

PROFESSIONAL
PRACTICE

**USING COMPUTER SOFTWARE TO ASSIST
IN TRAINING ON THE CANADIAN ENVIRONMENTAL
ASSESSMENT ACT (CEAA):
CANADIAN INTERNATIONAL DEVELOPMENT
AGENCY (CIDA) CASE EXAMPLE**

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Providing training for new legislation can be difficult, but consider several comments from participants who attended the one-day Canadian International Development Agency (CIDA) training course for CIDA officers on the compliance with the Canadian Environmental Assessment Act (CEAA):

- “Excellent course. It was clear that the participants knowledge increased dramatically over the day. The mix of classroom and computer training was useful. Well done.”
- “Very good course. Excellent preparation and delivery of course. I learned a lot and this will be really useful in my new job to come. Before today the CEAA was very scary and confusing and seemed insurmountable and impossible to manage.”
- “I loved the electronic job aid.”

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Why was this course so successful? What were the lessons learned so others preparing training courses can benefit? These questions are answered in this short report.

BACKGROUND

The Canadian Environmental Assessment Act (CEAA) was enacted by the government of Canada on January 19, 1995. One of the principal ways of ensuring compliance with any new legislation is to see that the appropriate people receive the training needed to comply with the act. During 1995, the CIDA embarked on a unique training initiative for its project and program officers who needed training on the CEAA. A one-day intensive training program was developed and implemented that used a unique combination of traditional classroom training and computer-based training. A total of 221 project and program officers were trained over a three-month period.

A computer program was developed that allows the project or program officer to successfully navigate through the act and find information relevant to the CIDA's project planning and approval cycle. The electronic job aid is available on all agency desktop computers and can be loaded on three discs for work away from the office. This electronic job aid does not provide instruction on the technical aspects of environmental assessment. Rather, it is meant to serve as a "road map" through the legal complexities of the CEAA. The program also has more than 20 case studies that demonstrate the requirements of the act through a series of interactive questions.

Once the CEAA was in force, the CIDA's program and project officers needed a training program that would meet their needs and the compliance aspects of CEAA. Achieving this balance was not easy. Some CIDA officers were in a state of training fatigue because of a wave of other training courses. In addition, the 1995 federal program review had reduced the resources available for official development assistance, and the CEAA was viewed as a potential block to project planning and implementation. There also was a belief that one could be fined or put in jail for not following CEAA properly. The training course had to counteract these negative impressions. The following paragraphs describe the steps taken to ensure the CEAA training course was a success.

Research

Prior to undertaking course design, a paper was prepared for CIDA management on the use of computer-based training as an effective tool for successful adult learning. This paper was prepared one year prior to the inception of the CEAA training course. It focused on the costs and benefits of computer-based training. Management agreed that computer-based training should be used in the CEAA training course.

Needs Analysis

Once computer-based training was accepted in principle by management, the challenge was to determine the CEAA training needed. An inhouse needs analysis revealed that CIDA officers wanted a course that was—

1. No more than a day long.
2. Focused, that is, CIDA officers wanted only the information about CEAA that would allow them to be in compliance and still be able to deliver projects.
3. Based on relevant case studies.
4. A combination of traditional classroom training and computer-based training.
5. Directed at work teams so that participants knew each other on the day of training.
6. Directed at the CIDA's project and program officers.

Focus Group

A CEAA Training Focus Group was formed that represented all elements of CIDA. All decisions about the training were first cleared with the focus group and then CIDA management. The progress of training course development was constantly relayed to the target audience, the CIDA's project and program officers.

Course Development

Course development, including the electronic job aid, took five months. A close liaison between the consultant who prepared the course and the focus group was maintained. Once the course was ready, a pilot course was given to all the environmental specialists in the CIDA. The pilot course was then given to a cross section of project and program officers. No more than 15 persons were registered for each delivery, and there were 25 offerings—10 in French and 15 in English.

The structure of the course (half a day devoted to traditional classroom techniques and computer training) was accepted by **CIDA** management prior to the commitment of funds. The same consulting company developed the electronic job aid and the traditional classroom materials and delivered the course in French and English. A key element of course development was structuring the training materials and case studies in a way that reflected the real, day-to-day situations of project officers. Thus, the training course was presented in a fashion similar to the actual project and program planning and approval cycle. To do this effectively, the consultant became familiar with the routine activity of the **CIDA**.

