

Chapter 13

Research Results

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ABSTRACT

In this chapter, we present the research process followed in the work from the try out phase for each game, the testing of materials and methods, the definition of research protocols, thus the experimental procedure, the description data analysis and the interpretation of the results. Finally, we present the primary results of our work in the primary school classroom, where we proposed the Cartolandia experiment.

THE TRY-OUT PHASE

Cartolandia

The try-out phase of the Cartolandia simulation game was carried out with Class 3 of the St. Foruli primary school (Scoppito), which is part of the Comenio comprehensive institute in Aquila with the collaboration of teachers Mauro Ciotti and Michele Di Lisio, who were both engaged in the construction of the materials for the game.

DOI: 10.4018/978-1-60566-930-4.ch013

In particular, Mauro Ciotti and Michele Di Lisio constructed the map, chose the image for Cartolandia, designed and constructed the “carto-carpet” and selected the images for the shapes. It was decided to construct the carto-carpet in a size that would not take up too much room (2x3 metres) in order to allow the children to move round it and work more easily in collaboration with each other. Shapes were chosen in which the feet would correspond to the footprints in order to make the investigation more real and logical. In this phase both teachers introduced various useful modifications to improve the performance of the game and began to whet the pupils’ appetite before the start of the game proper.

The actual workability of the simulation game, one of the main objectives of the pilot project was tested on Class 3, in which Mauro Ciotti conducted the game with three groups of pupils from his own class at different times in February 2008. In rotation, the children divided into groups of five took part in the game, while their classmates were involved in other activities outside the classroom with other teachers. Meanwhile, Michele Di Lisio, who was already familiar to the pupils having carried out his teacher training practice in that class, was able to participate in the role of observer, without being seen as an outsider by the children.

For the three groups, the presentation of the scenario and the explanation of the problem situation lasted thirty minutes on average, while an average sixty five minutes was calculated for the simulation game itself, excluding the debriefing phase, which took thirty minutes.

From the work of observation it emerges that there were no interruptions during the activity of any of the three groups. The pupils manipulated the materials, utilised the transparencies accurately, kept to the rules, followed the recommended procedure (albeit with some variations but nevertheless within the determined limits of the task analysis) and achieved the object of the game by finding out and providing the name of the culprit.

Every child was actively involved. With reference to this, the indicators used in the observation work, are mainly based on the frequency of dialogues, interactions, exchanges and actions using the transparencies on which the shapes and footprints were traced. Only one child in the second group did not participate in the group work. It was also recorded that one child in the third group introduced only inverse and direct congruence; moreover, another pupil in the first group and a pupil in the third group intuited rotation before the teacher’s explanation.

All the children were given a test the results of which were used to carry out an item analysis, following this a number of modifications were made.

In relation to the learning objective of the simulation game, through the considerations that emerged during its realisation a grill of descriptors was drawn up to be used to conduct the observation and evaluation both during and at the end of the game. Furthermore a decision was reached to add another learning objective

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