

# INTEGRATING ICT PROFILE SKILLS INTO COLLEGE COURSES AND CURRICULA

◆ This article is one of two on the *ICT Profile for College Students* (Dupont, Ouellette, and Perreault 2014). Published in *Pédagogie collégiale* in October 2014, the first stressed how essential the mastery of informational, methodological, cognitive, and technological skills is to the pursuit of an education, a career, and good citizenship. It then discussed the skills of the Profile,<sup>1</sup> which was established to meet these needs.

In this second article, the authors hope to show educators how to easily incorporate ICT Profile skills into their courses, detailing a systematic process of Profile curriculum integration and suggesting a number of resources that support the development of Profile skills.

## HOW TO INTEGRATE THE ICT PROFILE

Integrating ICT Profile skills means taking full advantage of their potential in various contexts, with a view to having students work in teams, carry out projects, use information, solve problems, acquire knowledge, participate in contextualized learning activities, build and update their knowledge, communicate, and acquire effective work methods.

How can the *ICT Profile for College Students* be used to support the development of these essential skills and the competencies associated with both general and curriculum-specific courses? In what circumstances can ICTs be incorporated into teaching activities? As technology use should enhance the value of any activity to be carried out, it helps place their students at the heart of the learning process, in accordance with the principles of active student-centred learning.

Ideally, in order to ensure that students master all ICT Profile skills and use them in different contexts, it is recommended that these skills form part of a program approach. Teachers may also design classroom activities related to skill objectives in order to support competency development. This is the topic we will explore next.

### INTEGRATING ICT PROFILE SKILLS INTO COURSES

Perreault (2012) observed that a good many teachers are already having their students take part in activities associated with ICT Profile skills or objectives (see Figure 1).

Such activities may involve **conducting research** (Skill 1; see Fleurant 2010), **visually representing information** by means of tables or concept maps (Objective 2.3; see Martin 2010), **presenting information** (Skill 3) by publishing research findings with the help of a YouTube video (see Lefebvre 2013), or **working in a network** to complete a team assignment (Objective 4.3; see Messier 2012).

FIGURE 1 ICT PROFILE SKILLS AND OBJECTIVES

<b>1. SEARCH FOR INFORMATION</b>
1.1 Plan an information search.
1.2 Conduct the information search.
1.3 Evaluate the quality of the information found.
1.4 Organize the documents to be saved.
<b>2. PROCESS INFORMATION</b>
2.1 Identify pertinent elements of information.
2.2 Analyze information.
2.3 Visually represent information.
<b>3. PRESENT INFORMATION</b>
3.1 Plan the information to be presented.
3.2 Complete the project.
3.3 Improve the look of the final product.
3.4 Share information.
<b>4. WORKING IN A NETWORK</b>
4.1 Remote communications.
4.2 Content sharing.
4.3 Network collaboration.
<b>5. USE ICTS IN AN EFFICIENT AND RESPONSIBLE MANNER</b>
5.1 Master the work environment.
5.2 Learn on a self-sustaining basis.
5.3 Ensure the security of digital information.
5.4 Act in an ethical and civil manner.

As the ICT Profile was designed such that all its components are independent of one another, teachers can make use of the skills and objectives involved to specify each step (tasks, actions) forming part of a given activity. In many, for example, students are asked to submit an assignment (a text compiled using word-processing software, a slide show, a video clip, etc.); in such cases, teachers would do well to refer to the aspects of Skill 3 (Present Information.), the related objectives and tasks of which describe the steps to be taken and may help them monitor the activity.

<sup>1</sup> For information on these skills, see the insert in the October 2014 issue, or go to [reptic.qc.ca/wp-content/uploads/2014/09/ICT-profile-insert.pdf].



