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ID.22 Walking in the park with augmented reality towards education enhancement

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Abstract

The EduPARK project promotes innovative technologies for interdisciplinary learning in outdoor environments that combine educational practices with mobile devices in a green park. The team developed an app that allows access to Augmented Reality (AR) content, such as animated 3D models, to be used in two modes: “explore freely” and “game”. The app is available for free in the Google Play Store (<http://edupark.web.ua.pt/app>).

EduPARK was awarded "Team Award for Innovation in Teaching and Learning" by the European Consortium of Innovative Universities (ECIU). This Consortium rewards and gives visibility to multidisciplinary teams with innovative practices that challenge conventional thinking about learning.

This work presents the EduPARK app as an example of an innovative educational resource using AR. Several 3D models were developed to visualize concepts difficult to understand in traditional textbooks, for example, geometric solids, symmetry axis, and locomotion of living beings. For object modeling, Blender was used in association with Photoshop for lifelike textures. The models were integrated in educational guides, in a quiz mode, for students and teachers ranging from Primary to Higher Education and also for the general public (park visitors), the later available in Portuguese and in English.

EduPARK has involved 1430 students; 330 teachers; 9 masters and 1 PhD students; and more than 1000 park visitors. The EduPARK app game has systematically awakened interest and enthusiasm in users, who learn in a fun way while they walk in the Park, having the 3D content contributed to this success.

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