CONCEPT MAPS IN THE "BOTTEGA DELLA COMUNICAZIONE E DELLA DIDATTICA" FOR "UNA ESCUELA BIEN DIFERENTE"

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Abstract. For a few years in the "A.Righi e VIII" Industrial Technical Institute in Naples, Italy, a workshop-project has been carried out: the Bottega della Comunicazione e della Didattica, where a model of teaching-learning has been experimented, based on a plural methodology. Our belief is that changing the instruments or adopting the latest theory is not enough to achieve a real change in the way of "doing school". Indeed, we have been trying to integrate more methods and techniques, including ICTs, with researches and studies, such as concept maps, which have been developed in psychology and pedagogy over these last years.

1 The Bottega, experimental laboratory-class for a cooperative learning

For several years in a Technical Institute in Naples (Italy), a project-workshop has been taking place: *La Bottega della Comunicazione e della Didattica* experience, with learning activities inspired by pedagogical references that have contributed to the renewal of the Italian School from the end of World War II till the '70s:

- La maieutica e l'empowerment by Danilo Dolci
- La Pedagogia Popolare by Celestin Freinet
- La Scuola di Barbiana by Don Lorenzo Milani
- La Grammatica della Fantasia by Gianni Rodari
- L'Educazione come pratica della libertà – La Pedagogia degli Oppressi by Paulo Freire
- Descolarizzare la Società, hypothesis by Ivan Illich
- Il sistema dei Laboratori by Francesco De Bartolomeis

On the other hand, such learning activities fall within the current researches and studies, that, over the past 15-20 years, were developed in psychology and pedagogy:

- the theory of multiple intelligences by Howard Gardner on the nature and characteristics of the human mind
- social constructivism and significant learning by Ausubel.
- the "*pèdagogie diffèrencièe*" which is based on multiple methods, depending on the differences among students concept maps.
- Practically, a teaching-learning model has been experimented in an environment of cooperation, characterized by ICTs (Information and Communication Technologies), in order to find a viable alternative to the slavish transmissibility of knowledge, or, as claimed by Paulo Freire, a custodian concept of Education: *" In this way the teacher is not only the one who teaches, but the one who, while educating, is being educated in a dialogue with the student, who, in turn, while he is being educated, he educates, as well ... At this point no one educates anyone, not even himself: educated men in communion, through the mediation of the world"*.

Since a change in learning methodologies, is not possible without a proper modification of school spaces, we have changed the way we use their adaptation to particular educational needs and not vice versa; in fact the *Bottega* laboratory, located in a room of 90 square meters, is composed of two areas, with the simple slide of some cabinets that contain the "physical" audiovisual library:

- An "educational" space, which has a Tablein the centre, arranged with 16 workstations and multimedia PCs around, and Internet access, that support up to 30 students, encouraging, where possible, pair-work or group-work. The Tableis the main element, where you face everyone, looking into each other's eyes, deciding what and how to achieve together, using available resources, preparing concept maps.

There is, then, a printing and graphics centre with a computer and a printer for the production of written texts, posters, brochures, and anything else springs from the students' imagination and creativity, consisting of a media library, and an area for screenings and discussions for refresher courses and seminars.

- A small TV studio, with simple sets, backgrounds and equipment for editing and directing live tapings, where it is possible to make video magazines, debates, interviews, with digital cameras on tripods, lights, microphones, area director (Mixer, audio and video monitors), post-production with computers and semi-professional video card, video DVD .
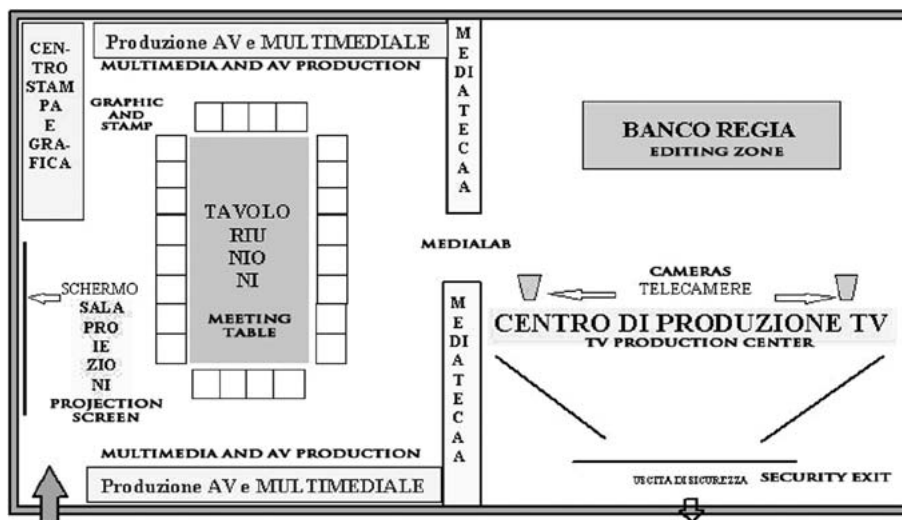