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At the same time, however, the ICT Profile was designed so that skill objectives can be combined in the same learning activity. Going back to our previous example, the assignment in question could very well be completed by teams of students (see Massé 2012). Teachers may then refer to objectives 4.3 (Network Collaboration) and 5.4 (Act in an Ethical and Civil Manner) in specifying the steps and tasks that will ensure efficient collaboration, as well as in determining if students are complying with intellectual-property rights.

Another illustration is the CÉGEP Limoilou’s “Tremplin Explorer” DEC course (see Rhéaume, Thibault, and Veilleux 2014), which also illustrates how the ICT Profile can be used to promote the successful completion of various specific activities. The goal of the course is to help students determine a career path while assisting them in developing a number of different abilities. Table 1 highlights the correspondence between course activities and target skills and the specific ICT Profile objectives involved. Here again, teachers would do well to consult the Profile to specify the steps involved in successful activity outcomes.

These examples show that, while it is entirely possible to capitalize on ICT Profile skills at both the activity and course levels, only when it forms part of a structured, collaborative program approach does the Profile take on its full importance and usefulness.

### INTEGRATING THE PROFILE INTO CURRICULA

Curricula are ripe for ICT integration when in a key development phase offering numerous possibilities. The steps involved are much like those used to implement new programs or when assessing or reviewing existing ones. These “golden opportunities” can be used with others identified “on the fly”, as it were: reflection on a program’s local “colour”, review of framework plans, establishment of mobile programs and practice firms, etc.

In order to support the work involved in ICT Profile integration, the IT REP Network has online a number of resources for college-network stakeholders,<sup>2</sup> including a guide (Aubin 2009). The latter sets out a process that can be used in conjunction with curriculum establishment, implementation, evaluation, and revision. Given that there is no “one-size-fits-all” solution, it is up to each college to coordinate ICT Profile integration into its particular curriculum-management process. Accessible, like the guide, in the “Integrating the Profile” section of the IT REP Network’s site, the other resources include two slide shows that describe the integration efforts of the CÉGEP de Granby (Dupont 2011) and the CÉGEP de Victoriaville (Boissonneault, Garneau-Angers, and Ouellette 2011). [TR: in French only.]

Let us now explore how to integrate the ICT Profile into a program of study. It should be noted beforehand, however,

CORRELATION BETWEEN WORK METHODS AND SKILLS TARGETED BY THE CÉGEP LIMOILOU’S “EXPLORER” COURSE AND ICT PROFILE OBJECTIVES	
“EXPLORER” WORK METHODS AND SKILLS	ICT PROFILE OBJECTIVES
Take notes in a digital learning environment.	Identify pertinent elements of information. (2.1)
Using a word-processing program, submit a written assignment that complies with the College’s standards.	Plan the information to be presented. (3.1) Complete the project. (3.2) Improve the look of the final product. (3.3) Share information. (3.4)
Prepare and give an oral presentation using a concept map.	Visually represent information. (2.3)

<sup>2</sup> To consult these documents, go to [reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/integrating-profile/].



that librarians, ICT advisors, and other college stakeholders may be asked to collaborate with faculty in carrying out one or more of the steps described below.

### STEP 1 — Analyzing the Program’s ITC-Use Context

#### DESCRIPTION

Before launching the ICT-integration process, it is useful to examine the role currently played by ICTs in the program concerned; accordingly, one of the first few steps to be taken consists in identifying the activities already making use of ICTs. With the help of an extremely simple data-collection form (see Figure 2),<sup>3</sup> teachers record the activities their students carry out using ICTs, and associate those activities with the corresponding ICT Profile skills. The inventory can be used, for example, to compile course numbers and names, a short description of the teaching activity concerned (which instructors must draft, ensuring that the ICT-related tasks are properly described), and various aspects that are relevant from a teaching and assessment point of view. This information can then be transferred into a “course/activity” table that associates ICT-related activities and the related Profile skills for every course in the curriculum. This grid will prove extremely useful when it comes time to determine which Profile skills are to be integrated (see Step 3), in order, *inter alia*, to identify those that have not yet been addressed.

