Training As Exchange And Negotiation Of Knowledge: An Online And In Presence Model

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Abstract

We propose a socio-constructivist conception of training, presenting a model of teaching-learning that we have used in traditional and online context at the University of Macerata. In our experiences peer interaction is the main instrument, both in face to face modality and in on line experiences by web forum. We are going to deal with the Workshop for Observing Children in School Context. We aim to show both theoretical assumption and an analysis of the outcomes of the online and in presence versions.

1 Introduction

In a life-long learning perspective, adults' training becomes relevant. Innovative technologies and methodologies demonstrate to be very needful to answer to new learning requests, and this is also because requests mainly come from workers. Even Universities are restyling their paths, organizing online courses in addition to traditional lessons. This change is potentially positive, but to be constructive it needs a proper consideration of the role of teachers, learning design, instruments, evaluation and self-assessment.

2 Training: towards a definition

Training is a complex process in which practices like teaching, coaching, tutoring, educating, instructing, guiding and preparing work out at the same time. In Italian language the verb "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 deal with previous opinions, ideas and judgments of their students to activate new understanding and deeper awareness. In this framework, 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, what permits to learners an adequate application and creative use of knowledge and expertise (Gardner, 1991). In accord with Bion (1961) 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; Bruscaglioni, 2002).

3 Methodological chooses

So far, we have followed these assumptions in designing different versions of the online Workshop that we are going to deal with. The Workshop for Observing Children in School Context is an obligate formative course addressed to students that will be teachers in their professional future. Assuming observation as a specific competence required to teachers, the Workshop is finalized to train skills in observation method. In fact teachers are supposed to adopt an expert approach when observing learners at school. The Workshop consists of a system of progressive proposals, both subjective and collective. As it can be seen in the Table n 1, the online version of the Workshop is articulated in 7 tasks related to specific goals:

TABLE 1:
Online Workshop for Observing Children in School Context

Tasks	Goals
Write down an observation text after downloading the videotape available at the url... Publish it.	Eliciting use of naïve theories
1st web forum: within your own group find analogies and differences among the made individual observation text	Discussing among peer to realize limits and errors of subjective point of view Promoting conceptual change
Read the recommended handbook	Meeting scientific theories Promoting conceptual changee
2nd web forum: within your own group discuss and negotiate till you agree to made only one table of indispensable indicators to made a correct observation in different educational contexts. Then publish it.	Searching and negotiating toward a possible agreement Promoting conceptual chang
On the base of made activities and apprehended concepts, made by yourself an observation text related to videotape available at the url... The text has to be published	Applying new learning and new theories achieved
3rd web forum: speak about the made activity within your own group, expressing an assessment on the Child Observation in school context Workshop. Do a self-assessment of your own training process, using the table of self-assessment indicators available on the website.	Discussing among peer to evaluate the whole activities and their structure. Eliciting self assessment and metacognitive reflection
Send a personal dossier to the Faculty formed by written texts of every tasks (exercises, forum's interventions, observation texts, individual and collective tables, assessment of the workshop, self-assessment)	Eliciting metacognitive reflection

The in presence version of the Workshop has the same tasks and goals: there are 7 meetings of 2 hours each along two months time. The only difference is the third task that here is replaced with a lesson, in which the teacher gives the information that the online students can find in the handbook. The interactions in web forum are substituted with discussions face to face. In the first task the participants have to write their observation text using the video available online. The video reproduces a real school situation, in which a group of children are building a tower. The video has a duration of 60'. The goal of the first observation task is to activate