Figure 1. "Bottega" map

2   A recent experience

Students, especially those belonging to culturally and economically disadvantaged social classes, are always less interested in traditional school. So, it is sometimes necessary a re-task motivation, which has the primary purpose of conscious and active participation in school activities for students who require the intervention of *"motivational recovery"* and, simultaneously, it is necessary to improve teaching methods and learning processes, through the innovation of methods and techniques in educational communication and teaching.

The class, a first class of high school (14/15-year-old students), with which this experience was made, consisted initially of 25 students, of which 5 of different ethnicity, Filipino, and up to 8 repeaters. Since the first school days, teachers had had problems in managing the class group. It was necessary, if not urgent, after the first few months of school, to search for a different relationship with the class, which was not restricted to a sterile list of reports on their disciplinary class journal.

For this reason, some teachers brought the class to an experience of interdisciplinary teaching workshop (Science, Chemistry, Geography) on "Environment", considered in its most general sense. The key objectives were: forming a class group, tending to curb school dropouts, requesting the reasons, in order to let them become accustomed to a conscious and active participation, enhancing the operational capabilities of all, especially youngsters with major learning difficulties.

The chosen methodology was plural, thinking that everyone can contribute to achieving the objectives. This would favour:

- The use of ICTs, as surely closer to young people'experiences;
- A challenging environment and friendly work;
- Use of concept maps and didactic collaboration, so that everyone could express their personalities and their ideas, feeling accepted and being able to count on the help and respect by all, teachers, classmates
- Subdivision according to related "intelligences" in order to enhance teamwork

Preliminarily, the teachers set up cooperative learning groups, taking their students' learning styles into consideration, as a result of questionnaires designed to assess the intelligence of individuals. Thus, musical, visual space, bodily kinesthetic and interpersonal groups were composed. On the first meeting a brainstorming session was held: students were all in circle around the table, led by the teacher, starting from individual students' prior knowledge on the chosen topic; concept nodes were then singled out and concepts were represented on the common knowledge map (Figure 2). Map branches are limited to 4 (the *private setting*, the *school environment*, the *city of Naples*, *the natural environment*). Then the research and study process started in small groups, which were provided with four PCs connected to the Internet. Students, starting from the general map, organized themselves by sharing issues and arguments in the most appropriate manner to each individual research and adding their topic on the map with some organizational notes (task assignment, etc.).
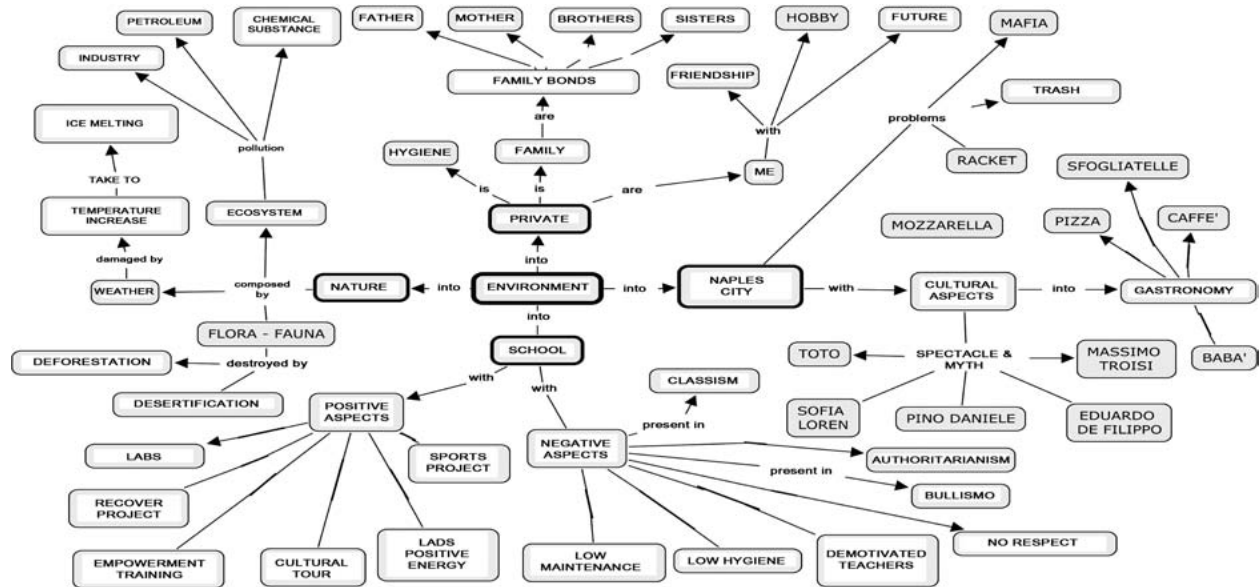