#### CONTEXT

By facilitating the examination of practices, this step makes it possible to pinpoint both the challenges to be overcome and the existing measures worth preserving. During this

exercise, teachers should be able to identify classroom activities that already involve ICT use, thereby recognizing that they are already helping their students develop Profile skills.

At this stage, some colleges also undertake complementary data-collection procedures, involving faculty, students, graduates, and employers or other community stakeholders. In so doing, these institutions are attempting to identify how the mastery of informational and technological skills affect workforce entry and university access. By the same token, they are also attempting to establish an up-to-date description of their curricula and related ICT practices.

### STEP 2 — Identifying Program ICTs

#### DESCRIPTION

This step consists in determining the potential use of technology by examining the characteristics of a given curriculum (general goals, objectives, standards, etc.) and building on existing ICT aspects. Next, possible connections between ICT Profile skills and program competencies are established. This exercise constitutes a good opportunity to consider the program concerned in a new light.

#### CONTEXT

Certain government course goals contain prescriptions that can be easily associated with ICT use, whether in relation to a curriculum’s goals, objectives, or standards. By reviewing these requirements, teachers may also be able to identify situations in which the nature of a competency, competency element, or performance criterion suggests that ICT use would be pertinent.

FIGURE 2

SAMPLE ICT-ACTIVITY INVENTORY

INVENTORY OF CURRICULUM’S ICT-RELATED ACTIVITIES (NUMBER – NAME)			INSTRUCTOR (YOUR NAME HERE)	
1 Course (number and name)	2 Session (1 to 6)	3 Activity (name and description: task, requirements, presentation, ICTs used by students, etc.)	4 Details (instruction and assessment)	5 ICT skills (network ICT Profile)

<sup>3</sup> An example of the ICT-activity inventory can be found at [[reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/](http://reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/)].



The contents and structure of the ICT Profile make it possible to easily relate the competencies to be developed in a given general or curriculum-specific course to precise skills and objectives, for both technical and pre-university programs. **Table 2** presents a few examples of the relationship between disciplinary competencies and ICT Profile skills.

In various college-network programs, students are asked to search for, process, and present information. Many dimensions of college instruction also involve the mastery of methodological, cognitive, or technological skills; 20 of the 24 Tourism DEC competencies,<sup>4</sup> for instance, are associated to some extent with a context of technology use. In other programs, explicit indications can be found in the general goals: in the Humanities (MELS 2010b) and Natural Sciences (MELS 2010a),

students must use the appropriate information-processing technologies, while in the new Arts, Letters, and Communication curriculum (MESRST 2013), they must use research methods and information technologies.

In the workplace, the past few years have witnessed the emergence of clear job-description requirements stipulating the use of social media in sectors such as tourism. Another perhaps surprising example is recent offers for special-education practicums specify that applicants must have skills enabling them to assist seniors in using technology that enables them to stay in touch with friends and family, look for information, and entertain themselves.

