

# Socio-constructivist perspective on self-assessment: a case study

Paola Nicolini  
University of Macerata  
P.le Bertelli – C.da Vallebona  
62100 Macerata  
00392581  
nicolini@unimc.it

Tamara Lapucci  
University of Macerata  
V.le Indipendenza 73  
62100 Macerata  
00393933240111  
t.lapucci@unimc.it

## ABSTRACT

In this paper, our goal is to deal with self-assessment according to a socio-constructivist approach. We offer some data about different versions of the same Workshop, considered as a case study. Between the possibility to adopt a completely goal-driven or a fully goal-free self assessment, we suggest the adoption of a blended modality, in order to involve students in the learning process and make them aware about the learning outcomes.

## Categories and Subject Descriptors

I.2.6. [Learning]: *Knowledge acquisition*

## General Terms

Management, Measurement, Documentation, Performance, Design

## Keywords

Socio-constructivism; E-learning; Conceptual change; Assessment; Self-assessment

## 1. INTRODUCTION

Self-assessment is an important process in e-learning course both for objectivist and constructivist approaches, however with some relevant differences.

According to the objectivist point of view, in learning processes teachers and trainers provides the useful path to reach one or more established goals. As “knowledge consists in correctly conceptualizing and categorizing things in the world and grasping the objective connection among those things and those categories” (Lakoff, 1987, p. 163), there is only one correct possibility to reach this kind of correspondence and only one correct understanding of any topic (Vrasidas, 2000). Evaluation is goal-driven (Jonassen, 1992) and it seems very similar to a paper and pencil test (Bennet 1998). Self-assessment mainly consists in identifying the successful completion of a task (Rafaeli & Tractinsky, 1989; 1991; Rafaeli, Barak, Dan-Gur & Toch, 2003).

In a constructivist perspective the structure of the world mostly depends on the human mind (Piaget, 1970) and knowledge consists of an interpretive process (Kuhn, 1996). Furthermore, in socio-constructivist approaches knowledge is considered the result of *construction of meaning* and *negotiation* that happens within social exchanges (Bruner, 1990), an active building of data and understanding situated within authentic relationships and tasks (Scardamalia & Bereiter, 2002). As well as learning is considered a real cognitive and affective re-organization of prior knowledge in

qualitative terms (Mason, 2001), evaluation can be a complex practice, because “there is not one correct understanding and there is not one correct way of solving a problem” (Vrasidas, 2000, p. 10). The exclusive use of testing is clearly not adequate to individuate this kind of learning (Lesh & Doerr, 2003; Sternberg 1997). An active role of students in the evaluation process (Jonassen, 1992b) is very important, maybe crucial. In fact the possibility to reflect on their own work and outcomes provides a plus-value in learning process (Lake & Tessner; 1997; Posner, 1995). “Evaluation of one’s own work promotes self-reflexive processes, which is another goal of constructivist learning” (Vrasidas, 2000, p. 12).

Unfortunately, sometimes in a socio-constructivist framework assessment seems to be a vague and opaque practice. As the tasks are goal-free, any answer can be right, so that it is important that constructivist teachers offer a right amount of guidance, in order to avoid the possibility for the students to be completely lost in their learning process (Perkins, 1992). We intend to deal with an experience of e-learning considered like a case study.

## 2. EVALUATION AND SELF-EVALUATION IN THE WORKSHOP FOR OBSERVING CHILDREN AT SCHOOL

We followed a socio-constructivist framework and those theoretical assumptions in different versions of the same course: the Workshop for Observing Children at School, an obligatory practical course for future teachers. The Workshop is intended to train competences in observation method. In fact, teachers are supposed to assume a correct approach when observing learners at school. The Workshop consists of a system of progressive proposals, both subjective and collective. It is articulated in 8 activities, as the below table shows (n°. 1). During the last three years we progressively focused our attention to the process of self-assessment.

The kind of evaluation the Workshop needs is goal-free (Scriven, 1983; Jonassen 1992). In fact there are many different ways to write a correct observational text, so that it is impossible to simply provide a model which to refer to in order to make a comparison<sup>1</sup>. Nevertheless differences between naïve and expert way to conduct an observation task can be clearly outlined. There are some methodological strategies used by the experts to *link* the observed reality to possible linguistic expressions.

In the first versions of the Workshop (2004-2007) the self-

<sup>1</sup> According with authors like Wiggins (1998) or Varisco (2004) we use a blended assessment system, applying both qualitative and quantitative evaluation strategies.

