

# LEARNING ASSESSMENT AT THE COLLEGE LEVEL



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## A CONCEPT MAP FOR ASSESSMENT PRACTICES

For some 25 years now, college programs have followed the competency-based approach. Over time, the associated pedagogical expertise has been developed, and college teachers have used a variety of strategies to ensure students develop the competencies they need. As for certifying these competencies, however, there are still questions as to which assessment practices to adopt. The goal of this article is to describe the primary concepts associated with learning assessment in a competency-based context. The complex process of assessment will be examined in accordance with a concept map that involves several inter-related factors. An analysis of the more traditional practices and related competency parameters will help teachers pinpoint their own practices within a flexible frame of reference aimed at promoting conciliation and consensus-building pertaining to evaluation practices.

### DEFINING ASSESSMENT

Before exploring the issue itself, we must try to reach a common understanding on the meaning of assessment. From an educational viewpoint, what does “assessing” mean? Is it merely correcting a stack of papers? Is it the same as “measuring”? Is it limited to assigning a mark? In fact, *learning assessment* constitutes a much more all-encompassing concept that influences a teacher’s pedagogical outlook in all its aspects. Here is how Quebec’s Ministry of Education defined learning evaluation in 2003:

“Evaluation is the process whereby a judgment is made on a student’s learning on the basis of information gathered, analyzed and interpreted, for the purpose of making pedagogical and administrative decisions.” (Ministère de l’Éducation, p. 4).

Although several years old, this definition establishes some major fundamentals pertaining to the concept of evaluation. First, as evaluation is associated with a **process**, it clearly

involves many actions that form part of a pre-determined sequence. In other words, assessment is not isolated, spontaneous, or improvised; it is a planned course of action that is governed by certain rules. The definition also brings into play the concept of professional **judgment**, implying that a high level of complex intellectual abilities is necessary. Evaluation can therefore not be reduced to an automatic mechanism of quantifiable measurements that require no reflection to be interpreted. To exercise judgment on learning, teachers must consider **data** (gathered via examinations, projects, portfolios, observation grids, oral presentations, etc.) that enable them to make the appropriate **pedagogical decisions** (for example, to provide formal or informal feedback, adjust their teaching, or have students do additional work). These formative decisions, which result in the regulation of learning, are followed by **administrative decisions**, which, as they are vital for grading and certification, are just as important.

### CONCEPT MAP

The various concepts associated with college-level learning assessment can be arranged on a concept map and represented in accordance with the diagram in **Figure 1**. These concepts are defined as follows:

- Learning assessment is based on competencies.
- Learning assessment should depart somewhat from traditional perspectives.
- Learning assessment should aim to incorporate new approaches.
- Learning assessment takes into account the “Three Ps”: product, process, and persuasive speech.
- Learning assessment must comply with certain principles.
- Learning assessment requires tools developed in keeping with principles and program specifications.
- Learning assessment requires a backdrop of consensus-building.