TABLE 2

SAMPLE DISCIPLINARY COMPETENCIES AND THEIR RELATED ICT PROFILE SKILLS

COMPETENCIES, COMPETENCY ELEMENTS, AND PERFORMANCE CRITERIA	ICT PROFILE SKILLS
<b>GENERAL COURSE — FRENCH LANGUAGE AND LITERATURE (MELS, 2011)</b>	
Analyze literary texts (Competency 4EF0) (as well as the three other competencies in French (4EF1, 4EF2, and 4EFP)): <ul style="list-style-type: none"> <li>• Draft [a certain type of text]: Precision and wealth of vocabulary + compliance with orthographic, grammatical, syntactic, and punctuation rules.</li> <li>• Revise and correct the text: Appropriate use of revision strategies + corrections.</li> </ul>	Task 3.2.7 of the ICT Profile suggests improving the quality of language by means of writing tools and the effective use of digital reference and correction tools (electric dictionaries, spell checkers, etc.).
<b>GENERAL COURSE — PHILOSOPHY (MELS, 2011)</b>	
Apply judgment to the ethical and political problems of contemporary society (Competency 4PHP): <ul style="list-style-type: none"> <li>• Proper explanation of the ethical problem involved in a personal, social, or political situation.</li> </ul>	Objective 5.4 of the ICT Profile (Act in an Ethical and Civil Manner.) constitutes an avenue for integrating aspects of reflection into teaching, such as intellectual property and cyber reputation.
<b>PREUNIVERSITY PROGRAM — NATURAL SCIENCES (MELS, 2010A)</b>	
Deal with one or more topics related to the natural sciences, in accordance with what has been learned (Competency 00UU): <ul style="list-style-type: none"> <li>• Use of information-processing technology.</li> </ul>	Skills that can be associated with this field of competencies are varied; possibilities depend on the learning-integration project involved.
<b>TECHNICAL PROGRAM — EARLY CHILDHOOD EDUCATION (INFOROUTE FPT, 2002)</b>	
Establish or help establish budget forecasts (Competency 019L). Draft informative documents (Competency 0197).	This field of competencies may be associated with information processing (Skill 2) and presentation (Skill 3), which can be developed by means of electronic spreadsheets, data-management software, and word processing.

<sup>4</sup> Although the government course goals for the Tourism program involve 29 potential competencies (core curriculum and options), the CÉGEP de Granby's Tourism DEC has 24.



### STEP 3 — Developing Students' ICT Profile

#### DESCRIPTION

Once the existing use of ICTs and their association with program characteristics have been analyzed, it is critical that progressive, consistent Profile skills be developed. Here, ICT skills are more formally associated with the learning and assessment activities directly related to the development of program competencies. This may involve such methods as courses with specific targets or the project-based approach.

#### CONTEXT

At this stage, it is important to ensure that students will, at various times while attending college, need to use a variety of ICT-specific tools and resources, in different contexts. It is also vital that teachers do everything possible to ensure that students develop their strategies, independence, and effectiveness, and that they gain deep learning. As such preparations are doubtless not far removed from existing measures for reaching numerous other program objectives, educators need only reproduce the pedagogical planning and collaboration model by adapting it to an ICT-integration context.

To facilitate management of the responsibilities involved in teaching Profile skills, we recommend the use of a course/skills grid (see [Figure 3](#)),<sup>5</sup> which makes it possible to determine which course will involve explicit instruction on a given skill; which, a formative evaluation; and which, a summative evaluation. ICT Profile skills can be integrated into framework plans and associated with a variety of competencies, whether at the specific-course level, by means of contributing disciplines, or from a general-education perspective, in accordance with the program approach.

Because the development of skills, like that of the competencies that characterize each curriculum, is staggered over several terms, it can be viewed as an iterative process involving successive refinements that occur as students progress. The “course/skills” grid allows teachers to plan for these developments. With a college-exit profile such as the *ICT Profile for College Students*, skills must be reinforced; tasks, made more complex; and requirements, made more stringent from one course and one term to another. Accordingly, the first year, teachers usually determine strategies and tools and use a number of models and examples, while also providing closer supervision. As each session goes by, they help students mobilize their resources and integrate their knowledge, so that, insofar as possible, they are able to carry out on their own, and “in context”, any and all ICT Profile tasks.

While it is not a requirement, some colleges have established a process to formally recognize the mastery of a minimum level of ICT skills for those curricula into which the Profile has been integrated, such recognition generally taking the shape of a certificate. The CÉGEP de Drummondville, for example, provides a certificate confirming that students have mastered the informational and technological skills required by their technical program, so as to meet the demands of the workplace.<sup>6</sup> Students appear to appreciate this certificate, as well as the fact that it is recognized by certain universities and employers.

