

# R É C I T

A Network of Resource Persons for the Development of Students' Competencies Through the Integration of Technologies



## RENEWAL OF THE CEMIS NETWORK

(Centres d'enrichissement en micro-informatique scolaire)

## Ministerial Orientations

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## Introduction

This document was prepared following consultations held in April and May 2000 on the ministerial proposal to bring the number, mandates and framework of the centres for the development of microcomputer use in schools, or CEMIS (from Centres d'enrichissement en micro-informatique scolaire), up to date. Consultations were carried out among representatives of the directors general of the school boards as well as representatives of the CEMIS network.

This review of the organization and role of the CEMIS is based on the Minister's desire to support the implementation of the education reform through, among other things, increased integration of information and communications technologies (ICTs) in teaching and learning.

The Ministère de l'Éducation set up the CEMIS in 1988 to promote and develop educational applications of computers in the classroom and to train and support teachers in the use of ICTs.

In June 1996, in its plan of action to support the integration of information and communications technologies in general education, the Ministère reaffirmed the importance of the CEMIS by increasing the financial and computer resources allocated to the centres.

In the spring of 1998, the Québec policy on the information superhighway called for making a greater number of CEMIS personnel available to educators so as to provide more direct support to the emergence and growth of a network culture.

That same year, during consultations with members of the educational community on the possibility of expanding the CEMIS, the directors general of the school boards expressed a desire to have each school board equipped with the necessary resources to provide these services. Moreover, representatives of the CEMIS network favoured strengthening the concept of a network culture by placing more emphasis on regional dialogue.

The education reform, which, among other things, aims to increase the use of new information and communications technologies in the classroom, now serves as a catalyst for expanding the CEMIS network.

The proposal to renew the CEMIS network therefore stems from the various ministerial and government orientations affecting the CEMIS in terms of their role in supporting the integration of ICTs in teaching and learning in the classroom.

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# 1 Backdrop to the Renewal of the CEMIS Network

The Ministère's decision to re-examine the role and organization of the CEMIS network is a result of several economic factors and of certain ministerial and government policies and orientations in particular.

Some of the elements forming the backdrop to the renewal of the CEMIS network include the following: the education reform; the ministerial plan of action to support the integration of ICTs into general education; the Québec policy on the information superhighway; the ministerial orientations for the professional development of teachers; and the consensus reached at the recent Québec youth summit, the Sommet du Québec et de la jeunesse.

## 1.1 ICTs and the Education Reform

There is a global consensus regarding the importance of having students acquire competencies related to the use of ICTs, not for the ICTs themselves, but for the access they provide to information and for the development of other competencies to which they lead.

Until now, ICTs were considered simply as another subject area or pedagogical tool. In the new Québec Education Program, however, they are seen as essential to the development of the students' competencies. They are tied not only to methodological cross-curricular competencies, but also to intellectual, personal and social, and communication-related cross-curricular competencies. The education program therefore provides for the use of ICTs both to facilitate the learning of subject areas and to support the development of competencies. As well, various areas of lifelong learning provide contexts for carrying out learning activities incorporating the use of ICTs.

The Program of Programs, an integral part of the Québec Education Program, encourages students to understand the logic underlying ICTs so that they will gradually be able to perform tasks more efficiently, using a variety of tools they will integrate into their work in an increasingly autonomous manner. These tools will help students carry out the various steps in their work when performing complex tasks.

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Given the rapid and sustained development of technologies and their recent integration into the education program, over the next few years we can expect to see a continued rise in the need for teacher training and support. Similarly, we can expect to see a growing need for technology watch and pedagogical support, as teachers and schools experiment with projects aiming to develop the subject-specific and cross-curricular competencies outlined in the Québec Education Program.

## **1.2 Ministerial Plan of Action for the Integration of Information and Communications Technologies into General Education: Preliminary Conclusions Following a Review of Year 3**

The aim of the ministerial plan of action for the integration of information and communications technologies into general education was stated as follows:

*“Because knowledge is at the heart of its mission, the education system must fully embrace information and communications technologies and integrate the best of what these technologies have to offer in order to enhance the teaching and learning processes. The true challenge of integrating ICTs into schools is to make technology more than a simple topic of study—rather, it should become a genuine tool used in teaching and learning activities.”<sup>1</sup>*

Since the implementation of the plan of action in 1996-1997, ICTs have become even more prominent in our society. Because of their impact on the organization of human activity (work, the economy, communications, human relations), ICTs are needed more than ever in the schools if we are to attain our goal of educating the adults of tomorrow.