Figure 2. "Environment" general map

The research phase of the materials was carried out both on the Internet and on school textbooks, through the dialogue and questions to their teachers. In this way the integration was made among different fields of knowledge through a variety of instruments and sources from the most traditional to the most modern, promoting new experiences with a view of "mutual teaching". This work phase clearly showed the different communication styles of individual groups, and the predominant expression of different intelligences. The musical group designed and produced a movie, containing all the issues raised and indicated in the initial stage, completed with a soundtrack, the city of Naples, strengths and weaknesses, setting a prior map (rather than an organizational script). The corporeal - kinestetic group, concerned with the natural environment, produced a small but real website with different themes, by first producing a map. The interpersonal group edited the school environment and prepared a series of text documents, accompanied by images, posted on an interactive map of their topic, always made with Cmap tools. The visual-spatial group, involved in the private environment prepared a presentation (PPT).
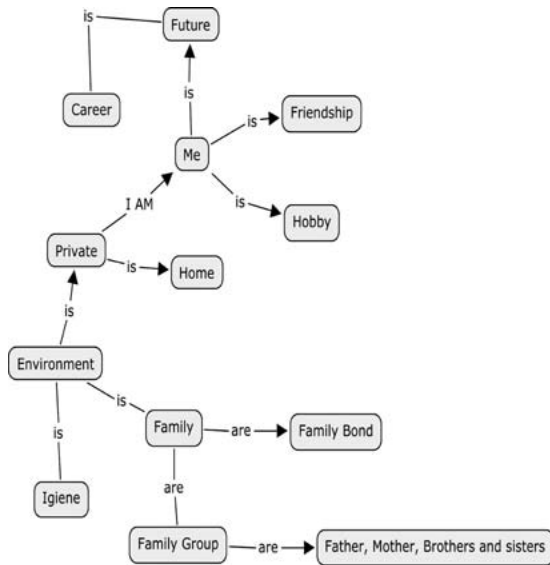
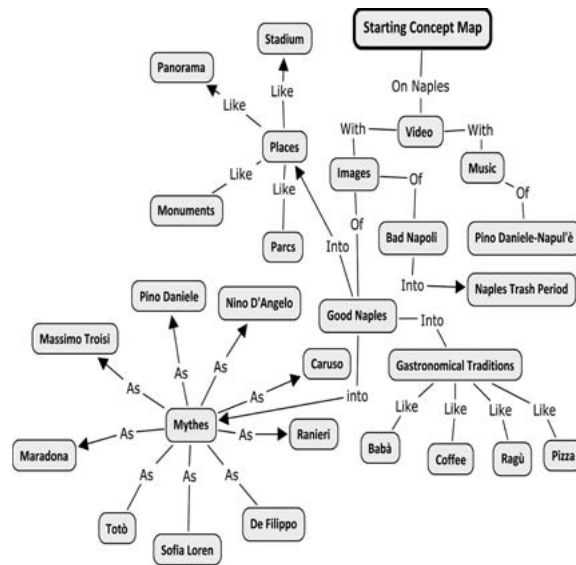**Figure 3.** Concept Map on private environment

