

**AUGMENTED REALITY IN OUTDOOR GAMES AS A NEW TEACHING APPROACH  
EXPERIENCED BY FUTURE TEACHERS IN TRAINING**

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*This poster presents an experience of interdisciplinary training, within the scope of initial teacher training at the University of Aveiro, implemented in articulation with the EduPARK Project. This experience demonstrates that the use of Augmented Reality (AR) is a promising strategy in promoting an interdisciplinary education approach through the creation of pedagogical guides which are integrated in the EduPARK app game, their implementation in the school contexts and respective evaluation.*

**INITIAL TEACHER TRAINING AND INNOVATIVE PERSPECTIVE OF EDUCATION**

The EduPARK aims at moving learning from traditional classroom environments to an open environment that promotes autonomy while providing moments of healthy competition and collaboration among students who participate in it (Pombo & Marques, 2019). The Augmented Reality contents are integrated in the games, supporting situated and authentic learning (Botana, F., Kóvacs, Z., Martinez - Sevilla, A., & Recio, T., 2020) to be explored in a city park.

**Context of convergence of Curricular Activities - EduPARK**

The use of tiles as AR triggers, with a specific pattern served as a context for the preparation, by future teachers in training, of questions that make up the educational guidelines, which allows the visualization of the axes of symmetry in a dynamic and interactive way. The understanding of the concept of symmetry, in this case, becomes more effective because it allows the visualization of phenomena in 3D, in which the animated three-dimensional tile displays its axes of symmetry, through virtual folding, which is not possible to observe using a traditional text book. This dynamic and integrated exploration of the axial symmetry concept allows the development of visualization and reasoning skills.

The idea to combine the disciplines of Mathematics and Natural Sciences, by exploring a three-dimensional model of the duck's house on the park lake was developed to help students to identify the geometric shape of the house. The created house model appears as an AR feature overlaying the real duck's house, which allows rotating movements that support the following question, designed by future teachers in training.

**Final reflection:**

The work that we have been developing has been a challenge in order to provide the development of knowledge and skills whose focus is the convergence of various fields of knowledge (Lew, 2019). These articulated fields integrating AR games in mobile apps, provide connection between society, nature and the world, making connection with areas of Social Studies, Science, Art and Technology in an integrated way.

**References**

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