The scope of the training needed to adapt the use of ICTs in the classroom to the aims of the new education program justifies expanding the support provided to teachers in this area.

At the end of Year 3 of the ministerial plan of action for the integration of information and communications technologies, the Direction des ressources didactiques (DRD) collected and analyzed reports from the school boards for the 1998-1999 school year on general education in the youth and adult sectors. These reports contain data from 700 schools and training centres. A complete report of these findings will be compiled and published at a later date.

The results of this analysis show that the ratio of students per computer station has improved significantly, dropping from 13 students per station in June 1997 to 8.2 students in June 1999. The objective of 10 students per station was met in 1998. At that time, approximately 46 per cent of all school computers were connected to the Internet, or about 55 000 computers. The use of ICTs by students and teachers continues to rise. Between 1996-1997 and 1998-1999, the proportion of teachers who integrated ICTs into their teaching activities went from 43 per cent to 54 per cent in elementary schools, and from 13 per cent to 22 per cent in secondary schools.

Many of the comments made by the education partners who completed the 1998-1999 questionnaire emphasize the need for training school staff.

## **1.3 The Québec Policy on the Information Superhighway**

In the Québec policy on the information superhighway entitled *Agir autrement* and adopted in the spring of 1998, it was agreed that the number of CEMIS personnel available to teachers would be increased to support the emergence and growth of a network culture.

More specifically, page 27 of the above-mentioned document states that the education system’s move towards making the information superhighway more accessible to all can be accelerated by:

1. Free translation.

“... increasing the number of school microcomputer enrichment centres (CEMIS), structures that have already proven effective as places for training school personnel in NICT, and by giving schools sufficient pedagogical and technical support to accompany educators in their efforts to master these technologies and to incorporate them in the teaching and learning process. The centres could be distributed according to a given number of teachers to be reached, the geographic area to be covered and the new structure of school boards.”<sup>2</sup>

In concrete terms, section 2.1 of this government policy states that the Ministère de l'Éducation will be responsible for setting up new CEMIS.

In the technological era of the 21st century, teacher guidance and support will most certainly benefit from the emergence and growth of an expanded network culture. The expression “network culture” contains a new dimension, characterized by the knowledge and attitudes acquired from working in an interconnected environment. Face-to-face support can now be complemented by virtual partnerships, where individuals are linked to each other on-line and work interdependently on group projects. Mutual aid on-line and the sharing options available on various types of networks offer promising paths for professional development.

#### 1.4 Ministerial Orientations for the Professional Development of Teachers

Based on pilot projects and other work carried out in the field, the recent ministerial orientations for the professional development of teachers specify, among other things, the need to:

- “... plan activities as part of an integrated process, rather than offer them on an ad hoc basis;
- “... shift the focus from individual skills to qualified school teams and to the creation of a ‘community of learners’;

2. Free translation. An abridged version of this policy is available in English. See Québec, Ministère de la Culture et des Communications, *Québec's Information Superhighway Policy—Abridged Version* (Québec: Gouvernement du Québec, 1998).

- “... organize in-service training activities on the basis of the expressed needs of the teachers rather than having them choose from a predetermined selection of offerings;
- “... move beyond a passive model of in-service delivery where the teacher receives training from an expert, to a model where the teacher is at times an active learner and at other times a resource to his or her peers;
- “... move beyond in-service training geared to the acquisition of compartmentalized knowledge to in-service training geared to the development of integrated teaching practices;
- “... move beyond evaluation where participants merely state what they liked or disliked about an activity to evaluation based on their perceptions of the medium- and long-term usefulness of what they learned . . . .”<sup>3</sup>

According to the document cited above, the current mandate of the CEMIS corresponds in certain respects to these orientations. And, these orientations now constitute a basic frame of reference for the entire school system.

#### 1.5 Consensus Reached at the Sommet du Québec et de la jeunesse

One of the priorities agreed upon at the recent Québec youth summit, the Sommet du Québec et de la jeunesse, was the need to promote young people's openness to the world. This goal is to be achieved through greater use of information and communications technologies—more specifically, by integrating ICTs into teacher training and learning methods.

This consensus therefore reiterates that the integration of ICTs into schools remains a challenge that cannot be met without the proper initial training and continued professional development of teachers.

3. Québec, Ministère de l'Éducation, *Orientations for the Professional Development of Teachers—Taking an Active Approach to Change* (Québec: Gouvernement du Québec, 1999), pp. 8-9.