knowledge and competences owned by the students before the meeting with the scientific theories explained in the textbook. According with Gardner we assume that every person uses naïve theories to explain a lot of aspects of the reality. Mainly when shared socially (Farr & Moscovici, 1984) these spontaneous constructions are difficult to be modified, especially in adult subjects. To move to a new vision of reality it is fundamental showing not only other possible visions, but also demonstrating the incorrectness and/or the limits of the old beliefs, so thus creating a desire to search for more satisfying solutions (Posner & al., 1982). To promote this kind of conceptual change the students are then asked to discuss (within the forum in online modality, in face to face interaction during the in presence lessons) about analogies and differences aroused among the individual observation texts (task 2). This peers' discussion is finalized to recognize differences, limits and errors of the subjective point of view (Chinn & Brewer, 1993). Moreover while the students do argue their divergent point of view to support their own opinions, they are building a new and stronger structure of ideas (Nussbaum & Novick 1982). At this point there are bases to activate a negotiation of meanings (Scardamalia & Bereiter, 2002). In fact, in the fourth task the students are asked to negotiate a shared list of indicators for child observation, looking for a possible agreement and reaching potential new solutions (Doise & Mugny, 1981; Carugati & Selleri, 2001; Pojaghi, 2000). At this stage the students have to read the recommended books (task 3). The encounter with scientific theories is now facilitated by the naïve theories recognition and activation. On the basis of the activities made and apprehended concepts, in the fifth activity the participants have to write a new observation text. The video is similar to the first; it shows the two children collecting a puzzle in an infant school. This activity aims to enable the students to experience the professional practice in the light of the just learned concepts. The participants are then invited to speak about the carried out task within their group in the web forum, expressing an assessment on the Workshop and formulating a self-assessment of their own learning process (activity 6). To conclude the curriculum, the students are requested to send a personal dossier (activity 7) composed by written texts of every task. Collecting and composing a personal dossier is a further strategy planned to promote considerations and metacognitive attentiveness. It is a way to support a self assessment too. As it can be seen, all the activities are in general structured through a learning-by-doing approach, followed by moments of meditation about the activities carried out.

4 The samples

The online and in presence version of the Workshop carried out during the academic years 2007-2008 have quite the same number of participants (125 subjects on line, 117 in presence). In both cases the great majority are women,

but the in presence course is generally attended by a younger public in respect to the Workshop on line. Besides in the online course there are a lot of students already graduated, whereas the Workshop in presence is mainly attended by students with a high school degree. The table below shows the characteristics of the participants in detail (Table n 2):

TABLE 2:
The samples characteristics of participants

	Workshop in presence	**Workshop online**
Number of participants	117	125
Year birth range	1966-1986	1956-1985
High school degree	96	30
University degree	21	95
Full time students	98	30
Workers	19	95
Geographic origin	5 South of Italy	68 South of Italy
	110 Centre of Italy	55 Centre of Italy
	0 North of Italy	1 North of Italy
	2 Foreigners	1 Foreign

5 Training evaluation

To assess the training efficiency we compared the observation text made by every student at the very beginning of the course and the text created in the fifth task. The analysis has been carried out by two independent researchers by the means of a list of features, as in the following table (Table n 3).

By using the above indicators we identified three quality level of observation text:

* low quality: short and not structured texts, without separation between description and interpretation, characterized by the presence of generalizations, deductions without argumentations, use of personal point of view as an absolute one;
* medium quality: longer and more structured texts, with a better separation between interpretative and descriptive data, the point of view is more frequently expressed as relative, but still inexact;
* high quality: texts which present all or most of the indicators typical of an expert approach.

TABLE 3:
Indicators to evaluate the qualitative level of observation texts

Naïve observation text	Expert observation text
Text structure	
Short and free text	Long and structured text (titles, paragraphs, bullet points, tables)
Context	
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
Absence of personal hypothesis about eventual aims of observation	Presence of personal hypothesis about eventual aims of observation
Mishmash of description and interpretation of data	Separation between description and interpretation of data
Use of daily language and incorrect use of technical language in adequate contexts	Correct use of technical language in adequate contexts
Linguistic expressions	
The text shows generalizations, abstractions, deductions without argumentations, all-encompassing conclusions	The text shows analysis of events and concrete objects with argumentations; conclusions supported by descriptive and concrete elements, with reference to details and intermediate passages
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, language of the observed subject and observer's internal world
Use of impersonal linguistic forms	Use of personal linguistic forms
Absence or deficiency of cognitive verbs	Presence and explicit use of cognitive verbs

6 The outcomes

The Table n 4 shows a general improvement in the observation skills of the participants, both in online and in presence Workshop.

The quality of the majority of the observation texts produced as first task of the online course are between low to medium quality. At the starting point, the participants seem to have moreover a naïve approach to observation methodology. Only 21 texts on 125 are high quality ones. On the contrary in the fifth task the high quality texts raise up to 68 (+47): there is an increase from 17% to 55%. At the same time the low quality texts decrease from 31% at the

beginning of the Workshop unto 7%.

With regards to the in presence students, nobody writes a high quality text in the first essay. The low quality texts are 81 while 36 are of medium quality. The second texts, realized for the fifth task, are visibly better: 74 texts are of high level, 40 of medium quality and 3 of low level, with an increase of high level texts from 0% to 63%, and a decrease of low level texts from 69% to 3%.

