

# SELF ASSESSMENT: A CRUCIAL PROCESS IN E-TRAINING

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## ABSTRACT

The paper offers a discussion about the concept of training from a psychological point of view. Training is a process that concerns a life long learning perspective, especially if referred to e-learning and on line activities. In this paper we present the Child Observation in School Context Workshop, an experience of e-training at Macerata University. We intend to stress the crucial relevance of self assessment in training processes that involve adults' participation. We are going to describe the methodology used in the Workshop, according to the on line educational context. Besides peer discussion and negotiation, that we described in other researches, in this study we pay more attention to the final phase of the training process. We found the importance to arrange a moment in which participants are requested to evaluate their involvement both in terms of process and outcomes. In the instructional design it is significant to plan a phase in which teachers or trainers share with participants the criterions through which they will make the assessment. We are going to show the differences, in terms of curricular results, between two editions of the same on line course: in the first one we did not share the criterions of assessment with participants, on the contrary in the second edition we dedicated a special moment to this activity. The results show a little increase of excellent outcomes and a modest decrease of the sufficient results in the second edition of the course.

## KEYWORDS

Training, Teaching-learning strategies, Conceptual change, Negotiation, Assessment

## 1. INTRODUCTION

Training is a complex process in which practices like teaching, coaching, tutoring, educating, instructing, guiding and preparing are present at the same time. In Italian language the verb for "to train" is "formare" that is to say "to give a form". Thus "formare" implicitly means to start with something which is already present but not yet exists in its final form. The basic role of prior knowledge in training process is evident: teachers and trainers have to manage previous opinions, ideas and judgments of their students in order to activate new understanding and deeper awareness.

In this frame, training is considered above all a progressive process of *conceptual change* (Mason, 2001; Mason, 2006): not a simple grow of information, but a real cognitive and affective re-organization in qualitative terms. The new contents have to be translated in individual competence, which permits adequate applications and creative uses of knowledge and expertise (Gardner, 1993). In accord with Bion (1971) the process of change can be achieved only on the base of *direct experience* and a *subsequent reflection* on the experience (Knowles, 1986; Arfelli Galli, 1997; Bruscazioni, 2002). So training means at least:

- let the participants know the final goal of the training course,
- permit them to deal with their singular knowledge (Mason, 2001),
- allow to face up to others' ideas (Ajello, Pontecorvo and Zucchermaglio, 1992; Carugati and Selleri, 2003; Pontecorvo, 2005),
- organize different moments to reflect on personal learning process,
- program a final moment for self assessment.

We followed these assumptions in different editions of the same on line Workshop. In the last year we put a larger attention on the final phase, in which students are requested to handle self assessment. We would like to show the results of this choice.

The paper is organized as follows: section 2 outlines the methodology and proposes the general format for learning design we used. In section 3 two experimentations of the methodology are confronted: the Workshop of Child Observation in School Context realized in academic year 2005/2006 and the same Workshop occurring in the academic years 2007/2008. Section 4 draws some general conclusions.

## 2. TRAINING METHODOLOGY

As an output of a wider research, Nicolini & Moroni (2006) created a list of guidelines finalized to training, as a starting point of the learning design. The guidelines are: active participation and direct practice; discursive negotiation; interest both about contents and relationships; teacher's and tutor's scaffolding; students' self regulation; reflection about learning experience; employment of several instruments in teaching-learning activities; self-assessment. On the basis of these guidelines we outline a general learning methodology, summarized in table n.º 1. The first column shows the plan of the activities; in the second column the related goals are specified; the third column refers to the methodological approach.

Table 1. The training methodology

Core activities	Goals	Guidelines
Naïve theories recognition	Eliciting self explanation and using naïve theories	<ul style="list-style-type: none"> <li>▪ active participation and direct practice;</li> <li>▪ discursive negotiation;</li> <li>▪ interest both about contents and relationships;</li> <li>▪ teacher's and tutor's scaffolding;</li> <li>▪ students' self regulation;</li> <li>▪ reflection about learning experience;</li> <li>▪ employ of several instruments in teaching-learning activities.</li> </ul>
Peer discussion: analogies and differences	Discussing among peer to realize limits and errors of subjective point of view. Promoting conceptual change	
Peer discussion: negotiation	Searching and negotiating toward a possible agreement Promoting conceptual change	
Encounter with scientific theories	New knowledge acquisition supported by the activation of personal conceptions. Promoting conceptual change	
Hands-on activities	Applying new learning and new theories achieved	
Peer discussion: evaluation	Discussing among peer to evaluate the whole activities	
Self assessment	Encouraging metacognitive reflection	

The model represents an empty format that can be personalized according to different aims, learning objectives, knowledge domains, community characteristics, physical and relational contexts. In the case we are going to discuss, the format was applied to an on line course at Science of Education Faculty in Macerata University: the Child Observation in School context Workshop.

