EVALUATION FOR TRANSFORMATION

Over the two last decades, various social changes brought on by immigration, globalization, the evolution of the family and the mercurial rise of ICT, not to mention the growth and mass phenomenon of education, have had a major impact on education systems (Bourdoncle, 1991, 1993; Paquay et al, 2001). We have witnessed a significant educational reorganization as school systems have refocused their energies on competencies-a phenomenon that is occurring on an international scale. In Québec, the reform implemented by the ministère de l'Éducation follows the same logic, and the development of competencies in students is now a pedagogical priority (Gouvernement du Québec, 2001, 2002). This general trend (Lessard, 2000), also linked to the practical conditions that increasingly prevail since the democratization of teaching, calls for different practices on the part of players in the educational environment and this applies equally to post-secondary levels.

Fact is, the democratization of teaching and particularly the increase in heterogeneous groups or groupings that followed, have driven home the importance for teachers to adopt pedagogical practices better suited to reach these new student groupings. In this respect, various authors (Develay, 1996; Espinosa, 2003; Rey, 1999) have shown that within these groupings, many students arrive at school without having mastered the implicit standards CHRISTINE LEBEL Professor, Faculty of Education, Université du Québec à Trois-Rivières LOUISE M. BÉLAIR Professor Faculty of Education Ottawa University

or codes of the academic culture and student success at school-a situation that can hinder their academic advancement in many ways. As observed for many years now in compulsory instruction, this transformation of the student body touches all teaching levels including collegial, where constraints such as more students in a classroom, the increasing heterogeneity of groups, budgetary cuts and the insufficiency of services are also prevalent (Langevin et Bureau, 2000).

DIFFERENTIATED INSTRUCTION IN SUPPORT OF COMPETENCY DEVELOPMENT

Given that these trends have considerably modified teaching conditions, the teaching paradigm seems to be shifting to a paradigm centered on learning, where differentiated instruction can be considered a viable alternative. For authors interested in differentiated instruction, including Meirieu and Perrenoud, the core concept is based on providing students with problem situations they must face, as frequently as possible. These situations cause the students to mobilize the resources needed to overcome the challenges encountered. The situations must be complex so the students go beyond a simple review of knowledge already acquired. Training situations of this nature harmonize nicely with a competency-based approach because they confront students with epistemological problems, calling on knowledge and competencies that are constructed on the road to project realization or problem resolution.

This approach naturally requires the management of time and learning activities. It obliges educators to give up an attitude of tolerance toward slower students and abandon the myth that differentiated instruction is nothing but deferred remediation (Meirieu, 1993). Differentiated instruction is rather the "sectioning" of a discipline so as to support the coexistence of a maximum number of learning styles. For example, the introduction of complex problem situations helps students experience work methods and learn that there is no such thing as one good answer only or only one good approach to finding a solution.

At the same time, the nature of programs offered in cégeps facilitates the emergence of transveral competencies. In fact, every one of these courses was conceived and developed within the scope of a program, the whole of which attests to the fact that the student should be "competent" in a given field. These courses are built on credits determined through the expertise of teachers and structured according to the specific area of study within a field. But what makes one student more "competent" than another is not the sum or courses but rather the integration of various components acquired during the courses. Given this knowledge, it seems obvious that we cannot implement a competency-based approach one course at a time. We must consider the development of competencies in direct relation to a given professional field or a field of studies, which presupposes a more global set of competencies to be acquired and, consequently, involves the decompartmentalization of courses.



A competency can be defined as knowledge to act, and knowledge that is called upon in a specific situation (Perrenoud, 2001). In a competency-based approach, we support the development of disciplinary competencies specific to courses yet remain attentive for transversal competencies that develop throughout. Transversal competencies–for example, those connected to work methods, reflective thinking, the analysis of problem situations (De Vecchi and Carmona-Magnaldi, 2002), or actions that must be performed and the self-evaluation of these actions–are difficult to assess using traditional methods and forms. In this respect as with teaching and learning, it is vital that evaluation approaches recognize transversal elements and their respective disciplines, but also go beyond this to contribute to the development of desired competencies. The approaches must combine formative and summative evaluations as as well as process and product; they must leave room for self-evaluation and co-evaluation so that a precise view of the person being evaluated can emerge. It is not simple–in fact, the change is quite dramatic.