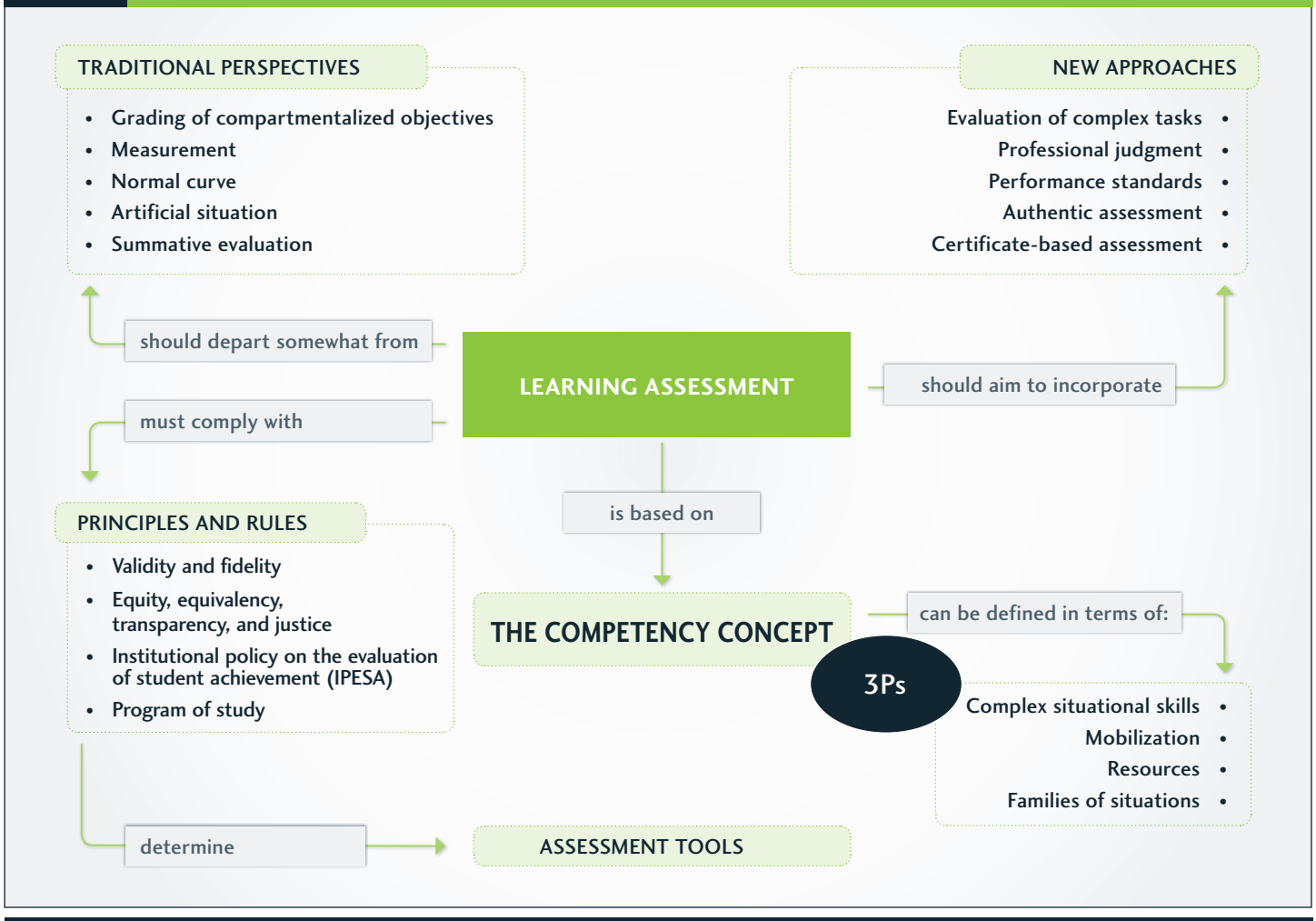
### LEARNING ASSESSMENT IS BASED ON THE COMPETENCY CONCEPT

As reported by Tardif (2006), a competency is a **complex situational skill** requiring students to deploy a variety of



FIGURE 1

A CONCEPT MAP FOR ASSESSMENT PRACTICES



resources within a given family of situations with comparable contexts. As competencies now lie at the heart of college programs, the resource mobilization involved logically lies at the heart of assessment. Precisely what is evaluated by assessments designed to certify competencies is therefore students' ability to question, select, combine, organize, use, and transfer what they have learned into a complex action. With the competency-based approach, while it remains essential to ensure students have mastered a certain amount of declarative knowledge (an indispensable resource of any field of study), and even though it is often appropriate to verify such knowledge in detail by means of examinations, it is risky—even inadequate—to limit competency assessment to that end only.

LEARNING ASSESSMENT SHOULD DEPART SOMEWHAT FROM TRADITIONAL PERSPECTIVES.

