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CONSIDERING RESPONSIBLE RESEARCH AND INNOVATION IN SCIENCE EDUCATION TEACHING APPROACHES AT PRIMARY LEVEL

Abstract:

The paper targets to identify the potential of Responsible Research and Innovation (RRI) in the teaching-learning process specific for science education, designed to primary students (3rd and 4th forms). In this respect, a specific case study is analyzed: a unit dedicated to natural nanomaterials, having the objective of increasing the students' awareness related to the existence and usage of such materials. During the lessons, experimental approaches were introduced with the view to emphasize the nanoparticles in natural nanomaterials, but also to establish correlations between their structure and function.

The overall objective of the research was to analyze advantages and limitations of the teaching strategy which tried to consider RRI dimensions in science lessons. Specific research objectives are oriented on: analysis of the efficacy of the teaching methods used in the classroom - mostly of the 6E Model: Engage, Explore, Explain, Elaborate, Exchange, Evaluate (OS1), and analysis of the way in which RRI becomes efficiency in the educational process (OS2). The data collection process took into consideration the learning objects proposed by the teaching unit and the semi-structured interview conducted with the primary teachers. The whole analysis and the interpretation led us to the following conclusion: introducing RRI dimensions in the teaching strategy - even from early ages - positively motivates students and stimulates their active participation during the science lessons, determining so an intense process of deep learning of the related scientific content and developing of a desirable social behavior in relation to social and educational environment.

Keywords:

Responsible Research and Innovation, science education, primary level, 6E model, IRRESISTIBLE Project

JEL Classification: I21, I29