**Tab. n° 1: Self assessment activity in different versions of the Workshop**

Activity	2004/2007	2007/2008	2008/2009
1	Write down your idea of "observation" and then an observation text after downloading the videotape available at the url... Publish it...		
2	1 <sup>st</sup> web forum: within your own group find analogies and differences in the individual observational text		
3	On the base both of your own observation written text and of the others' ones, create an individual table containing the necessary and sufficient indicators to make a complete and correct observation written text		
4	Read the recommended handbook		Read the recommended handbook and consider the list of indicators provided by teachers
5	2nd web forum: in your own group discuss and negotiate a list of evaluation criteria. Publish it		
			Using the negotiated list of indicators, do an auto-evaluation of the observational text written as first task
6	On the base of completed activities and apprehended concepts, make by yourself an observation text related to videotape available at the url... Publish it...		
7	Express a self-assessment of your work and write down an assessment of the whole Workshop, too	Consider the list of indicators provided by teachers and then express a self-assessment on your 1 <sup>st</sup> and 6 <sup>th</sup> work. Write down an assessment of the whole Workshop, too	Express a self-assessment of your 1 <sup>st</sup> and 6 <sup>th</sup> work using the evaluation criteria shared both with the trainers and the other students. Write down an assessment of the whole Workshop, too
8	Send a personal dossier to the Faculty composed by written texts of every task (exercises, forum interventions, observation texts, individual and collective tables, assessment of the workshop, self-assessment)		

assessment phase was simply organized as an individual restructuring of the entire path. The participants were requested to collect their own activities and then to write a free-text in order to express their opinions about the reached outcomes and the learning experience. The self assessment was completely goal-free, while the teacher and the tutor made the requested final evaluation by comparing the first task (activity 2) with the last one (activity 6): if the course was effective, the second text would be better than the first one and it should contain the typical characteristics of an expert approach. The teachers' evaluation took in account also the quantity and the quality of the other types of contributions by the students, like the interventions in the web forums and so on. The result was expressed in the form of a curricular judgment and soon after communicated to the participants.

During the academic year 2007/2008, we tried to better involve the students in the evaluation process, explicitly introducing in the 7<sup>th</sup> activity our assessment criteria. The students were allowed to know and to use the list of our criteria in order to recognize their possible improvements or mistakes. In this way the evaluation process became an important part of the learning process itself. The work to write an observational text was still goal-free, but some guidelines were put at the disposal of the students (and they are not so different from that elaborated by the students in another requested activity of the Workshop).

In the last academic year (2008/2009), we published our evaluation criteria since the 4<sup>th</sup> activity. This change in the learning design allowed the students to conduct by themselves the comparison between their first observational text and the last one. This kind of exercise activates additional metacognitive processes by participating in the Workshop.

### 3. THE OUTCOMES OF WORKSHOP FOR OBSERVING CHILDREN AT SCHOOL 2006/2009

It can be hypothesized a positive correlation between the general results of the students and the choice related to the task of self assessment. To provide evidence of this, two blind researchers analyzed the first and the second observation text of every student, assigning an evaluation. On the base of a list of figures that we progressively shared with students (concerning text structure, information about context and other linguistic expressions requested by an expert approach) the texts were considered as of low quality (LQ), medium quality (MQ) or high quality (HQ). The following table synthesizes the data.

**Tab. n° 2: Different WOCS versions outcomes**

2006/2007			2007/2008			2008/2009		
Initial observation text: tot. 88			Initial observation text: tot. 125			Initial observation text: tot. 219		
LQ	MQ	HQ	LQ	MQ	HQ	LQ	MQ	HQ
34	46	8	3	65	21	103	94	22
39%	52%	9%	3%	52%	17%	47%	42%	11%
Final observation text: tot. 88			Final observation text: tot. 125			Final observation text: tot. 219		
LQ	MQ	HQ	LQ	MQ	HQ	LQ	MQ	HQ
0	35	43	8	49	68	7	33	179
11%	40%	49%	7%	38%	55%	3%	15%	82%
<b>-24</b>	<b>-11</b>	<b>+35</b>	<b>-30</b>	<b>-17</b>	<b>+47</b>	<b>-96</b>	<b>-61</b>	<b>+157</b>

The improvement of observation skills in the a.y. 2008/2009 is evident. The percentage of students that reached an excellent curricular evaluation was higher than in the previous years. The high quality observation texts (HQ) increased with respect to the other version of the Workshop and the low quality texts (LQ) continued to decrease, as well as the medium quality (MQ) ones. To share the evaluation criteria in the first part of the course with the students seemed to be useful to engage them in the task of writing a complete and correct observation text, that is to say to develop from naive to expert competencies.

#### 4. CONCLUSIONS

Our research provides some arguments about the constructivist way to evaluate learning processes. We intended to stay away from a single way communication flowing from teachers to students. At the same time we tried to avoid to use constructivism as a low structured framework, in which predefined learning goals or a learning method is considered to somehow interfere with students' construction of meaning (May, 1975). Between the possibility of a completely goal-driven and goal-free evaluation, we progressively get a middle way, so that a kind of blended strategy of self-assessment was adopted. The comparison among different versions of the same learning design also stresses the importance to share with students the criteria of evaluation used by trainers as soon as possible along the learning path. This seems to allow a conscious involvement of the students in the whole learning process and to make it possible to decrease the differences between trainers and trainees, who usually have different structures of knowledge and competence (Nicolini, Lapucci & Moroni, 2008).

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