## 3. CHILD OBSERVATION IN SCHOOL CONTEXT WORKSHOP

The Workshop is an obligate practical course addressed to students that will be teachers in their professional future. As far as observation is a specific competence required for teachers, the Workshop is finalized to train skills in child observation method. In fact teachers are supposed to assume a scientific approach when observing learners at school.

The Workshop consists of a system of progressive proposals, both subjective and collective. It is articulated in 8 tasks related to specific goals. First of all the students are asked to give a definition of the term "observation" (activity 1). The goal of this task is to promote the self-explanation process (Chi et al, 1994; Pine & Messer, 2000). At this point the participants are asked to write their first observation text, using the video available on line (activity 2). The video represents a real school situation recorded by an external

observer. This activity is finalized to activate knowledge and competences owned by the students before the meeting with the scientific theories explained in the textbook. The students are then asked to discuss within the web forum about analogies and differences realized among the individual observation texts (activity 3). Peers' discussion is finalized to recognize limits and errors of the subjective point of view (Vosniadou et al., 2001). In the fourth activity the students are asked to negotiate a shared list of indicators for child observation, looking for a possible agreement (Doise & Mugny, 1981; Carugati & Selleri, 2001; Moroni et al., 2006). At this stage the students are asked to read the recommended books (activity 5). The encounter with scientific theories is now facilitated by the naïve theories recognition and activation. On the basis of the realized activities and apprehended concepts, in the 6<sup>th</sup> activity the participants have to write a new observation text related to a second school-video, available on line. This activity aims to enable the students to experience the professional practice in the light of the learned concepts and skills. The participants are then invited to speak about the realized activity within their group in the web forum, expressing an assessment on the Workshop (activity 7). To conclude the program, the students are requested to send a personal dossier (activity 8) composed by written texts of every task (exercises, forum's interventions, observation texts, assessment of the workshop, and self-assessment). Collecting and composing a personal dossier is a further strategy planned in order to promote reflection and metacognitive attentiveness. It is a way to promote a general self assessment too. As can be seen, all the activities follow in general a learning-by-doing approach.

Following the above structure, in the first editions of the Workshop the self assessment phase was simply organized as an individual re-composition of the whole path. The students were asked to write a free-text in order to express their opinion about the learning experience. After this moment teacher and tutor made their final evaluation comparing the first task (activity 2) with the last one (activity 6). The result of this work was expressed in the form of a curricular judgment and then communicated to the participants.

Our researches on e-learning and e-training conducted us to make more clear and explicit the criterions to establish the changes from the first observation text, supposed to be written in a naïve way, and the last observation text, supposed to be written in a more expert modality. We produced a list of indicators that also the students could use to recognize the changes occurring in their two works. The complete inventory is shown below (table n. ° 3).

Table 2. Differences between naïve observation text and expert observation text

Naïve observation text	Expert observation text
<b>Text structure</b>	
Short and free	Long and structured (titles, paragraphs, bullet points, tables)
<b>Context</b>	
Absence of information about video tape duration and observational method adopted	Presence of information about video tape duration and observational method adopted
Absence of information about the focus of attention and the aim of the observation	Presence of information about the focus of attention and the aim of the observation
Mishmash of descriptive and interpretative data	Separation between descriptive and interpretative data
Absent or incorrect use of textbook references and quotations	Presence of textbook references and quotations
No references to concepts coming out from the book or the forum	References to concepts coming out from the book or the forum
<b>Linguistic expression</b>	
Presence of generalizations, abstractions, deductions without argumentations, all-encompassing conclusions	Presence of analysis of events and concrete objects, with argumentations; conclusions supported by descriptive and concrete elements; references to details
Use of his or her own point of view as an absolute one	Use of his or her own point of view as a relative one
References to unobservable data such as thoughts, feelings, intentions of the observed subject	References to observable data such as actions, verbal and non verbal languages of the observed subject and observer's internal world
Use of impersonal linguistic forms	Use of personal linguistic forms
Lack of cognitive verbs	Explicit use of cognitive verbs

To clarify the characteristics of every kind of texts, we are going to attach an examples of texts for each type.