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## 2. Network Renewal

In collaboration with the school boards, the Ministère proposes setting up a network of resource persons based on the current CEMIS framework, beginning in the 2000-2001 school year. Each school board will receive funding for this purpose.

To foster the emergence of a network culture that is even more far-reaching than the current CEMIS, the resource persons designated by each school board, as well as those that will be designated at the provincial level, will work together—by means of mutual aid, partnership and the sharing of expertise, directly and on-line—toward the development of students' competencies through the integration of technologies.

The primary functions of the renewed network of CEMIS will be to provide training and support to teachers in the area of ICTs, to promote the practical application of the network culture in each region through effective regional dialogue, and to provide for the pedagogical development that is expected in the school system.

### 2.1 A New Name: RÉCIT

A new name is needed to reflect the new orientations. The suggested expressions for referring to the new services are the "local services" and the "provincial services" of the "RÉCIT."

The designation "RÉCIT" comes from the French name for the network, i.e. the "réseau de personnes-ressources pour le développement des compétences des élèves par l'intégration des technologies."

The name has already been used in the school board budgetary rules for the 2000-2001 school year in the section on the allocation of financial resources for the new network (measure 30081).

### 2.2 School Board Responsibilities Regarding Local Services

Each school board will designate one<sup>4</sup> resource person to provide local services, based on the funding received and the school board's contribution, in accordance with the ministerial and government orientations discussed above.

Together, the resource persons from each school board will comprise the RÉCIT. They will provide training and support to teachers in the area of ICTs, more specifically by supporting them in field-testing and carrying out student learning projects; they will also help develop practical applications of the concept of a network culture through efficient regional and provincial dialogue.

#### Cross-curricular competencies

The inclusion of cross-curricular competencies in the Program of Programs is a new element in the Québec Education Program. It will require special effort in terms of providing information and training, as outlined in the ministerial policy on lifelong learning. The competency of being able to use ICTs is, by the very nature of its integration into the education program, a cross-curricular competency, one that can be easily transferred to everyday life. It provides an "added value" to education. In this respect, applied and continuing education has become indispensable to teachers, who must keep abreast of the rapid changes in information technologies so they can integrate the applications into their learning activities. For this reason, monitoring new information technologies will be that much more important.

4. School boards that receive substantial funding due to greater enrollments will be invited to designate more than one resource person to join the RÉCIT, insofar as justified by the funding allocation.

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### **Mandate objectives**

- Professional development of teachers in the use of ICTs in accordance with the implementation of the new program; guidance and support of teachers developing and carrying out local educational projects; technology watch required to provide appropriate support to the projects, innovation and experimentation
- Participation in regional and provincial dialogue, which is essential to ensuring the emergence and growth of a network culture and to supporting the integration of ICTs in the subject areas (mandate shared with the provincial services resource persons); regional consultation meetings needed as well as provincial discussion and training sessions

### **Subject areas**

Following a call for bidders to be announced in early fall 2000, the Ministère will grant certain school boards the mandates to offer provincial services in the subject areas outlined in the new education program: languages; mathematics, science and technology; social sciences; arts education; and personal development.

The resource persons of these school boards will be part of the RÉCIT and will provide ICT support to the school network in the given subject area.

### **Framework for local services**

School boards will determine the structure, planning and evaluation of the mandate for local services.

School boards will submit an annual report to the Ministère on how the mandate is being carried out. This report will provide specific details on the activities of the resource person<sup>5</sup> participating in the RÉCIT and will present an overview of the results of pedagogical support (professional development), participation in regional and provincial consultations, and mutual aid and sharing, both face-to-face and on-line (network culture).

### **2.3. School Board Mandates for Provincial Services**

The Ministère will grant certain school boards the mandate to continue offering provincial services to specific target groups by updating the provincial mandates in areas where they are already in place: vocational and technical education, adult education, special education and preschool education. The renewed mandates, based on the ministerial and government orientations discussed earlier, are presented below.

5. Or "resource persons," where justified by the number of students and amount of funding allocated.

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## Mandate objectives

The mandate assigned to the resource persons in the school boards entrusted with this service will be to guide and support the various partners, according to their specific needs. These will include persons in charge of the dossiers at the Ministère, the regional teams coordinating the ICT dossier and, by the same token, the educational services of the school boards as well as the school administrators. Finally, in collaboration with the provincial committee and, depending on the case, their local services colleagues, these resource persons will be required to form teams of teachers to carry out pilot projects.

