

## **The use of an App as an educational tool in science education: two examples centred on out-of-school activities**

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### **ABSTRACT**

Mobile devices are becoming increasingly common and incorporated into our daily lives. Due to several characteristics that make it distinctive and well adapted to the affordances of mobile technology, there is potential for adopting mobile learning in the field of science education. In this paper we present an evaluation of two Apps for mobile devices, 'Roteiro dos Descobrimientos', directed to 4th grade students, and 'Roteiro Entre Marés', directed to 8th grade students. The study involved the participation of about 200 students and 10 teachers. Data were collected by participant observation, students' and teachers' questionnaires and interviews. According to students, they have acquired new scientific knowledge in an easy and funny way. They also emphasized as positive aspects the fact that they had to face different challenges and the need to mobilize their knowledge to solve them. Teachers referred that students showed great interest and enthusiasm during the activities. As main gains, they stressed that these Apps promoted the development of important skills, such as the ability to interact with the environment, collaborative work, and autonomy. Moreover, they may be used as a learning foresight or reinforcement resource. As a conclusion, there is a great receptivity to integrate mobile technologies in the teaching and learning process, as they can contribute to the creation of directed, centered, and creative learning environments, but the role of the teacher can't be dismissed, as a mediator and educator. These projects were funded by EEAGrants (PT02\_2°RPS\_0017) and by Fundo Azul (FA\_06\_2017\_011) (Direção-Geral de Política do Mar).

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