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AN EVALUATION APPROACH BASED ON COMPETENCIES

The evaluation process as defined by Cardinet in 1986 and implemented by the MEQ in the 80's remains in use today. However, evaluation goes far beyond the mere administration of tests whose purpose in general is simply to measure. This evaluation has two facets: Its helps define the intention of evaluation and also constitutes a final judgment that will lead to a decision. The process is innovative in its way of designing and implementing this type of evaluation, bridging the gap between the formative and summative evaluation and allowing us to go beyond the artificial and arbitrary limitations of courses.

The progressive file, commonly known as a portfolio, presents an interesting alternative for exploring competencies that require evaluation yet are not exclusive to the course in which they are developed (Bélair, 1999, 2002). This option allows for the evaluation of disciplinary competencies during the course, while integrating traditionally overlooked transversal competencies in the certification process. The portfolio, which includes data specific to the student on his learning (formative evaluations), work reports (formative components centered on the process), reflections (self-evaluation or reflexive analysis of problems to be solved), drafts and final productions (summative), forces both student and evaluator to communicate and judge the level of competency development in the programs. In addition, a portfolio has a dual role of formative and summative evaluation; finally, it emphasizes the accountability of students relative to their performance and productions.

However by itself, the portfolio cannot guarantee that the assessment of competencies will be fair and equitable. It nonetheless seems an effective method for evaluating them. For example, teachers in nursing can create a file together to evaluate each of the disciplinary competencies in the course. However, certain components of the file are directly connected to transversal competencies (defined in advance by the teaching personnel) and will have to be assessed in each course. This file could be used during the three years of training in the program both in collegial courses and training in the hospital workplace.

A NECESSARY SHIFT

Competencies cannot be measured in terms of percentages. It is important to design a rating system that takes into account the quality of learning and not the number of components acquired for certification purposes. Otherwise stated, a competency can be developed, actualized and gualified, but it is not quantifiable. For example, the competency of a doctor does not correspond to the number of successful interventions on his patients but the accuracy of his diagnoses, his speed of execution, his altruism, his decisionmaking abilities and other criteria more "qualifiable than quantifiable" 1.

Accordingly, it is a case of taking the characteristics of formative evaluations and adapting them to the certification constraints. In Québec, this step was reached in the 70's with the implementation of descriptive report cards at elementary level. We presumed that each objective could be qualified: Successful performance, average, failure. This initiative was followed by several others and through trial and error, we were able to identify general qualifications of learning but have been unable so far to find a way to implementing them effectively and efficiently.

In light of the various systems and programs implemented in Québec, Ontario and several French-speaking countries, the approach described in the following section introduces general principles applicable to all disciplines as well as professional and general activities.

¹ Can one say that a doctor is qualified 60% of the time? To go even further, can we say this doctor is very competent versus another who demonstrates less competency? The statement is quite fuzzy but we can all agree that patients all over the world can probably gauge competency or lack thereof quite accurately in this context. So, what is needed is to define the characteristics of these two states?



A QUALIFYING APPROACH

A qualitative evaluation rests on the concept that qualification levels must be defined in order to make a judgment on acquired learning and the level of mastery. Likert's measurement theory includes five levels describing the evolution in the achievement process. These levels can be considered stages to be completed in the development of competencies. Table 1 describes the five levels found in the achievement of a task. The levels are described using criteria that allow the student to position himself relative to a given production or task.