### STEP 4 — Planning ICT Profile Integration and Taking Action

#### DESCRIPTION

Once the ICT Profile for a given program has been completed, plans can be made for implementation. In the final phase, an evaluation of the goals met and measures established makes it possible to take the necessary corrective steps for future student cohorts.

#### CONTEXT

An action plan and a timetable are very useful here. When implementing the ICT Profile in their courses, teachers can also adjust both their strategies and their classroom activities in accordance with the objectives established in the previous step.

When planning ICT Profile integration into programs of study, it is important that the following requirements be taken into account: faculty professional development, human resources (educational advisors, librarian, and technical support), physical premises, software applications, equipment, and so on. Given the budget cuts faced by the education system, this may seem difficult, but, generally speaking, it may be assumed that the great majority of colleges already have the necessary resources, infrastructure, and equipment. Furthermore, the “menu” of available educational goods and services has undergone a major transformation over the past few years: freeware is becoming increasingly common; complimentary applications are numerous and of higher quality; and colleges now have access to platforms that can meet a number of needs. As

<sup>5</sup> An example of this grid can be downloaded at [[reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/](http://reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/)].


<sup>6</sup> To consult a sample certificate of achievement issued by the CÉGEP de Drummondville, go to [[reptic.qc.ca/wp-content/uploads/2013/08/DRUM\\_2012-12\\_ATTTESTATION-Certification\\_TIC.pdf](http://reptic.qc.ca/wp-content/uploads/2013/08/DRUM_2012-12_ATTTESTATION-Certification_TIC.pdf)]. [TR: in French only.]





FIGURE 3

SAMPLE COURSE/SKILLS GRID

 Codes: T: Teaching TS: Transferable Skills EV: Evaluation P: Archive in portfolio TI: Transmission of information O: Optional		Year 1							
		1	1	1	2	2	2	2	2
Sessions =====>									
<b>ICT Profile Skill</b>									
1	Search for Information.								
1.1	Plan an information search.								
1.2	Conduct the information search.								
1.3	Evaluate the quality of the information found.								
1.4	Organize the documents to be saved.								
2	Process Information.								

concerns professional development, the college network has developed considerable expertise in educational technology, and that expertise is now readily accessible. These issues will be discussed in the next section.

### ▶ A STUDENT-CENTRED APPROACH

While the development of ICT skills is an institutional affair and, in large part, teachers' responsibility, the main parties concerned—those that should be at the heart of the process—are students. Informing them of the presence and pertinence of the ICT Profile in their respective programs is important in ensuring that those skills are successfully integrated. Of course, contextualization is paramount. The ICT Profile may become motivating for some students as soon as they begin taking courses; it can even constitute a plus during program promotion. Moreover, knowing beforehand that the Profile has been integrated into their curriculum will help the more technophobic or weaker students get off on the right foot.

#### RESOURCES SUPPORTING THE INTEGRATION OF ICT PROFILE SKILLS

Educators wishing to integrate ICT Profile skills into a course or curriculum need not start from scratch—indeed, far from it. Since the first version of the Profile was developed in 2009,

a number of resources have been developed and shared to help faculty in their endeavours. With the arrival of the 2014 version, new tools are now available to colleges. These resources have been designed, not only to assist teachers in ICT Profile integration and implementation and to facilitate the efforts of educational advisors in their efforts to aid program teams, but also to help students develop and assess their skills. Below is a short summary of the materials now available or being developed, as well as the services offered to colleges.

#### RESOURCES FOR STUDENTS AND TEACHERS

A number of resources are available to enhance student autonomy as regards ICT Profile skills development. Teachers and other professionals may also find them useful in perfecting their own skills.

##### ▶ The Diapason Site<sup>7</sup>

This site provides college and undergraduate students with learning resources such as tutorials, videos, guides, work tools, and checklists; it also has a section for professionals (teachers, librarians, etc.) that includes lesson plans and tips.

<sup>7</sup> Site resources may be consulted at [mondiaison.ca/]. [TR: in French only.]