TABLE n 4:
Outcomes of online and in presence Workshop

Online Workshop		
First observation text: tot. 125		
Low quality: 39 (31%)	Medium quality: 65 (52%)	High quality: 21(17%)
Second observation text: tot. 125		
Low quality: 8 (7%)	Medium quality: 49 (38%)	High quality: 68 (55%)
-30	**-17**	**+47**
In presence Workshop		
First observation text: tot. 117		
Low quality: 81 (69%)	Medium quality: 36 (31%)	High quality: /
Second observation text: tot. 117		
Low quality: 3 (3%)	Medium quality: 40 (34%)	High quality: 74 (63%)
-78	**+4**	**+74**

7 Conclusions

The differences between the quality level of the participants to the online and in presence course at the starting point can be explained through the disparity related to age and school level degree. As we previously underlined, the online participants are older than the in presence ones. Furthermore the online students in large part already have a University degree. On the contrary the in presence learners get only a high school degree. It can be an evidence of the influence of previous knowledge on curriculum and its outcomes, as we assume at the beginning. The results put in evidence another important issue: the direct intervention of teacher seems to be not so relevant in the training process. In fact, in the online version of the Workshop, the teacher does not participate explicitly to the activities. She only organizes the learning design and plans

the tasks. Peer interaction and the handbook are the main instruments. On the contrary in the course in presence the teacher is more active. She doesn't substitute peer interaction, but she supervises the reading of the handbook.

This illustrated analysis is also confirmed by the final judgements that online and in presence participants obtained in the final acknowledgment of the Workshop. In the online course 47 students had a very good evaluation, 57 a good evaluation, 12 an average evaluation, 9 a sufficient evaluation. In the in presence Workshop 69 students had a very good evaluation, 31 a good evaluation, 13 an average evaluation, 4 a sufficient evaluation. The final curricular judgements are obtained taking into consideration not only the quality of the second observation texts, but also the participation to the whole training process. With regards to this kind of assessment, an important function is carried out by every student gathering in the final dossier all of her/his own tasks. We provide to the participants the list of quality figures showed before. In fact we consider fundamental for the effectiveness of the training course to stimulate in the students a comprehensive consideration about their participation and results. In this way learners can autonomously judge themselves. Finally we asked students to produce an evaluation about the Workshop, to improve the further editions. In this last part we propose some extracts of the last web forum:

«Sharing my point of view with my peers (within the forums for example and during the confrontation for the production of a common observation scheme) has been very productive for my professional growth. In fact these efforts projected me in the direction of team work, which is a key point in the role of teacher».

The relevance of eliciting metacognitive reflection in learning process is evident: this student speaks not only about her final results, but she also considers the whole learning process and the used tools. She identifies the causes of her improvement (peer interaction, negotiation) and shows awareness of their utility in her future professional life. We can hypothesise that theoretical information will probably become practise and expert competences.

During the evaluation of the first movie, within our group different positions have emerged and this, of course, led to some conflicts. This is not bad! In fact, I personally think that conflicts will help people to source better ways of understanding. Interacting and openly confronting give the opportunity to grow up both from a professional and a human point of view.

The student adds another important detail: the conflict is useful not only in professional life but also in daily life. We can observe again a relevant reference to the advantages of online Workshop in the following message:

«I should also note that the online path, in a way "forces" to be efficient, collaborative and above all (this is especially applicable in the forum) demands a continuous presence and participation in the discussions…online you cannot

hide behind the idea of the group and think that others will work for you: this kind of teaching makes stand out active participants. In addition, by the use of multimedia technologies you can generate a portfolio of documented experiences, always accessible in the net and this constitutes an asset both for students and teachers. Many of us have called for teacher supervision on the activities. Immediately after reading the chart, which distinguishes between naive approach and expert approach, I realized I had not produced the right final protocol. If I only had had such grid earlier along the trail ...! I noticed that the grid offers many examples of how we should have proceeded according to an expert approach and then each of us could understand his own errors, although only at the end of the trail. Taking my mistakes into consideration, I realized how important the work we did in the group was. In fact, the individual work has served as an input to tackle down the contents to be developed, but the development has arrived with the confrontation»

The student shows to understand the limits of her work. There is a double activation of critical spirit, directed both to herself and to the organization of the course. In this way the students are protagonists of knowledge building in every aspect: as a result of their suggestions in the next edition we are going to anticipate the sharing of self-assessment criteria. We also intend to add another task to the current design to verify the resistance of learnt concepts in long terms: the students will have to produce a new observation text, but after some months from the end of the course. We conclude with a consideration: why some learners (although a very small number) don't improve their competences? Maybe it will be necessary to modify again some details of the activities plan.

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