### The mandate objectives are the following:

- Development, research and professional development concerning the use of ICTs in teaching the targeted subject area or student population; guidance in and support of the development and implementation of pedagogical projects in the regions; setting up of reference centres; distribution of products; technology watch to provide appropriate support to projects, innovation and experimentation
- Dialogue and consultation through a provincial committee composed of representatives from each region with a view to building an efficient partnership with regards to ICTs in the subject areas (mandate shared with local services) or the targeted student populations (mandate to pursue), as the case may be; participation of provincial services in provincial discussion and training sessions

It should be noted that given the specific terms of the basic school regulations and the nature of the student populations, the provincial services related to adult education and vocational and technical education will also be responsible for the direct training of teaching staff, in both the anglophone and francophone school boards.

As for provincial services in the youth sector, specific measures will be taken to provide products and services useful to all school boards, anglophone and francophone, particularly through the creation of a provincial service specifically for the anglophone school boards and the distribution of these products and services over the Internet.

## Framework of provincial services

The framework of the provincial services will be determined by the school boards entrusted with these services.

The mandate of each of the provincial services will be planned and evaluated annually by a committee made up of the following people: the resource person designated by the school board entrusted with the service, a senior administrator from that school board, the person in charge of the RÉCIT project at the DRD, Ministère representative(s) in charge of the subject area or targeted student population and a representative from the school board regional offices. The committee will determine whether it is necessary to form other partnerships.

The senior administrator representing the school board entrusted with the service is responsible for calling the committee meetings, in collaboration with the designated resource person.

The school board entrusted with the service will make sure that the Ministère receives an annual report on the fulfillment of its mandate.

### 2.4. Regional Dialogue

School boards within the same region will be responsible for ensuring that they work together, in collaboration with the regional offices of the Ministère, under the authority of a delegation from the regional committee of directors general.

This kind of regional consultation will be necessary to ensure regional representation in all issues dealt with by the provincial services of the RÉCIT: the five subject areas, preschool education and special education (specifically in the youth sector), as well as adult education and vocational and technical education. Ongoing communication between the sectors will allow all players to remain open to working together whenever and wherever network services are available.

Regional dialogue will also allow school boards to designate, for each region, one resource person from a local service or other service (for provincial services of the adult sector or in vocational education), who will help in carrying out the various provincial mandates.

In the adult education sector, the provincial service already has its own regional extensions through its satellite sites (SitSat). For vocational and technical education, the provincial service also has access to another type of network, the Inforoute FPT. Provincial services in the youth sector, however, will have to develop their own network in collaboration with the local services or with other representatives, depending on the needs of the region.

The purpose of this kind of regional consultation is to set up an effective partnership to help develop students' competencies through the integration of technologies in the various subject areas of the education program; it also aims to respond to the needs of the different types of student populations.

## 2.5 Allocation of Resources

### Local services (allocations)

The financial resources for local RÉCIT services will be allocated according to the following parameters:

Basic amount for all school boards  
(fixed sum aiming to take disparities into account): \$30 000

Additional amount based on the number of students  
(pro rata sum aiming to take number of teachers into account): to be determined

### Provincial services (number, designation and allocations)

In addition to the four existing services, for which additional resources have been provided, the Ministère will set up five new services in the different subject areas as well as a service specifically for the anglophone community, for a total of ten provincial services.

Financial resources for the provincial services of the RÉCIT will depend on the size of the student population targeted by the service, while taking into account the number of programs requiring the use of ICTs, the complexity of the network to be served and the applications to be supported. Funding for 2000-2001 will therefore be allocated as follows:

#### Consolidated services:

<b>Vocational and Technical Education</b>	<b>\$150 000</b>
<b>Adult Education</b>	<b>\$150 000</b>
<b>Special Education</b>	<b>\$150 000</b>
<b>Preschool Education</b>	<b>\$75 000</b>

#### New services:

<b>Languages (French, language of instruction, and English as a Second Language)</b>	<b>\$150 000</b>
<b>Mathematics, Science and Technology</b>	<b>\$150 000</b>
<b>Social Sciences</b>	<b>\$75 000</b>
<b>Arts Education</b>	<b>\$100 000</b>
<b>Personal Development</b>	<b>\$75 000</b>
<b>Service to the anglophone community, including languages (English Language Arts and Français, langue seconde)</b>	<b>\$150 000</b>

### Designation of mandated school boards

In terms of appointing school boards to offer the new provincial services, a call for bidders will be launched in early fall to all school boards. Responding school boards will then indicate their interest and demonstrate their expertise already acquired in a particular field. A committee made up of school board and Ministère representatives will then select the mandated school boards.