UNIVERSAL CRITERIA

We can begin by drawing up a list of universal criteria which will facilitate the development of unique grids for an entire program (Table 2, on next page). The grid contains descriptors such as relevance, depth and precision, used to evaluate written productions, and is for the most part, transferable to other disciplines. In Ontario, the primary and secondarylevel curricula use this grid for all disciplines. However the model may not be appropriate for specifics and to fully describe the targeted competency; in some cases, the teacher must adapt it based on the tasks being evaluated.

AN ADAPTED GRID

Since 1988, many experiments have led to a second option that seems more relevant for both the student and the evaluator (Table 3). This option uses grids adapted to the targeted competencies thus making it possible to identify the competency level the student must achieve. It is important to note that this grid is primarily qualitative. Student progression is shown not with quantitative words such as "much",

Table 1 COMPETENCY LEVELS						
Level 4	Integration of the totality of competencies.	Level of satisfaction vis-à-vis the competencies being developed.				
Level 3	Acquisition of competency.	The level that determines whether the student is "competent"; level 4 means exceptional.				
Level 2	Hesitation during the demonstration of competency.	Level showing dissatisfaction vis-à-vis competencies to be acquired.				
Level 1	Difficulty in demonstrating competency.	This level does not mean failure but rather provides a better snapshot of the gaps in learning.				
Level 0	Problems–failure–competency not acquired.	This level does not mean failure but rather provides a better snapshot of the gaps in learning.				

"often", "sometimes" or "hardly", but rather by qualifying the students' productions, actions or behaviours. This grid is much more accessible for the student with its choice of terms and wording of contexts: "To identify" rather than "to explain" or "to deduce"; "based on the given model" rather than "in light of the various models analyzed".

Table 3EXAMPLE OF COMPETENCY LEVELS FOR THE COMPETENCY: TO EVALUATEIN A DIAGNOSTIC, FORMATIVE AND SUMMATIVE MANNER

3 sub- competencies	level 1	level 2	LEVEL 3	LEVEL 4
To develop an evaluation tool that takes styles and strategies into account.	To develop an evaluation tool for diagnostic, formative and summative purposes.	To develop an evaluation tool that takes account of the development criteria.	To develop an evaluation too that takes different strategies of at least one theory into account.	To critique the tool developed relative to the theories on styles and learning strategies.
To create evaluations that are authentic and contextualized.	To differentiate a contextualized from one taken out of context.	To develop an authentic evaluation tool that is contextualized relative to the scenario.	To develop an authentic evaluation tool that is contextualized relative to the scenario and the students.	To validate he authenticity and contextualisation of the tool.
To bring about improvements during co-evaluation.	To identify potential errors in a situation.	To undertake an improvement process.	To make a diagnosis on the situation at hand.	To establish connections between types of errors and the improvements required.