### ► ICT Profile Video Clips<sup>8</sup>

The result of a cooperative effort between the IT REP Network and *CÉGEP à distance*, these clips are tutorials designed to help students develop ICT Profile skills. More than 40 clips in English and French are already accessible on YouTube, and 15 more will be added by Jun 2015.

### ► IDIKO Instructional Material<sup>9</sup>

These video clips, available thanks to joint action by the CÉGEP de Sainte-Foy and Université Laval, are designed to help Web surfers learn about digital publishing and imaging.

### ► The Profiltic.qc.ca Site

This site, which is intended to support ICT Profile integration in colleges, will be onlined in 2014-2015.<sup>10</sup> Designed primarily for faculty and students, the site will provide the various college-network stakeholders with a multitude of information and tools: general information on the Profile, learning resources for students (and for teachers, too!), testimonials and accounts, lesson plans, an FAQ section, etc. The IT REP Network is currently working with a number of different agencies and college-network partners to identify the many resources pertaining to ICT Profile skills, in order to make them easily and efficiently available on the site.

### ► The World of Images, companion textbooks, and a wealth of digital resources (Websites, software) produced by the Centre collégial de développement de matériel didactique (CCDMD)<sup>11</sup>

Designed expressly to meet the needs of college programs, these diverse resources facilitate learning through technology.

*While the development of ICT skills is an institutional affair...the main parties concerned...are students.*

### RESOURCES FOR TEACHERS AND OTHER COLLEGE-NETWORK STAKEHOLDERS

Other projects, resources, and organizations help support integration ICT Profile skills into courses and curricula at various points of the process.

### ► IT REP's "ICT Profile for College Students" Dossier<sup>12</sup>

Although this section of the site is dedicated primarily to college IT REPs,<sup>13</sup> teachers and other stakeholders interested in technology use can also consult it for information, resources, and tools aimed at promoting, integrating, and implementing the Profile, as well as leadership and inspiration.

### ► A Database for Tracking College ICT Profile Integration

By means of this new tool, which will be available in early 2015, it will be possible, *inter alia*, to communicate with college IT REPs who have completed various steps of the ICT Profile integration process in a given curriculum.

### ► The Profweb Site<sup>14</sup>

Designed to promote the digital resources that can be used at the college level, this site contains a wealth of motivating publications such as the real-life stories of teachers from a variety of disciplines who have integrated learning and teaching technologies into their classrooms. It also lists a variety of tools and services that facilitate such integration. Profweb is a gold mine of exciting, specific examples of activities that involves Profile skills.

### ► The FutursProfs Site<sup>15</sup>

This site, which was designed jointly by the CCDMD and the Université de Montréal, contains training modules on pedagogical-design competencies, a good number of which bear on the software applications and lesson plans to be used in conjunction with activities aimed at developing Profile skills.

### ► Non-Credit Professional-Development Activities Directly Related to ICT Integration in Education

Offered by the *Association pour les applications pédagogiques de l'ordinateur au postsecondaire* (APOP),<sup>16</sup> these activities often have themes related to ICT Profile skills.

<sup>8</sup> These clips can be viewed at [youtube.com/channel/UCFO8CBHL1Wlu0eYOYSw44DA]. A correlation table linking the videos to the respective student ICT Profile skills (2014) can be viewed at [docs.google.com/spreadsheets/d/1EuLB3Sev9tRFDCN9DGIpA7nhv0EY\_1wwzVIWDnkzOiy/edit#gid=516507546].

<sup>9</sup> The IDIKO clips can be viewed at [idikoc.ca/p/videos.html]. [TR: in French only.]

<sup>10</sup> For the time being, the "ICT Profile for Students" page redirects surfers to the IT REP site; see [reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/].

<sup>11</sup> For more information on the resources offered by the CCDMD, go to [ccdmd.qc.ca/eng].