Coach identification

The **CIDA** focus group felt it was important to identify who in the **CIDA** could assist a project or program officer with questions about the act or the electronic job aid. These people were viewed as coaches and were given a half-day training on how to be an effective coach before the commencement of the training course. One or two coaches attended each course in order to respond to technical and **CEAA** process questions that were outside the purview of the facilitator.

Participant Preparation

Before coming to the course, each participant was exposed to several documents and techniques that would help them understand the act. There were numerous informal briefing sessions offered, easy-to-read documents were developed (for example, posters), and most officers had a small desktop calendar that devoted each month to some component of the act. By the time each participant was at the course, he or she had a sense of what the act was about and understood the language of environmental assessment.

Legal Review

Once the course material was prepared, a Department of Justice lawyer reviewed the material to ensure it was legally correct. This is a critical element of course preparation. If there is a court challenge, a judge can ask if the respective federal department received the necessary training to be in compliance. The training material could become evidence in a court. If the material is not legally correct, the case for the defense could be weakened.

informatics Support

Since the electronic job aid was to be installed on all of the **CIDA**'s local area network servers, **CIDA** staff involved with informatics development

worked closely with the training team. In addition, the informatics staff needed lead time to test the electronic job aid in the CIDA computing environment. They also needed time to dedicate human resources and space on the servers to accommodate the electronic job aid. CIDA's informatics Help Desk were given the time to learn about the electronic job aid so they could respond to the questions of system users.

Personnel and Administration

The Training Division of the Personnel and Administration Branch of the CIDA is responsible for administering all training. Therefore, they were given the task of enrolling participants in the course. Since 221 people were trained over a three-month period, a high degree of coordination was required between the training division and the course development team.

Follow-up

Following the completion of the CEAA course, which ran from September to the beginning of November, a half-day session was held with the coaches to determine what problems with the electronic job aid existed and to identify common operational questions. **All** findings were sent back to the agency.

ELECTRONIC JOB AID

The use of computer programs to assist in adult learning is not new. Many public and private organizations have used computer-based training for years. However, the amount of computer-based training being used has increased appreciably in the last five years as more authoring software becomes available. The CIDA had not used computer-based training before.

The CIDA electronic job aid for the CEAA is based on the Asymetrix Multimedia Toolbook 3.0 system. Personal computer requirements are (1) an operating environment capable of running a Microsoft Windows application, (2) an 80386 or higher processor, (3) **4MB** RAM, and (4) 6-to-8MB of hard-disc space. These requirements include the Toolbook runtime executable, several system files, the application file, an ASCII data file, and a Windows Help file.

The electronic job aid is designed to present information to a CIDA project and program officer in an effective and efficient way. Training and supporting materials focus on the minimum that an officer needs to know to apply

the act within the confines of Canadian federal law and good environmental practice. Excessive legal and procedural detail in the electronic job aid or the classroom training would have significantly reduced the ability and desire of the officers to meet the learning objectives of the course.

All training, including the job aid, is structured around five questions. These questions appear time and time again throughout the day in classroom training to reinforce the key elements of the act. The questions are—

1. Is the act triggered'?
2. Is there a "project" as defined by the act?
3. If there is a project, is it excluded from assessment under the act?
4. What type of assessment is required?
5. **Is** a follow-up program required?

The electronic job aid has three screens from which the officer can chose. Two of the screens give the officer easy-to-read electronic pages on the **CEAA** process. Screen 1 provides 12 electronic pages of information on the **CEAA** process and screen 2 provides eight electronic pages on the process to be followed for announcing the preparation of an environmental impact document in the Public Registry. With the third screen, an officer can pull up case studies from a database of **CIDA** projects to see examples of how the act was applied. Filters can be set so that the officer has the ability to fine-tune case study selection (for example, identifying only case studies relevant to a dam being constructed in Pakistan where the assessment required is a comprehensive study).