From the outset, we should say that the aim of distinguishing between **traditional perspectives** and **new approaches** in an evaluation context, as described in the next few paragraphs, is not to portray them as opposites. Polarizing different viewpoints is unproductive, as the result would be a discussion detrimental to reflection. By systemically incorporating both viewpoints on learning assessment into the same network, we acknowledge that the practices of each educator are to be found somewhere between the two extremes—obviously influenced by his or her beliefs and experience, but also



influenced by the discipline, types of learning, and college policies involved. The system proposed in [Figure 1](#) is intended to be flexible, to allow for latitude within the framework in accordance with various educational contexts while not losing sight of the fact that these are competencies students must develop and teachers must assess. The dotted lines surrounding the groups of concepts emphasize this malleable quality.

*By focusing solely on the simple verification of knowledge, teachers deny themselves the opportunity to fully assess how students mobilize what they have learned, thereby rendering competency assessment incomplete.*

Scallon (2004), in a text on assessment that inspired this article, describes various distinctions between traditional practices and new approaches. To truly appreciate them, we must take a step back and examine the structure of programs that used to exist in Quebec colleges. Before the educational reforms that began in 1993, programs of study were defined based on segmented content and organized in keeping with goals to be reached. Those goals were sometimes composed of long lists of learning objects that, although in fact connected, were considered distinct, a fact that often resulted in discrete, isolated “compartments” of learning. The ultimate goal of the evaluation practices then in effect was to verify and measure separately everything taught. Assessment methods such as short-answer or multiple-choice examinations were a popular option, as they could be easily implemented to confirm whether or not students had learned the material in question.

Although a traditional practice, such tests may still be required and appropriate in a competency-based context, especially for certain more theoretical disciplines. However, these exams should be combined within an approach that is not limited to the verification of knowledge; used in isolation, this type of assessment is not enough to certify competencies. As we know, knowledge forms an integral part of competencies; the latter, however also demand other resources, such as the superior intellectual prowess and attitudes to be transferred in performing complex tasks. By focusing solely on the simple verification of knowledge, teachers deny themselves the opportunity to fully assess how students mobilize what they have learned, thereby rendering competency assessment incomplete.

Traditional practices have been strongly influenced by the scientific paradigm focused on measurement (the quantitative model) and psychometric tests. With this model, assessment is designed to be normative—i.e., it compares one student’s achievement to that of others, rather than to an accepted standard. The use of the normal curve (Gaussian or bell curve)

reinforces this comparison by setting the strongest students apart from the average and the weakest; either students are “tricked” (i.e., asked difficult questions on subject matter not fully explored in class) so the strongest stand out, or marks are standardized. Standardization and the control of variables constitute major parameters of this model. Learners are placed in an artificially controlled environment with uniform testing conditions (no asking questions, no right to use resources, no interaction, and an equal amount of time for everyone)—in other words, contrived situations that have nothing to do with the contexts in which students will have to transfer their knowledge, whether at university, in the labour force, or during daily life. Lastly, grades are assigned via summative evaluation. Points for each question are added together to obtain a test mark, with the final grade being determined by a calculation algorithm that adds the results after weighting them. A reference value, in conjunction with sample representativeness, is then used to determine whether that grade is a pass or a fail (e.g., a 60% reference value assumes that students have reached 60% of the related objectives and deserve a passing grade). We should emphasize here that this method is still omnipresent at the college level.

### LEARNING ASSESSMENT SHOULD AIM TO INCORPORATE NEW APPROACHES

Since 1993, various approaches have emerged in an attempt to adapt assessment practices to the fundamentals of competency-based instruction. While we must strive to implement these new approaches, we should bear in mind that traditional practices have a long history in Quebec’s colleges, and are still firmly ensconced in IPESAs. It is therefore completely natural that modern assessment practices are not all located at the extreme right of the concept map (see [Figure 1](#)). Teachers are responsible for entering a numerical grade on student records, and that grade must reflect a number of tests, which are generally added together. As teachers, ensuring that our practices lie somewhere between the two extremes helps us consider the assessment context and provide this intricate process with a certain equilibrium.

