under particular circumstances; and (c.) to determine what has changed as a result of the learning that did take place. This method was first developed by MIT’s Centre for Organizational Learning (Sloan Management School). The approach has many characteristics of a traditional case study, although it is focused specifically on learning activities. An example of a learning history within the Public Service of Canada is “Outside the Box,” the learning organization “story” at Canadian Heritage.

2. *Learning audits* use techniques akin to auditing and accounting to assess the current state of learning and knowledge within an organization. There are generally three types of activities involved:
 - Audits are systematic attempts to determine the extent to which learning takes place, the strengths and weaknesses of the learning activities, and the areas that need improvement.
 - Intellectual capital accounting techniques involve the creation of indicators (metrics) that determine the amount and composition of the knowledge contained within an organization. These indicators can include both record-based accounting data and probability-based survey data.
 - Benchmarking is a set of activities that involves sharing good-practice case studies. It also involves systematically comparing the characteristics and performance of an organization with those of a similar organization deemed to be particularly adept at learning.
3. Individual learning plans are methods for systematically determining a person's future learning needs in order to develop learning agendas tailored to that individual. Although learning plans come in various configurations, they tend to contain the following elements:
 - An assessment is made of an individual's learning needs with respect to some set of performance, career, or personal goals. Part of the assessment is to establish the knowledge gaps that must be filled for the person to successfully fulfill professional and organizational roles. Another part involves a competency assessment, where the individual develops a competency profile and compares it with the competencies required to achieve the goals.
 - Given that individuals have a finite amount of time and resources to devote to formal developmental activities, learning priorities must be set in order to determine the best mix of learning activities.
 - The set of formal learning activities that will fulfill these priorities are then selected from a range of options provided.
 - Monitoring progress, acquiring feedback, and evaluating success are then conducted on an on-going basis in order to move steadily towards fulfillment of the goals.
4. Organizational learning plans are methods for forecasting future learning needs in order to develop strategies designed to fulfill those needs. These plans operate with structures similar to the individual learning plans, although the unit of analysis is the team or organization. Health Canada, the Department of Indian

Affairs and Northern Development, and the Canadian International Development Agency are organizations that have developed learning plans.

5. Learning self-assessment guides are manuals or kits (physical or electronic in form) that guide individuals in assessing their personal learning needs and styles. The guides may include such things as:
 - Checklists and questionnaires designed to make individuals think about the way they learn, as well as the steps that they need to take in furthering their personal or professional development.
 - Heuristic exercises that encourage individuals to conduct certain activities which, if performed correctly, often cause them to come to new realizations about the way they learn.
 - Cognitive tests designed to identify an individual's personal learning style. A learning style refers to the ways an individual prefers to (or is predisposed to) learn. Knowing these preferences can be extremely helpful in determining the types of learning activities that would improve an individual's learning.
 - Guidance about the types of knowledge, skills and competencies that are in demand, as well as information about how to acquire such capabilities.

An example of a learning self-assessment guide in use within the Public Service of Canada is the *Tools for Leadership and Learning* pocket book created for the Leadership Network.

2. Instructional Tools

- Teaching has long been recognized as an important part of any learning agenda. In recent years, the number of different teacher-student relationships has grown, particularly as teachers and students tailor learning to conform to their own particular teaching and learning styles. There are four main types of instructional tools:
 1. *Curriculum-Based Instruction* — A variety of instructional activities involve developing a curriculum designed to instill knowledge, skills, abilities and values in a methodical way. This includes the identification and development of techniques that are ideally suited to teaching particular types of material. Curriculum-based instructional methods include:
 - Training programs, which may take place in a class, on the job, or in a self-directed fashion (i.e., based on lesson plans, but with minimal direct contact with the instructor).

- Tutoring and coaching services, which not only provide students with additional instructional guidance, but also actively motivate and counsel them.

These curriculum-based initiatives can take place within (a.) an orientation program, (b.) a formal course, (c.) a development program composed of several courses and activities, and (d.) electronic teaching and distance learning programs.