Table 2

EXCERPT TRANSLATED FROM BÉLAIR 1999 AND 2000 AND THE COURSE TAUGHT BY C. LEBEL

	level 1	LEVEL 2	LEVEL 3	LEVEL 4
RELEVANCE Ability to understand the requirements of the course Production directly connected to the subject at hand	Ideas and the subject are more or less appropriate to the requirements of the course	Grasps the subject matter for the most part and demonstrates an understanding of the requirements	Grasps the subject matter and meets requirements	Demonstrates an exceptional adaptation to the subject matter and goes beyond course requirements
DEPTH Level of analysis and integration of knowledge vis-à-vis the components being developed	Demonstrates the ability to analyze and superficially integrate the targeted components	Demonstrates the ability to analyze and to integrate simple components while certain aspects remain superficial	Demonstrates the ability to analyze and to integrate the targeted components in a rich and thorough manner	Demonstrates the ability to analyze knowledge in a complex and complete way that leads to a global integration of the targeted components
SCOPE Extent of the range of the components that demonstrate a good overall grasp of the subject	Subject tackled with a minimum amount of resources. Does not indicate if the subject matter has been grasped	Takes resources into account in the handling of the subject matter. Fast overall view of the subject	The resources are exploited in an exhaustive way. A good overall view of the subject	The resources are rich and varied; offers a critical vision of the subject; goes beyond a simple overview
COHERENCE Logical sequence and ordered components, arguments and ideas	Handling of the subject displays a certain amount of logic between the components and of a relatively prioritized sequence	The connections are logical and the whole is sufficiently prioritized	As a whole, the connections are logical between the components and are connected in an organized whole	The common thread allows the reader to readily grasp the content of the work
PRECISION Clear, concise and detailed work	Subject not very detailed and lacking in precision and clarity	Detailed subject but more clarity and precision would benefit the text	Detailed subject, clear and concise as to terminology and concepts	Subject matter which is also publishable pedagogical material
ORIGINALITY Ability to suggest different ideas relative to gestalt [+form] and background	Use of traditional methods	Use of traditional methods with certain innovative components however	Demonstrates creativity in the presentation or conception of the work	Very creative and personal presentation, innovative framework, new concepts
AUTONOMY Capacity to take oneself in hand, to make choices and take initiatives	Marked dependency vis-à-vis ideas and resources presented in the course	Dependency vis-à-vis the task to achieve; some initiatives put into place; appropriate resources.	Independent operation, demonstrates initiative in the presentation, the resources and the organization of work	Marked leadership in the field, exhaustive choice of resources
LANGUAGE Compliance with rules and conventional wisdom relative to grammar, syntax and spelling	Legible text, simple sentences, familiar and popular language with many errors, making the reading almost impossible	Language skills require support, accurate, simple sentences, errors making the reading difficult	Adequate and complex sentences, good mastery of the language, few errors	Exceptional mastery of the language, rich and complex sentences, insignificant errors

Compilation is simplified by the fact that it is no longer necessary to weight the work on its factual importance but by level. The levels numbered from 1 to 4 (level 0 represents failure) reflect a more lucid and interpretative reading of a production or an achievement and not just the sum of components. The levels are a true reflection of evaluation.

In a formative context, the grid allows evaluators and students to quickly identify the level of competency acquired, the learning still to be acquired and the validation needed (for example, production or reflective thinking) to reach a higher level. As this model establishes levels, it thus makes it possible to identify the level reached (formative) and to reexamine that judgment subsequent to new data and changes made by the student (formative). Thus, the overall certification results offer a descriptive facet, since they are based on the whole of competencies to be developed.

THE IMPACT AND WHAT IS AT STAKE

To undertake the transition toward instruction centered on learning and competency development is not an easy task. Blin (1997) shows that changes impacting the teaching professionincluding higher education-are now commonplace and the ability of any organization to adapt, regulate and change its behaviour in anticipation of these changes has become the decisive factor in its success. This new positioning effectively requires a certain involvement on behalf of the players that can destabalize current pedagogical practices and alter the operations of an institution (Gather-Thurler, 2004). Even though these practices are no longer new, they should cease being marginalized or used occasionally and instead, become an integral part of the teaching process from training to evaluation. Nowadays, it is important to think inter-disciplinary, to present knowledge as an answer to questions asked over the ages, to develop metacognitive capacities and, as teachers, to give students "free rein" on their choice of learning path and to know when to remain quiet.

To implement the changes needed for a better integration and a more relevant evaluation of competencies, we need to modify our way of doing things. We will have to give up the orthodox view of learning and evaluation, and admit straightaway that processes connected to these topics are subject to trial and error, hypotheses, retracing steps and anticipations.

This broader latitude corresponds to an amplified concept of observation, intervention and regulation. As regards the latter, we must abandon the formal equity standard currently in effect in traditional certification evaluations. In this same spirit, it is important to give up the desire to control everything, to teach everything, to compartmentalize things up and to perpetuate the myth that student motivation is born from student need.

If these conditions are respected and there is a concerted will among teachers and interveners in education networks, on pedagogical, political and administrative fronts, then the competency-based approach will be more than just a passing phase in the school system. •

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