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CHILDREN DISCOVER THE FANTASTIC WORLD OF THE PAPER

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Abstract. This work concerns a conceptual mapping experience that took place in an infant school (children from 3 to 6 of age) situated in a country economically and culturally deprived. The main objectives the children had to acquire from the experience, were: 1) the elementary scientific abilities; 2) a vaster vocabulary; 3) a meaningful learning. The educational program started from a visit at a paper factory; then, the curiosity and the questions of children brought the program to further developments. This experience includes fantastic and realistic ingredients: in fact, children, during the journey, meet Geolina, a fantastic girl. Geolina sends letters and messages to pupils, asks questions and looks for answers to them. So, she stimulates interests, curiosity, poses problems, inducing the intellectual and social growth of children.

1 Introduction

When children enter in infantry school, they had just known the world by playing, by exploring, by making, by looking, by daydreaming and have built their naïve ideas about natural and social phenomena. At last, they have got a more or less developed language. The main contributions the infantry school can offer to children to support in general their growth and, specifically, to acquire correct scientific and linguistic knowledge, is to plan spaces and laboratorial experiences where they can test their abilities, to involve them in experiences at the same time meaningful and amusing and, at last, in subsequent activities to reconstruct and symbolize them. In this point of view, the conceptual mapping is a powerful instrument to facilitate children to formalize experiences and to develop thinks, feelings, language and movements. In the following experience, who involved all pupils and teachers of a little infantry school (three classes) during last school-year, appears a fantastic character, Geolina, that accompanies pupils during the school –year and stimulate them to make new experience, between whom there is conceptual mapping. So, the conceptual mapping interlaces, at the same time, fantastic and realistic elements, knowledge and feeling, movement and language.

1.1 Here begins the journey...

Geolina, the fantastic pupils' friend, sent us a letter in which she told us about an old paper factory, situated at Amalfi, a fantastic sea town. Our curiosity about the place was so great that we decided to visit it.
What a wonderful experience!! And how many kinds of paper! When we turn back to school, we have a big bag full of different paper.

Figure 1: Amalfi, a view of the old paper factory.

2 The manufacturing process

Children and teacher reconstruct the manufacturing process in laboratory: pupils knead water, paste, a piece of chalk and sawdust. Here the paper is ready!!

Figure 2: children reconstruct the manufacturing process at school

After the experience, children recall their knowledge orally.

2.1 Conversation

Teacher: can you repeat the manufacturing process?
Pupil 1: we need sawdust
P. 2: and water..
P. 3.: yes, we mixed sawdust and water
P. 4.: No, we have first mixed the sawdust and then water and paste..
P 2. : .. then, we have scratched the piece of chalk and then, we have mixed all the ingredients.

3 The concept mapping: first step

The big bag full of paper and the manufacturing experience afforded interesting resources to make various experiences of classification and concept mapping: by playing, children have labeled paper according to shape, color and dimension. Because of the presence in the school of children 3, 4 and 5 years old, a few of experiences are the same for all, others are different from age. An experience in common, is the following: on the floor, there were four circles of different colours. In the first of these, there were pieces of paper, the others were empty. Teacher asked to children to place the paper in the empty circles according to classification principles chosen by children. So, children classified paper in according to colour, shape and dimension and their bodies were linking words (fig. 3 and 4). Then, children four and five years, have organized and represented their knowledge about paper by construction of conceptual maps (fig. 5,6,7).

Figures 3-4: children classify paper

Figures 5, 6, 7: children four and five years assemble conceptual maps

3.1 Concept maps: second step

After experiences, each child constructed his own map - responding to the focus question - tracing on a sheet a large shape to represent the main concept, little shape to represent less general concepts and arrows to represent linking-words (fig. 8,9, 10,11). In figure 8 – 9 there are two C.'s maps . The focus question is the same in both of them: classify paper in according to colour, shape and dimension. In the first map, C. has failed the task. So, she returned in laboratory for new experiences about classification: the second map, shows the progress. In the maps in figure 10 -11, children say all they know about paper: the A.'s map (four years) is less rich than P.'s nevertheless the experiences were the same.

Figure 8: C.'s (four years) conceptual map (date 05-01-11)

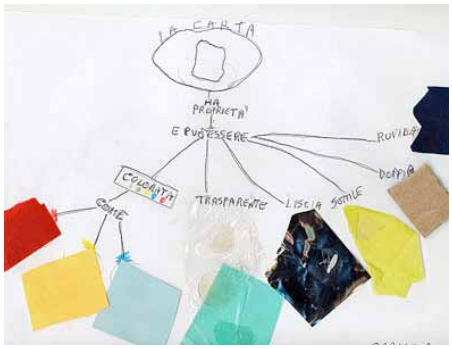

Figure 9: C.'s (four years) conceptual map (date 04- 11- 12)

Figure 10: A.'s (four years) conceptual map

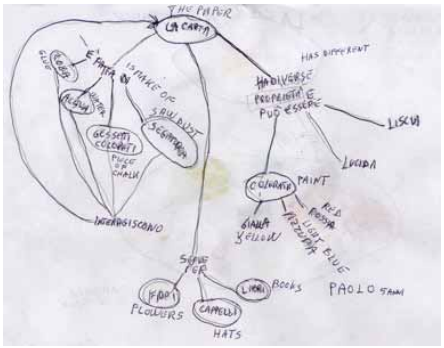

Figure 11: P.'s (five years) conceptual map

Translate: task (fig. 8-9): classify the paper according the following proprieties: smooth, rough, transparent, opaque

Task (fig. 10-11): what do you know about paper?

Carta: paper; è: is; proprietà: proprieties; liscia: smooth; ruvida: rough; trasparente: transparent; opaco: opaque; serve per: is used to; è fatta di: is made; ha: has

4 End

The concept mapping in infantry school is preceded by a lot of physical and cognitive experiences. It helps children to organize thoughts, to reconstruct and recall their knowledge, to improve language and scientific abilities. Moreover, conceptual mapping help teacher and children to discover fault and misconceptions precociously: so, the school is able to organize individual didactic planes to correct them.

5 References

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