A comparative study will measure the impact of a learning unstructured, in museums, in learning process of children 3-6 years

Francesco Peluso Casseste*, Giulia Torreggiani*, Luisa Bonfiglio*

*H.E.R.A.C.L.E. Lab — Niccolò Cusano Rome University

ABSTRACT

The aim of this study is to measure the difference between communicative participation between traditional classroom teaching and an experiential didactic at an interactive museum. Interactive museum teaching encourages children especially to discover the objects and the environment that surrounds them through the body.

The body-manipulative activities represented a cornerstone of the active position which, in the first half of the 20th century, created new scenarios for the didactics, by drawing more and more inspiration from the learning models that could enhance the natural disposition of the child "to act", recognizing in the movement and action the preparatory function for the development of thought.

In this perspective, our interest is to deconstruct the current school that is at a standstill and limited to goals, and apply a global, experiential and developmental didactics that considers education in its etymological meaning by stimulating the possibility of developing individual skills considering the resources of every student, motivating them to unleash their creative mind by opening it up to curiosity and to the discovery of new knowledge acquired with all of their body.

Keywords

Embodied cognition, neurodidactics, experiential learning, perception learning, Aeps

INTRODUCTION

Bearing out the "body" as a prerequisite for the development of higher cognitive functions allows to recognize the "sense of movement" as one of simplifying mechanisms of the complexity of the educational action for the achievement of educational purposes, which facilitates the individual's learning and adaptation to the environment (Bettour, 2011).

Thomas Arnold, in 1988, identified three educational dimensions in the body movement:

- the knowledge about the movement, which results in the study of various motor aspects, elaborated in different disciplinary fields;
- the knowledge through the movement, related to the acquisition of various physical, intellectual and moral skills through the motor action;
- the knowledge in the movement, which refers to the experiential and informal knowledge own of the elaboration during the movement.

In a complex vision of the didactics of movement activities aimed at the acquisition of objectives of other disciplinary areas, the context assumes a determining factor since learning about this movement may be considered not as internalization of external executives patterns, often also implicit, but as the result of a continuous restructuring of existing patterns (Amold, 1988).

This vision leads to consider the teaching practices taking advantage of motor actions as "embodied" and "situated" practices (Lave & Wenger, 1991; Chaiklin & Lave, 1993), which involve biological and contextual factors that condition learning. The circular interaction between intentions, actions and feedbacks (Clancy, 1994) is the cornerstone of an effective didactic action at a cognitive level too (Clancy, 1994).

Therefore, the motor system would no longer represent a simple system responsible for the implementation of the action, but the means through which to interact with the outside world, understanding the meanings and develop logics of the mind. From this it follows a vision of the person understood as psychophysical unit whose cognitive mechanisms, including the ability to speak, currently appear naturalized and deeply rooted in the sensorimotor bases of the body and in its constructive interaction with the environment.

The body component is seen in relation to the linguistic faculty in two perspectives: on the one hand, the alignment of language development with that of the body (Shafee, Garmo-Nag, 2007); on the other hand, language is seen as arising from the social interactions where the presence of the body is essential (Baldwin, Moyer, 2007).

METHODS

A group of 112 children, without pathologies or disturbances, between the ages of 3 and 6 was observed several times, with validated tools, during traditional "static" didactics and later during experimental "dynamic" didactics.

Evaluation, and Programming System for Infants and Children (AEPsP) (Bricker, 2002). AEPs is designed to produce a comprehensive and detailed picture of children’s behaviors and skills by gathering observational data as children play and participate in daily activities. Gathering information in this manner permits the development of a clear and accurate picture of what children can and cannot do. This information then can be used to formulate developmentally appropriate IEP/IPPs goals and objectives and intervention content. The AEPs Test is particularly useful for these purposes because only that items that target critical educational and developmental skills have been included in the test. In particular we focused on the area of social communication