### 3.1 Example 1: Naïve Observation Text

*The videotape presents two children playing together with a table, in a free context, in an Infant School. They establish a cooperative atmosphere, both of them are engaged and both are helpful in order to attain the same result/success: to put some pieces in the table following a criterion. Actually it seems no one dominates the other, even if, there is always a leader like in every situation, in this case the child who adds the toys pieces. This play expresses the cooperative intelligence, that is to say the child skill of cooperating with others, of helping, of receiving help, of accepting or asking it, consequently respecting the other difference. This situation leads the children to know themselves, since they can discover their limits. At the same time, it expresses the bodily-kinaesthetic intelligence, that is to say the skill of using body to work with objects that request fine movements of fingers. Finally there is an atmosphere characterized by joy, cheerfulness, curiosity, hope to the common success and empathy.*

We consider the above text as a naïve one because:

- the student produces generalizations such as - *there is always a leader like in every situation* -;
- there is an incorrect use of text references – *This play expresses the cooperative intelligence, that is to say the child skill of cooperating with others, of helping, of receiving help, of accepting or asking it, consequently respecting the other difference*. In this case the quote is correct, with regard to the content. Nevertheless it is not coherent with the actions of the children in the video;
- the personal point of view is expressed as an absolute one - *there is an atmosphere characterized by joy, cheerfulness, curiosity, hope to the common success and empathy*. In fact to feel an atmosphere is a very personal feeling, so that different persons could experience different atmospheres in the same situation;
- there are references to unobservable data such as thoughts, feelings, intentions of the observed subject, like in the phrase - *joy, cheerfulness, curiosity, hope to the common success and empathy*;
- over all there is not a separation between description and interpretation - *This situation leads the children to know themselves, since they can discover their limits*.

### 3.2 Example 3: Expert Observation Text

*About the cognitive, social and affective development of the children in the videotape I could recognize the relationship between children and objects. Children are playing with a puzzle that they have to construct in order to compose a series. According to Piaget, child forms concepts through action, even if the action is guided by the adult. One of the phases during which the relationship between children and objects develops, consists in the identification of objects function and in the attribution of meaning to them. By the videotape I could realize:*

*THE OBSERVER: he/she doesn't participate in the activity, because he/she is engaged in recording video.*

*OBSERVATION OBJECT: two children are present, engaged in a free game activity, that is to say a puzzle construction in sequence. The puzzle is composed by four kind of figures: monkeys, bears, elephants and giraffes.*

*SCENE: the videotape is recorded in a section of an infant school, where I can see low yellow tables used by the children like a base. The room floor is blue and behind the tables, on the wall, there are shelves with several toys and didactic object.*

*OBSERVATION MODALITY: by video camera*

*OBSERVATION DURATION: 1 minute and 14 seconds*

*TIME OF STARTING/ENDING: I don't know the time of record starting or ending*

*CONTEMPORANEOUS FACTORS: in the section I can see other children engaged in other free game activities. A child is disguised with a long skirt and a bag; other children are running in the room, and some are engaged on the yellow tables. I couldn't distinguish the dialogue among the children, because there are voices and noises.*

*BEHAVIOUR DESCRIPTION: at the beginning the video camera frames only a child (A) with a light jumper, he's engaged in composing a puzzle. After few seconds a child with a red jumper arrives (B), keeping in hand a piece of puzzle. She puts it in the first line. A observes the object placement, saying something and he continuing to place other figures. A collocates in the third line all the elephants figure, while B is moving to the left keeping in hand three pieces. B observes the composition, waiting a little and then showing the puzzle in his hand to A. B points to a place in the table, saying: "You have to put this figure here". A tries to take the piece that B is keeping in his hand [...]*

*HYPOTHESIS AND CONCLUSIONS: the atmosphere is positive, the children seem to appreciate the free game's activities.*

We consider the above text as an expert one because:

- it is a long and structured text;
- there are details about duration and observational method adopted;
- the focus of attention is intentionally declared- *I could recognize the relationship between children and objects*;
- there is a clear separation between description and interpretation of data;
- there is a coherent and correct reference to scientific theory – *Piaget*;
- there are particulars and conclusions supported by descriptive and concrete elements;
- there are references to observable data such as actions;
- the student uses overall personal linguistic forms;
- there are cognitive verbs - *I couldn't distinguish*.