Figure 4. Concept Map on Naples video

Some students were particularly interested in the use of maps, especially using also the software; a student, subject to dispersion risk, deepened a thorny problem, the *authoritarianism,* redacting alone the map in Figure 5.
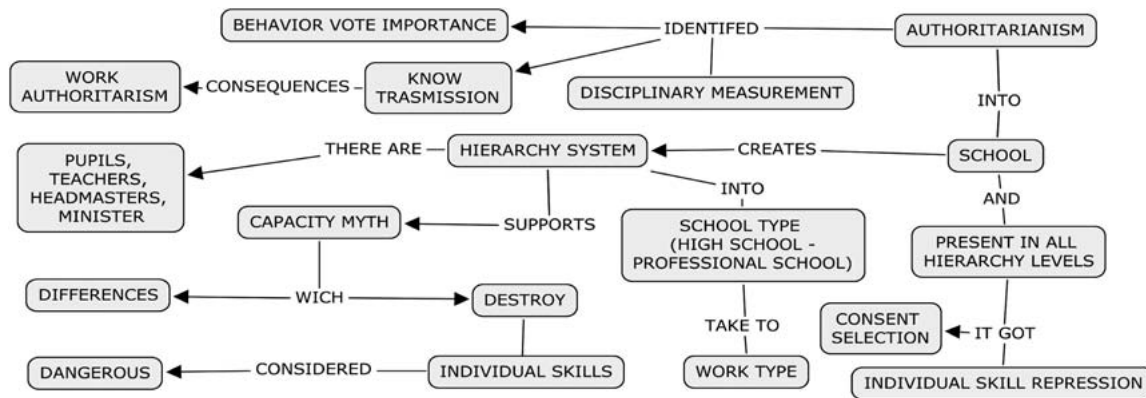

Figure 5. Authoritarianism map, redacted by a single student

Our experience was very useful. Indeed, our students showed their wish to take the challenge, to contribute to the group-work and to express their ideas. Of course, the cognitive repercussion was not immediate, but then they gradually displayed better expression abilities, also thanks to concept maps and to the specific software used. This is an example of a didactic trail that, starting from the scholastic malaise experienced by school students and through the identification and exploitation of some of their personal characteristics (including cognitive styles) and their interests, comes to the collective realization of a multimedia product, result of a formative path that put them as protagonist, in order to stimulate the growth of their self-esteem, autonomy and identity. The multimedia teaching requires, a significant transformation of how knowledge is revised in school, which being from strict and aimed to identical students, becomes more open and flexible, in which there is not a clear separation between the disciplines. And to consider, however, that the spiral low self-esteem> little confidence> bad performance> negative evaluation> is a chain which traditional education generally fails to break, but it reinforces, contributing to dissatisfaction to the school, before school dropout, and social disintegration in the broadest sense. The positive view of themselves with valorisation of their own characteristics, that is, instead, in the workshop activities, an inclusive education, undermines the system and allows than to "injure" something in this chain, helping to change the direction good performance> positive assessment> growth of self> confidence> good performance>.

3   Conclusions

Porque esta vez no se trata/de cambiar una metodologia/será el pueblo quien construya/una Escuela bien diferente.

Paraphrasing a Chilean song of the '70s, an escuela bien diferente does not just apply to one or another methodology, which, among other things, is what teachers have always been doing, with the hope of improving the quality of students' learning. But we need to put together both the criteria and educators' philosophies who have dedicated themselves to building a genuinely popular and collaborative learning, the "plural methodology". Through the use of concept maps, we should take into account different learning styles of individuals in an aulaboratorio (which is a lab classroom and, simultaneously, a laboratory that is also the classroom). Perhaps in this way, we can go "beyond" the transmission mode of knowledge, contributing to a significant transformation of how knowledge is processed and making it more suitable to the reality of a society in which learning is widespread in the "school outside" and, above all, through various multimedia.

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