

STEM Curriculum Development Using Robotics with K-12 Students in Brazil

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Abstract : This paper describes an implementation of a STEM curriculum program using robotics as a technological resource at a private school in Brazil. Emphasized the pedagogic and didactic aspects and brings a discussion about STEM curriculum and the perspective of using robotics and the relation between curriculum, science and technologies into the learning process. The results indicate that STEM curriculum integration with robotics as a technological resource in K-12 students learning process has complex aspects, such as relation between time/space, the development of educators and the relation between robotics and other subjects. Therefore, the comprehension of these aspects could indicate some steps that we should consider when integrating STEM basis and robotics into curriculum, which can improve education for science and technology significantly.

Keywords : STEM curriculum, educational robotics, constructionist approach, education and technology

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