### **3.3 The Outcomes of Child Observation in School Context Workshop 2005/2006**

In this section we are going to focus our attention on the outcomes of the 2005/2006 edition of the Workshop. In that experience the sample was composed by 131 participants, all Italians, especially from centre and south of Italy (only one student was foreigner), moreover already graduated (124). Only 7 had a high school diploma. The younger student was born on 1981, while the eldest on 1956.

With regard to the final outcomes we could observe that within 131 participants:

- 38 students, that is to say the 29% of the sample, had an excellent evaluation;
- 70 students, that is to say the 54%, had a good evaluation;
- 11 students, that is to say the 8%, had an average evaluation;
- 12 students, that is to say the 9%, had a sufficient evaluation.

In other words we can say that half of the participants got a good assessment, the third part reached an excellent appraisal and the others were in the average or even less.

From a qualitative point of view, we found in the final dossier comments like the ones we are going to quote below.

*I think this Workshop was extremely useful because it provided us some working devices finalized to correct potential errors in the interpretation of child behaviour. The starting point was the observation of a videotape finalized to become aware of own way to observe. The confront within small groups allows to discuss about the work and to deal with different points of view. In my opinion such a practical way allows the student to reflect and to correct his/her own errors, as theory on metacognitive didactics suggests.*

In the above comment the participant produces a general reflection on the course, showing to understand the general sense of the whole activities.

*I consider difficult to express what I learned because I often underline the lack more than the reached objectives. Nevertheless I think the Workshop allowed me to put in practice what I knew only in a theoretic way.*

In her remark the student points out a very important fact: the assessment is often considered a way to underline lacks and problems more than a method to measure achievements and reached goals. This is a real problem for self assessment too.

*I think that I learned different aspects of observation method which I didn't know [...]. I want to be sincere: after a first moment of dismay, I began to think about what to do, how, in which way and with whom. The next work of description of the videotape required time in order to translate the images in language. I'd like to know if that description was correct, if there were errors and of which kind, in order to have the possibility to avoid them in the future.*

In the last text the student enlightens the necessity to have precise instruments of self assessment in order to comprehend her own errors and, above all, to correct them in the future.

### 3.4 The Outcomes of Child observation in school context workshop 2007/2008

In this section we are going to focus our attention on the outcomes of the 2007/2008 edition of the Workshop. The sample's characteristics are very similar to the ones documented in the preceding edition. In fact there were 125 participants, all Italians excepts 1 foreigner, 69 from south of Italy and 54 from the centre. Like in 2005/2006 the birth year range was ample (1956-1985) and there was a big percentage of university graduated . We found 95 students with university degree on 125, only 30 with high school diploma. But with regard to the outcomes we recorded an improvement compared to the ones reached in the preceding edition.

On 125 participants:

- 47 students, that is to say the 38% of the sample, had an excellent evaluation;
- 57 students, that is to say the 45%, had a good evaluation;
- 12 students, that is to say the 10%, had an average evaluation;
- 9 students, that is to say the 7%, had a sufficient evaluation.

The excellent results had a considerable increase: from the 29% of 2005/2006 to the 38%. At the same time the sufficient evaluations decrease (from 9% to 7%).

During the last academic year, in the final phase of the course, we added the list of indicators in which we distinguished between typical expressions of a naïve approach and typical expressions of an expert approach to observation. The list was provided in order to help the students to realize a more specific and punctual self assessment of their learning products. The list is the same that we used to express the evaluation in the form of a final curricular judge. The list of indicators contains also some examples of them, directly drawn from other observation texts to contextualize and make them understandable.

Using the table of indicators the students are able to identify their own errors and in some cases to propose a correction or an alternative, showing in this way a deeper awareness of their learning results and getting over the limits, as the following comment shows:

*Reading the indicators, I actually realized that in my last observation text the indicators of adequate linguistic translation were not present. Through the discussion with my colleagues, I was convinced that a correct observation was an observation without interpretation, instead the interpretation have to be done, but expressed in a correct linguistic way.*

The student shows to appreciate the publication of criteria for auto evaluation, because she could find indicators and examples of naïve and expert approaches, to analyze and understand the errors of her own works. A metacognitive activity is evident in another dossier in which a student gives in details her judgment on the Workshop:

*I used the following criteria to evaluate this workshop and to assess my personal learning course:*

- *coherence between aims and results;*
- *evaluation of my personal will;*
- *evaluation of team work with my colleagues.*

