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Assessment in a Situated Learning Environment:

A Conceptual Framework

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Introduction

What is educational assessment?

Generally speaking, learning assessment strategies are tools allowing teachers to elucidate what needs to be learned, as well as references helping students choose their study approaches. Effective assessment provides clear guidelines and objectives. Ideally, evaluations should give meaningful feedback to students.

Formative and summative evaluations are two major assessment categories. Formative assessment contends with students' ongoing educational developmental progress, and emphasizes assessing *for* learning. In contrast, summative assessment is defined as the evaluation *of* learning and is interested in how learners perform in order to judge their ability to advance in their studies. Pre-testing, to verify and trigger the learner's prior knowledge, is another form of assessment advocated by the adepts of a situated learning approach. Excellent instructional assessment programs use all these types of assessment.

Why is assessment important in education?

Experienced educators concede that efficient assessment strategies are an essential part of high-quality educational practices and that they should provide adequate guidance for students' progress. According to the Australian Universities Teaching Committee (2002), many practitioners defer the choice and design of assessment strategies to the last step of their course design models. When considering the fact that most students plan their time allocation and learning strategies based on the

assessment requirements of any given course, it becomes clear that a conceptual assessment framework should be a prominent phase of educational design.

This is not to say that teachers should "teach to the test". On the contrary, the effect of starting with the assessment in mind gives educators an opportunity to plan what and how they will teach in concordance to what and how they will evaluate. The evaluation scheme becomes a planning device and gives them the freedom to focus on the pedagogy that will best support the learning acquisition of their students. Among the daily classroom interactions or even with complex online educational forums, clear assessment offers structured references for the teacher and the students.

When assessment guidelines are not well thought through, teachers may find it challenging to focus on innovative knowledge acquisition strategies due to a lack of focus that can lead to time constraints.

Principles of assessment in situated learning

New assessment paradigms

Education is undergoing a transformation when it comes to classroom assessment techniques. The U.S. report on assessment and its role in supporting educational reform (2000) indicates that changes are mainly due to the modern students' novel ways of learning and the skills and knowledge associated with future professional success.

The objective of this paper is not to investigate the assessment challenges created by computer technology and its connected resources (audio blogs, video streaming, online mediated communication, information retrieval tools such as the Internet, search engines). The intent is rather to explore procedural frameworks in which assessment devices (including technological tools) correspond to modern educational rationales.

The situated learning context

The situated learning approach offers instructional opportunities well suited for the new educational paradigms. In contrast with traditional classrooms where disconnected knowledge is taught in an artificial setting, in the situated learning context, especially the constructivist version, social interaction is crucial (Savery & Duffy, 1995).

Lave & Wenger (1991) claim that learning occurs as a part of an activity and within a context and cultural environment, hence "situated". According to the theory, a community of practice allows participants to experience and assimilate professional attitudes and deportments. As the students improve they become proficient and will eventually tutor or support less experienced students.

In other words, from a situated learning point of view, students engage in situations involving collaboration and are expected to communicate their experience, formulate their theses and solve problems (Roos & Hamilton, 2004). During this process, participants actively construct their own knowledge with the teacher's guidance and encouragement (Savery & Duffy, 1995). The main responsibilities of the teacher are "to organize the educational context, to provide support (scaffolding) and to promote inquisitiveness" (Savery & Duffy, 1995, p.13). The role of the students is to construct authentic meaning and create a vehicle to present evidence of their knowledge integration (Savery & Duffy, 1995).

Assessing constructivist activities

Evaluation tactics in situated learning, including constructivism, are characterized by assessment being an intrinsic part of the learning process. According to Herrington & Oliver (1997), successful models of situated cognition implementation include: "(1) apprenticeship, (2) collaboration, (3) reflection, (4) coaching, (5) multiple practice and (6) articulation".

It follows that relevant constructivist evaluation criteria should unequivocally assess the six previously mentioned implementation steps and therefore include (Merluzzi, Glass & Genest, 1986):

1. a) Authentic assessment (corroborates (1) apprenticeship);

   b) Judgments based on knowledge, experience, and context (corroborates (1) apprenticeship);
2. Socially constructed meaning" (corroborates (2) collaboration);
3. Self-evaluation and activities promoting reflection allow for authentic proof of concepts and skills' acquisition (corroborates (3) reflection);
4. Attitude toward the learning process and leadership qualities may be assessed by peers (corroborates (4) coaching);
5. Multiple and multimodal perspectives (corroborates (5) multiple practice);
6. Well designed rubrics enable both teachers and students to assess communication in groups (corroborates (6) articulation).

Situated learning principles generally promote students' participation in the on-going development of the assessment procedures.

> According to Johnson, Johnson, & Holubec (1998, p.8), "Cooperative learning groups provide the setting, context and environment in which assessment becomes part of the instructional process and students learn almost as much from assessing the quality of their own and their classmates' work as they do from participating in the instructional activities."

The challenges of constructivist assessment

Planning assessment in a cooperative setting presents interesting challenges for instructors. To implement effective evaluation strategies, teachers must be clear on what tasks will be assessed, what

procedures will be used, and how the tasks and assessment procedures will correspond. Three types of assessment are typically used (Johnson, Johnson, & Holubec, 1998):

1. Diagnostic assessment (pre-testing): refers to student's actual level of knowledge and skills
2. Formative assessment: monitors students' progress toward learning goals
3. Summative assessment: provides data to judge the final level of students' learning

This table is an example (taken from my own situated learning assessment experimentation) of the relationships between the three main assessment types and tasks designed to create a public service announcement (PSA) in a digital film communication Grade 10 class.