New evaluation trends are thus very closely related to the competency concept and students’ ability to demonstrate they have acquired complex situational skills. For students to be considered competent, they must prove they are able to perform a *complex task*. But what do we mean by this term? A complex task is multidimensional, requires the mobilization of a wide variety of resources that call on superior intellectual prowess, is contextualized, and is inclusive in nature. By way of



illustration, having students read a text or a book is an instructional strategy often used by teachers to encourage learning. Concerning assessment, having students take reading tests and answer the related questions is a rather traditional practice that requires memorization skills in particular. Having them write a paragraph analyzing what they have read, on the other hand, is a complex task that is more reflective of a “new approach”. To be competent, it is not enough to master isolated “compartments” of knowledge; students must know how to integrate and mobilize those compartments in performing a complex task, in accordance with the program specifications in question. Competency assessment must therefore allow teachers to ensure that students can perform that task in its entirety, and not just a certain percentage of it.

With the competency-based approach, the concerned complex task also involves a context, which represents an additional difficulty when it comes to evaluation: teachers must ensure that assessment situations are authentic in nature, by placing students in a context resembling the workplace or some other environment in which they will be required to transfer what they have learned. In other words, we should try to remove students from the controlled artificial situations associated with traditional perspectives. Not only is it meaningful, motivating, and realistic, authentic assessment<sup>1</sup> also enables students to genuinely demonstrate what they have learned and thus put their best foot forward.

When it comes to assessing **authentic complex tasks**, whether these take the form of projects, case studies, research, artistic performances, or internships, teachers are confronted with a broad spectrum of student productions or performances. Accordingly, teachers must necessarily use their professional judgment. The challenge here is to develop **qualitative and descriptive** instruments that ensure such judgment reflects the principals involved, as it is exercised in keeping with a standard of performance: in assessing students’ work, teachers do not compare assignments with one another; rather, they evaluate them against a standard defined in the performance criteria of the specifications for each program.

New approaches also include the concept of **certificate-based evaluation**, which involves assessing the integration as well as the transfer of learning with a view to endorsing a competency or program of study. This type of assessment allows for the mobilization, use, and reinvestment of learning as part of a complex task with sufficient weighting to significantly influence course or even program success. On a theoretical level, while certificate-based evaluation may be limited to a “pass” or “fail” rating, as is the case for comprehensive program assessment, it should also be adapted for use as a final course exam and

given a grade (summative assessment), since both the *College Education Regulations* (RREC) (Gouvernement du Québec, 2016) and college IPESAs require grades to be entered in student records. For example, a final course exam that is inclusive and reflects the entire competency or an element thereof may be defined as both a summative evaluation (because it is given a mark) and a certificate-based assessment (as it provides information on the degree of competency development). In contrast, tests of knowledge, although summative in nature, cannot be considered certificate-based for a final exam, as they involve a much narrower appraisal of a given competency. That said, however, assessment strategies are mostly mixed, incorporating summative methods designed to verify the learning of specific knowledge as well as inclusive certificate-based methods with sufficient weighting to significantly influence success.

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#### LEARNING TAKES INTO ACCOUNT THE “THREE Ps”

To fully assess competencies, teachers must consider various aspects of students’ work. There are three complementary dimensions to be considered in informing and consolidating one’s judgment in this regard: Product, Process, and Persuasive Speech (Côté, 2014). The Product is the end result that reflects learning outcomes (essay, interior-design project, musical performance, etc.); this dimension is generally closely incorporated into assessment strategies. The Process refers to students’ learning evolution, and consists of visible traces: a portfolio, clipping file, log, or lab notebook, for example. Although indications of these traces are not always apparent in the end result, they are significant in helping teachers form a judgment, and having students provide the relevant information is therefore extremely pertinent. Persuasive

<sup>1</sup> A number of authors have published works on the characteristics of authentic assessment. Anne-Marie Duval and Mélanie Pagé (2014) present a theoretical framework, tools, and practical advice for teachers wishing to master the authentic situation. For more information readers can consult [aqqc.qc.ca/en/publication/authentic-situation-design-assessment-academic-model-all-disciplines]. In Chapter 5 (Concevoir des tâches d’évaluation en situation authentique) of *Évaluer les compétences au collégial et à l’université: un guide pratique* (2015), Julie Lyne Leroux, Alexandra Hébert, and Johanne Paquin offer an extremely nuanced interpretation of the characteristics and advantages of this strategy, which is associated with new approaches.