Once a case study is selected, the officer has the option of working through the case study in a *practice* or *look-up* mode. In *look-up*, all five of the above questions are answered. Each case study has a screen for each of the five questions that demonstrates how one arrives at an answer. Four hot buttons are presented to assist in answer determination. These are *Hint*, *Reference*, *Answer*, and *Analysis*. In the *look-up* mode, the *hint* button is deactivated; in *practice* mode, however, it is accessible. For example, the second question one must answer in a case study is, "**Is** there a 'project' as defined by the act?" The *hint* button in *practice* mode will prompt a user to answer the question, "Does the proposal call for the building or construction of a physical work?" The *reference* button will guide the user to an appropriate reference document in the Help file, such as the Exclusion List. The *Answer* button gives the answer to the respective question and the *Analysis* button provides the rationale for the correct answer.

There also is a Windows Help file available that provides the officer with the legal aspects of the act that are pertinent for compliance. For example, the Exclusion List, Inclusion List, and Comprehensive Study List are contained in the Help File. There also is a Regulations Guide, developed by CIDA, that is a compendium of the three regulations and is presented by sector, such as mining, energy, transportation, etc. The Regulations guide is a quick way of determining which regulations pertain to the proposal being evaluated under CEAA. Within the various regulations there are words colored in green. By clicking on these words, one obtains the definition of the words. This is a minor hypertext function of the job aid.

When an officer takes the course, the electronic job aid is available the next day on his or her local area network (LAN) server. Therefore, the opportunity for using the training material and the electronic job aid is immediate, relevant, and accessible. The program also can be loaded onto three floppy discs for use away from the LAN.

The job aid is a decision-support tool for the CIDA officer. Each time a CIDA officer reviews a funding proposal, he or she must determine if the proposal must be screened according to CEAA prior to funding approval. The job aid can very quickly assist in the decision making. If the proposal does require an assessment, then the job aid can assist the officer with more detailed responsibilities under CEAA, such as the steps to follow in maintaining the Public Registry.

BENEFITS OF TRAINING

Environmental assessment is a powerful planning process that can assist a decision maker in bringing into focus many economic, social, and environmental factors that can affect the project and the public. Although the CEAA course was not intended to train CIDA officers to become environmental assessment specialists, it did ensure that the officers were given the knowledge and skills needed to ensure that an environmental impact assessment is prepared when required.

At CIDA, the immediate benefits of the CEAA training program were—

1. The risk of time-consuming and costly legal challenges was reduced.

2. The training brought some common focus to different **CIDA** branch activities and agendas.
3. Fear about the **CEAA** was reduced, and the **CEAA** process was significantly demystified.

Project and program managers now understand and can use the language of environmental assessment and **CEAA** in everyday project discussion.

CONCLUSION

There is now increased national and international interest in the influence the environment has on people; on social, cultural and economic development; and on quality of life. Any environmental assessment training, whether it is related to legislative or policy requirements, must show the participant in a succinct and practical fashion the merits of incorporating environmental assessment into day-to-day operations. In a world of competing interests, diminishing financial and natural resources, and growing public scrutiny, a decision maker needs to have the right amount and type of environmental assessment information. If the training does not provide this, the environmental assessment process can be ignored. This can result in loss of the opportunity to design a more sustainable project, while still meeting the corporate, government, and public needs.

The success of the **CIDA CEAA** training project can attributed to the following factors:

Preparation

1. A thorough needs analysis was done.
2. Senior management from all **CIDA** Branches approved the training strategy.

Application

1. Work teams were trained together.
2. Training information was kept to a minimum.
3. The electronic job aid demonstrated that it was an effective tool to reinforce learning.
4. Electronic and paper training materials were in a form that could be used after the training is over.

5. Training materials were developed in close cooperation with a training focus group.
6. Coaches were available to assist officers once the training was over.
7. Case studies were kept short and designed to represent actual office practice.

Management

1. One consulting company was chosen to develop all the training materials, as well as deliver the training sessions in French and English.
2. The project was managed by two CIDA project managers so that in the event of travel or vacation, there was always one person to oversee project development.

The CIDA CEAA training program may become a model for other types of training in CIDA and is well suited for adaptation to other guidelines, policy, or legislation that requires operationalization into real-life situations.