Table 1: Relationship between tasks and assessment types

Task	**Assessment Type**			**Activity**
PSA	**diagnostic**	**formative**	**summative**	**Students work in crews**
Brainstorming	√			Accessing previous knowledge
Initial presentation of concept to class	√			Integrating feedback through collaboration
Research		√		Analysing data: widening cognitive references
Script writing		√		Reconstructing and consolidating concepts
Story board development		√		Presenting concepts visually
Filming		√		Applying technology to construct evidence of knowledge
Editing		√		Applying technology to construct evidence of knowledge
Written pitch			√	Synthesising knowledge
Oral pitch / Public Screening			√	Pitching film to audience & articulating concepts
Final product PSA (1 min)			√	Screening & 0resenting finished film

(Drolet, C., Digital Film Communication Program, C.H.S., 2008)

This type of production can be conducted in the spirit of a situated learning philosophy. The students are exposed to other student films as an introduction to the project (Tomas, 2000). They become part of a community of practice by participating in film festivals and sending their films as entries.

Also compatible with a constructivist approach is the assessment of these types of tasks. Here is an example of the relationships between tasks and assessment procedures designed to create a public service announcement (PSA) in a digital film communication Grade 10 class.

Table 2: Relationship between tasks and assessment procedures

Task	**Assessment Procedures**						**Assessing:**	
PSA	**self**	**peer**	**crew**	**Teacher**	**Public Audience Class**		**Based on rubric**	**Based on observation**
Brainstorming				√				√
Initial presentation of concept to class				√				√
Research			√	√			√	
Script writing			√	√			√	
Story board development			√	√			√	
Filming	√	√					√	
Editing	√	√					√	
Written pitch			√	√			√	
Oral pitch / Public Screening				√	√		√	√
Final product P.S.A. (1 min)			√	√	√		√	√

(Drolet, C., Digital Film Communication Program, C.H.S., 2008)

This form of assessment program gains in validity by the fact that students are evaluated sufficiently, and from a variety of view points (internal to external). The validity is also strengthened when multiple estimations correspond. For example, when the crew, the teacher and the audience give the same "mark" to a final product, the correlation validates the final assessment. If a film is rated as having achieved a high standard and wins an award at a festival, it also reinforces the dependability of the evaluation procedures.

However, some of the main challenges when assessing situated learning activities are the evaluation of internal processes and the establishment of group assessment reliability. For instance, students may give themselves high marks within a participation rubric due to parental expectations pressuring them to insure an "A" at the end of the project. Furthermore, friends might evaluate their friends more generously than students they do not know or with whom they have no affinity. In other words, the legitimacy of self and peer assessments conducted in a constructivist context must be clearly ascertained.

For self-assessment, teachers may resort to student interviews, journal entries and portfolios. Then again, these assessment devices should include "questions requiring the articulation of students' understanding of the course content and provide clear evidences of students' complex cognition" (Savery & Duffy, 1995, p.4). Such parameters diminish the risk of the evaluation reflecting mainly subjective impressions and impart more objectivity to the results. For peer assessment, the rubrics should use criteria that adequately appraise group interaction and collaboration. Examples of collaborative assessment tools are: questionnaires and concept maps (Collins & Brown, 1987; McLellan, 1993; Gay & Mazur, 1993).

The benefits and challenges of constructivist assessment

When assessment is well designed, it provides a potent motivation for students and fosters study habits correlated with the educational goals of the course. Other advantages of constructivist assessment instrumentation consist in valuing personal knowledge construction; acknowledging proficiency gained with peer support; and appreciating the relationship between the learner and the teacher. Assessment is therefore a "mutual monitoring system" cultivating enthusiasm for learning (Roos & Hamilton, 2004, p.9).

Conversely, without referring to the assessment parameters of the syllabus, teachers in a constructivist educational context may end up trapped in past transmission models of teaching using excessive rote learning strategies in order to cover the mandated curriculum.

Table 1: Advantages and Disadvantages: Traditional and Alternative Assessment

Type of Assessment	Advantages	Disadvantages
Traditional	Easy to administer and grade; used heavily in past years	Focuses on factual recall; promote only simple application of knowledge; some forms have been found to be teacher-biased
Alternative	Student-oriented; promotes learning, involvement, and motivation; allows for consideration of human characteristics such as prior knowledge, culture, and language	Requires extensive knowledge and skills teachers may not possess; requires more time to develop and implement than traditional forms; could be ambiguous to some learners; if used alone, could result in students not acquiring necessary academic skills

(Sources: Magnan-Lev, 1997; Nachman, No Date; and Porter, 1991)

Conclusion

Evaluating students' accomplishments is shifting, mainly due to a global reality requiring technological fluency and proficiency in critical thinking, analysis and innovation skills. To support learners with the expansion of these abilities teachers and educational institutions will have to transform the way they assess learning.

A situated learning approach to assessment is relevant to these new paradigms.

> Young (1993, p.48) notes that "assessment can no longer be viewed as an add-on to an instructional design or simply as separate stages in a linear process of pre-test, instruction, posttest; rather assessment must become an integrated, ongoing, and seamless part of the learning environment."

One of the biggest challenge facing constructivist practitioners is to insure the correspondence between the way they teach and the validity of the evaluation procedures they design. The situated learning theory is a defensible educational model as long as the assessment criteria effectively measure the learner's competence in relation to instructional processes and outcomes (Jonassen, 1991).

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Tables

Table 1:

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