Speech, which ensures that students have actually developed the competency in question, resides in their ability to justify their choices, recognize their strengths and weaknesses, and demonstrate their metacognitive skills and critical faculties. Assessment of this third dimension can be carried out separately, via a presentation or oral interview, as well as forming part of the larger picture (product or process evaluation). A comprehensive evaluation strategy for an entire semester should, at one time or another, allow for the evaluation of each of these three dimensions, so as to more fully certify competency development or course success.

### LEARNING ASSESSMENT MUST COMPLY WITH CERTAIN PRINCIPLES

Diligence in learning assessment involves certain principles and qualities, which are usually specified in each college's IPESA; among the terms frequently mentioned in these policies are *validity, fidelity or reliability, equity, transparency, equivalency, and justice*. Whether assessment practices are more traditional or rooted in the fundamentals of the competency-based approach, it is the teacher's responsibility to remain focused on these various principles if grading and certification are to remain credible and valid.

**Validity** is defined as the ability of an instrument to accurately measure what it is designed to measure, in accordance with its intended use (Legendre, 2005). Questions teachers might want to ask to ensure the validity of their assessments might include the following:

- Is the task required of students representative of the course competency or competencies to be developed?
- Is the task consistent with the competency elements contained in the program specifications?
- Does the task require students to mobilize several resources (knowledge, strategies, documentary resources, Internet searches, attitudes, cognitive and metacognitive skills, procedural knowledge, environment, etc.)?

This content validity is important as it helps our judgment of the relevancy of the assessment method involved.

**Fidelity**, which is defined as the capacity of an instrument to measure with the same accuracy every time it is used (Legendre, 2005), reflects the stability of the assessment process. In contrast with the psychometric approach, which is aimed at controlling and standardizing variables, competency assessment is often tailored to consider authentic situations.

Where students produce distinctively different projects, the related parameters can vary considerably from one project to another; accordingly, it is more realistic to talk of assessment **reliability** rather than fidelity, as the former represents the degree of confidence that can be placed in the results observed (De Ketele and Gérard, 2005). Concerning reliable assessment, the conditions or environment in which students are placed remain important parameters to be considered, even if the latter are not necessarily identical or fixed. Clear instructions, binding guidelines, and appropriate supervision should ensure that students in a given class or year complete their work under the same conditions, thereby guaranteeing outcome reliability. Furthermore, whether we are using the term fidelity or reliability, it is important that assessment tools used by various teachers be stable—i.e., that the proper *inter-rater agreement* exists. In this regard, the quality of the assessment tools used, in particular descriptive scales, is clearly vital.

Among the other fundamental assessment qualities, **equity** is especially important, as it assures students that the evaluation method in question is closely related to course content, and that their grade is representative of what they have learned. Equity also requires that, during assessments, students' cultural diversity is considered and special measures for handicapped students are available.

There are few other principles that also apply to assessment practices: **transparency** is aimed at ensuring that, rather than students being "tricked" during evaluations, they are informed beforehand of what is expected of them so they can properly prepare themselves; **equivalency** guarantees that learning is comparable from one class and teacher to the next; and **justice** provides students with the true right to seek redress where they feel they have a grievance.

