SCIENCE LABORATORY ACTIVITIES FOR KIDS AND PARENTS IN NAPLES

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Important component of research is an understanding of the reciprocal impact of science and the culture on each other. Theoretical framework is based on ideas of critical teaching and incorporates affective and cognitive practices set within socio-cultural contexts. Language mediates thought in a dynamic, interactive way: social interaction between children and adults is essential for learning and development. This project was funded by the Municipal Authority of Naples and based on university-school-museum partnerships. In 6 years, we involved approx. 100 classes (kids of 4-6 years) from different social conditions. Paying attention to the affective dimension of learning and to the relationships between art-science and language, we worked with two areas: ‘Light and Vision’ and ‘Water’. The experience was based on: lab works at school with the involvement of researchers; workshops with teachers and parents; visits to museum. The aim was to involve kids, teachers and parents in a game of correlations between experiences in modeling activities. We proposed every-day phenomena (colored shadows, water lens, boxes where the children could enter under colored lights) and ask pupils to find explanations through continuous discussion with guidance of teachers. Parents supported scientific-linguistic development of children making experiments at home. We have been realised workshops with parents (most mothers from the slums of Naples) in order to improve the feeling of self-esteem doing science at home. Everyday examples (colors of makeup, changing colors at the disco, etc.) have been proposed to improve the mothers’ ability to think and discuss scientific issues. The experience has been very well received by teachers, kids and parents. Evidence is based on: interviews; sheets of observation; workshop participation; quality of the communication of phenomena made by kids in final science festival events; the permanent laboratory activities in schools. Teachers and parents consider very productive this experience but require more work with researchers and stability of the project. In the next year the work will be supported by regional-European funds in the framework of Life Long Learning Programme.

Keywords:
Socio-cultural contexts; Affective dimension of learning; Critical teaching.