She continues with interesting hypothesis about the aims of the workshop design:

*I think the aims of this workshop were:*

- *orienting reflection to spontaneous observation;*
- *improving existing abilities;*
- *helping the passage from naïve observation to expert observation;*
- *helping the change from naïve approach to systematic approach to observation.*

In addition she declares that she connected new information with her previous knowledge, and speaks about her personal vision of how to realize a good observation. She shows awareness about her learning process and a real conceptual change:

*The central topic [of this Workshop] is observation. We can better state "meta observation", that is to say, observing how you observe. In my opinion, to observe in systematic and competent way, every teacher needs of:*

- *knowledge of theories and techniques;*
- *a lot of practice, applying the theory;*
- *confrontation with colleagues;*
- *confrontation with experts.*

She goes on using the indicators schemata to individuate the limits and the better elements of her final observation text:

*I believe that I didn't recognize the context indicators in the final observation text. I didn't define the observation focus, since it was not specified to express it in the task. I thought to have to realize a general observation [...].*

Finally she analyzes the teaching-learning methodology, underlining the positive points of Workshop and focusing her attention about her personal learning.

*I appreciated:*

- *the videotapes, the possibility of putting in practice the observation techniques [...];*
- *the activity of sharing with the colleagues, the realization of a common tool, even if it was a result more due to a sum of opinion than to a true shared construction of knowledge.*

*I learned:*

- *I noted that it's fundamental for a future teacher observing, communicating, listening and interpreting, because the teacher has not only a cultural power, but she/he plays a role in the transmission of life principles and in the development of identity of students [...].*

In these statements the importance of autoevaluation in learning course can be noted: the student seems to produce a global and deep reflection, in which she considers not only her own results, but also her participation to the whole process. She shows to understand the role of obtained competences, linking them to professional future.

Another participants produced the final reflection, as in the text below:

*Using the indicators table I noted that in my final observation text some characteristics of expert approach are present. At the same time I believe that this product is not complete of every adequate elements. In fact my first observation text was built using an unstructured text, because I couldn't connect the several parts of my work. Instead in the second text I used some of indicators of the shared table created within my team group. Nevertheless I didn't specify the aim of my observation and I didn't propose hypothesis, because I believed wasn't necessary. Reading again my final text I noted that I persisted in using impersonal linguistic form ("It's not visible the presence of adults"... ) mixed with personal ones ("I can't speak for a certainty").*

The participant confirms the importance to know the criteria of evaluation to realize an aware self assessment. It seems a way to create a bridge between cognition and metacognition, to attain an effective conceptual change: in fact, using the schemata to compare his works, this student seems to understand his improvements and his mistakes. He provides quotations of his text, showing evidences of correct and incorrect linguistic expressions. At the same time, beginning from the use of criteria schemata, he does not limit his analysis to the observation text: he tries to understand the reasons of his progress or his errors reiterations, reflecting about the learning process and recognizing the useful role of team group.

Finally we quote the last part of another dossier:

*The autoevaluation was another reflection moment, especially because we have the orientation schemata of criteria. When I read the table that distinguishes between naïve and expert approaches, I thought "I didn't hit the aim of workshop with my final observation text". If I could do the observation text now, certainly my text could be different! I judge the Workshop in a positive way, because of a tangible evidence of an improvement in my competences [...]. Many of us claimed the teacher's direct supervision [...]. I realized that the table offers several examples about expert approach, so everyone can understand his/her by himself/herself errors, also if at the end of the course. Reflecting about my mistakes, I realized the importance of working in team group. Because the individual work was useful as input to face the content to develop, but the "maturation/grown" is happened with the confrontation within peers.*

#### 4. CONCLUSIONS

The research showed the importance of share with the students the criteria to establish the changes from a naïve to expert approaches. We produced a list of indicators that helps the students to find by themselves the changes occurred in their texts. The list of indicators is therefore a tool to assure an effective self assessment activity. In fact it can elicit a reflection about the quality of the outcomes and a deeper elaboration of the whole learning courses, since it makes possible to think about the errors, the improvements and their origins.

Next step in this direction could be to build the schemata for evaluation together with the students, so that

they can be involved in the full process. In this way the comprehension of the criteria can be ensured even in a better way. At the same time, enhancing the metacognition by the activity of criteria's self-building, it will be possible for the students to operate a useful self monitoring during all the course, not only at the end. We can suppose that in this way the quality of the final observation texts will probably improve.

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