### LEARNING ASSESSMENT REQUIRES TOOLS DEVELOPED IN KEEPING WITH PRINCIPLES AND PROGRAM OF STUDY

If assessment tools are to be of high quality, they must also comply with IPESA rules and evaluation principles; their development stems from the performance criteria set out in programs of study. There exists a multitude of assessment tools designed for different contexts. Examinations, while still a valid option for verifying theoretical knowledge, should go beyond that simple concept and incorporate case studies, situational exercises or problem solving, thereby enabling students to demonstrate more complex skills. For assessing practical knowledge, a checklist or observation grid is often useful.



If competencies are to be certified via the performance of complex tasks, a specific tool is indispensable. Some teachers, with experience, develop intuitive **professional judgment** that gives them a comprehensive overview of student competencies. The challenge here, however, is to make the parameters of that judgment explicit. As students are as diverse as their assignments, providing detailed descriptions clearly outlining expectations and accurately classifying the performance level of each student on a **progressive scale** are paramount.<sup>2</sup>

*The challenge of assessment lies in making professional-judgment parameters explicit.*

#### LEARNING ASSESSMENT REQUIRES A BACKDROP OF CONSENSUS-BUILDING

Any reflection on learning assessment would not be complete if it did not consider the **concerted effort** required among teachers of a given program. These practices comprise the backdrop of the concept map and embody the main principles associated with assessment (equity, reliability, equivalency, etc.). Whether we are discussing how to correct language-use, the choice of program attitudes to be evaluated, the common requirements for a final exam, the standard to be met in qualifying successful performance, the conditions for taking tests (open book, in class, take home, etc.), or even how to use a scoring rubric for internships, these and many other situations require a joint vision if evaluation principles are to be properly implemented.

Obviously, this represents a challenge, as teachers do not always take the same stance on assessment depending on their specific contexts, and their practices can vary according to the concept map. Where evaluation practices are not coordinated within a given department, at the very least a certain minimum “meeting of the minds” is desirable, to ensure that practices are located near the centre of the concept map rather than the two extremes (thereby avoiding a polarization of ideas). Openness to the thoughts of others, compromise, and consensus-building help develop assessment practices gradually, without losing sight of the diligence demanded by such a process.

#### CONCLUSION

What lessons should be learned from the learning-assessment concept map in a competency-based context at the college level? First, as educators, it is worth taking a step back and

pinpointing where our own practices are located on that map by asking the following questions:

- What traditional practices are still used in my courses?
- Are they still valuable? If so, why?
- Do I occasionally or often implement assessment methods that constitute new approaches?
- Am I able to limit the micro-compartmentalization of assessment and look holistically at the abilities of each student?
- Does my assessment strategy comprise a certificate-based dimension?
- What aspects of my assessment practices could be improved or redefined to take into account the conceptual fundamentals of competency assessment?

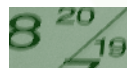
Second, we must not lose track of the fact that the conceptual changes, no matter how praiseworthy, must be made in full compliance with the regulatory standards stipulated in both the RREC and the IPESA. These policies pave the way for equity and equivalency by identifying the main principles of evaluation used by each college. As the very credibility of grades and diplomas depends on such compliance, the latter constitutes a guarantee of quality.

Last, we must keep in mind that teachers’ assessment practices are not isolated—they co-exist with those of their colleagues. It is preferable to gradually adopt practices that are adapted to a competency-based context in accordance with other teachers from a given discipline or program. Accordingly, we might ask ourselves the following questions:

- Where are my colleagues’ beliefs and assessment practices on the concept map?
- Where is the meeting point from which I could launch my reflection?
- How can I avoid stances that are overly rigid and explore new, compatible avenues?

Just as Rome was not built in a day, the adherence to and adoption of assessment practices that reflect new approaches to learning evaluation, in the context of a competency-based

<sup>2</sup> For more information on descriptive scales, readers can consult France Côté’s *Construire des grilles d’évaluation descriptives au collégial: Guide d’élaboration et exemples de grille* (2014).



approach, require patience and flexibility. Our strategy should be one of baby steps; while not resulting in overnight changes this will eventually lead to new, appropriate, valid, reliable, and collaborative practices. ◆

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