2. *Presentation-Based Instruction* — Learning also takes place within special events, such as learning conferences and learning workshops. The key distinction being made between these two activities is that conferences tend to involve a highly structured agenda and presentations, whereas workshops tend to be more flexible and open-ended in nature (they are often referred to as open-space conferences). Conference presentations also tend to be oriented towards more passive forms of learning (such as note-taking), while workshops tend to rely on more active engagement on the part of participants.
3. *Learning Exercises* — Group-based exercises (such as those that take place within learning retreats) put individuals through activities designed to instill certain lessons (e.g., role-playing exercises). Although a great deal of learning comes from group interaction, these exercises are facilitated and moderated by an instructor.
4. *Mentorships and Apprenticeships* — Mentorships and apprenticeships are designed to convey expertise and experience between individuals who are at different stages of their career. Apprenticeships tend to be oriented towards foundational learning. Mentorships tend to be relationships that may take place at any point in the career cycle and tend to be less structured in nature.

3. Knowledge Dissemination Tools

- Over the past decade, several attempts have been made to systematically identify, gather, and distribute knowledge and ideas within an organization. The hope is to make the best use of the knowledge contained within the organization as well as to promote new avenues of inquiry.
 1. *Expertise Mapping* — The mapping of expertise within an organization (to produce what is also known as “knowledge maps”) involves identifying subject and skills experts within an organization. The resulting information is placed in some form of schematic or database that allows interested parties to find the expertise they need. Contact can then be made between expert and layperson for the purposes of sharing knowledge. Individuals with similar expertise or interests can also use knowledge maps to contact each other. The Treasury Board Secretariat is developing a knowledge map.

2. *Knowledge Depositories* — For those forms of knowledge that are conducive to codification within documents, knowledge depositories provide a means for pooling this knowledge to facilitate access. The depositories can take the form of libraries or electronic databases. Hewlett-Packard currently operates an electronic depository for storing and sharing important technical knowledge.
3. *Learning Centres and Portals* — Organizations can set up particular centres designed to provide learning services, including counselling/coaching services, knowledge depositories, and a space for individuals to exchange ideas. Such centres can be physical or virtual. Electronic versions can also include portals (gateways that link an individual to sources of knowledge and information) that facilitate access to news and ideas.
4. *Network Tools* — Individuals with similar interests, occupations or expertise can develop on-going networks through a series of tools. Traditionally such tools have involved mailing lists and newsletters. More recently, e-mail discussion lists, chat forums, specialized Web sites, and other electronic networking applications have been added to this list.

4. Research and Development Tools

- Inquiry is an important aspect of any learning agenda. Learning organizations do not simply make use of previous lessons learned, they actively create new lessons. Most of the tools mentioned above contain some element of inquiry. However, the following tools have been explicitly designed with the aim of generating new knowledge and ideas for mission-critical activities within an organization.
 1. *Brainstorming Sessions* — Some private sector organizations specifically set aside “face time” so that individuals can form groups in order to generate new ideas. Such sessions are meant to generate ideas at a certain pace and within a specific time frame in order to maintain focus and efficiency.
 2. *Brainsqueezing Sessions* — These sessions are also group-based forums in which individuals interrogate an expert about his or her knowledge. They help disseminate knowledge, but they also compel individuals to think about the ways in which their knowledge can be made more persuasive.
 3. *Learning Teams* — A learning team is either special or self-directed and is set up for the purpose of undertaking a project designed to achieve organizational learning goals. Such teams meet regularly to plan and implement their activities and to report on progress.
 4. *Skunkworks* — Organizations often create small, arms-length groups designed specifically to create cutting-edge ideas and products. These are research and development groupings that are given the resources and flexibility to make

important discoveries and inventions, and they have a mandate to think beyond conventional approaches to a problem or set of problems.

5. *Intelligence Gathering* — Organizational learning often involves actively gathering knowledge and information from various sources outside of the organization's boundaries. These gathering activities may involve a wide variety of techniques and technologies designed to identify and acquire ideas of strategic importance.