<sup>12</sup> To consult the *ICT Profile for College Students* dossier on the IT REP site, go to [reptic.qc.ca/en/dossiers-en/ict-profile-for-college-students/integrating-profile/].

<sup>13</sup> College IT REPs are the individuals in charge of integrating technology into the teaching and learning process, and have been appointed by their respective institutions to act as ICT resources and form part of the IT REP Network. Although generally educational advisors, they sometimes hold other positions.

<sup>14</sup> To consult the resources offered by Profweb, go to [profweb.ca/en].

<sup>15</sup> FutursProfs resources can be found at [futursprofs.ca/]. [TR: in French only.]

<sup>16</sup> The APOP site can be found at [apop.qc.ca/en/].



### ► University Credit Professional-Development Programs in College-Level Instruction

In these programs, which are offered by PERFORMA to its member institutions,<sup>17</sup> technology is often the subject under study. Some courses bear directly in integrating technology into learning and teaching.

#### INSTITUTIONAL RESOURCES

Integrating ICT Profile skills can be difficult without the determination or commitment of the colleges. Institutions that are introducing Profile-related objectives as part of their main policies (i.e., their Student Success Plan, their IT Integration Plan, and even their Strategic Plan) are increasingly numerous, making it easier to justify the action and resources associated with ICT skills development and mobilizing the academic community in order to reach this common goal. Given this fact the Profile should now be easier to integrate into such mechanisms as annual work plans, capital budgets, professional-development programs, first-year instruction policies and methods, and student-success plans.

Successful ICT Profile integration depends on the establishment of educational and organizational conditions such as upgrading and support for faculty, teaching-activity and teaching-strategy development, the creation or fine-tuning of services, the appropriate technical support, and the availability of the necessary equipment and applications. (Barrette *et al.* 2011).

Educators who hesitate to integrate ICTs into their teaching strategies often experience considerable insecurity about using technology and their own technical and technopedagogical skills. These individuals must be given the necessary resources, upgrading, and support. That support must also be maintained, if they are to start making progress as quickly as possible. It may be provided by educational advisors (in particular the IT REP), but also by various network services. We must remember that all this is not going to happen by magic! Teachers' skill development and ongoing support are both conditions that contribute to project success.

Certain colleges have “beefed up” or adapted existing structures in order to better serve students and teachers (for example, by bundling services), as well as to facilitate screening for students with major technological problems (particularly in the case of individuals returning to school after a hiatus of some length). Instructors must know where to refer students whose academic success could be compromised by a lack of digital competence. Measures (technical-assistance offices,

tutoring, etc.) should be taken to ensure that students are given every chance to master technology use.

Faculty members therefore need to be able to count on the involvement of librarians<sup>18</sup> and educational advisors, computer services, student services, and so on. In a collaborative context involving college resource persons and services involved in student success, measures stemming from ICT use can be taken consistently and efficiently.

### ► THE ROLE OF JOINT ACTION AND COLLABORATION IN ICT PROFILE INTEGRATION

As we have seen, the college network has for some years been mobilizing in order to offer teachers, students, and educational advisors the framework (the *ICT Profile for College Students*), support, resources, and tools needed to promote ICT integration into courses and curricula. Another goal is to assist all these stakeholders in developing the informational, methodological, cognitive, and technological skills essential to the college students, employees, and citizens of today and tomorrow.

We invite you to discuss your plans for ICT integration, as well as the related issues and resources, in your community, with the members of your department, your IT REP, your college's librarian, the educational advisors assigned to your program, and your academic dean. Whether at the course, program, or institutional level, as regards ICT Profile integration, joint action and collaboration constitute the best avenue to take. ❶

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<sup>17</sup> For more details on PERFORMA programs, consult [usherbrooke.ca/performa/en/].

<sup>18</sup> College professionals with library-science training usually occupy positions as professional librarians or SMTEs (specialists in education methods and techniques).





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