

A BRIDGE BETWEEN CLASSICAL EDUCATION AND NEUROSCIENCE

UN PONTE FRA PEDAGOGIA CLASSICA E NEUROSCIENZE

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Bridge from the Latin *pontem*, congeneric with the Greek *pontos* or *patos*, generally, has the meaning of passage, a way over an obstacle as well as a connection between two points that do not touch. I believe this word perfectly represents the goal of the Research on Educational Neuroscience International Conference 2022. When we started thinking about REN in 2020, we were perhaps not fully aware of the potential of the topic that we wanted to explore at an international conference. Among the various nuances that emerged, I clearly remember to have perceived a refractory wave from that area of pedagogy, which to define as 'classical' is perhaps reductive, represented by a number of colleagues with strong philosophical roots and an imprinting markedly opposed to the invasion of neuroscientific knowledge into the baggage of educators and teachers. For this reason, we have promised to give space, in the first available edition, to this debate between classical pedagogy and neuroscience, trying to give voice to all the authors who have dealt with it from various angles. We made this decision in order to generate a healthy debate on the contribution that neuroscience can make to the educational process and didactic action, in order to remove any obstacle to the acceptance of arguments that are now fundamental for understanding the effect of educational interventions, for observation, planning and evaluation in school and in extracurricular training environments.

Although they were introduced over 30 years ago (Cruickshank, 1981; Fuller and Glendening, 1985), some have argued that educational neuroscience cannot be translated into education (Bruer, 1997; Bowers, 2016). However, Bruer himself (2006) later noted that psychology can support the building of a bridge between the two fields. Howard Jones et al. (2016) note that educational researchers use neuroscience to understand behavioural data. Neuroscience has influenced educational practice in several ways. For example, it has observed the mechanisms of dyslexia and of its interventions (Shaywitz and Shaywitz, 2008) and gave insights into how anxiety, attention, relationships and sleep affect educational outcomes (Goswami, 2006; Carew and Magsamen, 2010).

The themes presented in this volume, therefore, make it possible to rethink the way of "doing school today", acquiring significant elements from a new conception with respect to the relationship between "perception, action and cognition (Sibilio, 2012; Rivoltella, 2012). The importance of neuroscience in didactics has, therefore, been confirmed by eminent experts in the field and by recent neurobiological research in support of didactics and special pedagogy, aimed at creating didactic differentiation (D'Alonzo, 2017) in both subjects with typical and atypical development. But what is learnt from neuroscience is also useful to fully understand the educational relationship, as educational acting is distinguished from other forms of professional acting in socio-educational contexts. It aims to promote the human growth of the person and the enhancement of all potentialities (Perla, 2016) and this cannot disregard an assessment of the structural functions in response to the relationship itself.

The contribution of contemporary neuroscience aims, in simplified terms, at understanding learning processes and brain functioning systems and discovering the mechanisms that enable us to communicate with our fellow human beings, to convey our desires, beliefs and intentions to them and, at the same time, to understand what others do and why they do it (Gallese, 2012). Of course, as in everything, any extremism is wrong and a neuroscientific study of the human being cannot be separated from an epistemological basis that takes into account pedagogical models and theoretical constructs developed over time. The following pages contain interesting analyses and ideas for future research on the subject. We hope, with this annual contribution, to have 'opened up' the topic as much as possible and broken down the walls of prejudice, creating a way to overcome obstacles that have no reason to exist.