

# LEARNING ENHANCING BOARD GAMES FOR HIGH SCHOOL EDUCATION IN MICROBIOLOGY AND PARASITOLOGY

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The project "Adote uma Bactéria", created in 2013, uses social networks to enhance participatory learning, via a rich environment of knowledge acquisition and exchange. A variant of the project "Adote um Microrganismo" was created in 2018, and has aimed to expand beyond the boundaries of higher education reaching high school students. To achieve these goals, direct connections between high school and undergraduate students were established to improve the teaching-learning process. Inclusive activities aimed to improve knowledge and skills acquisition through a catchy, playful and natural atmosphere of a game, which offering useful experiences during the learning process. These procedures stimulated self-learning by allowing for associations with previously learned topics. Furthermore, we focused on expanding the potential development of each individual through the collaboration and direct engagement of more experienced undergraduate students.

This ludic methodology favors collaborative, investigative, propositional and experimental actions, allowing subjects to summarize and further publish acquired content on Facebook®. The following didactic games were developed: (i) **BioCaça (BioHunt)**, a word hunting board game, containing already addressed topics in the form of a questionnaire with the answer hidden in a pool of letters, and (ii) **BioBingo**, where the students have to give the correct answer to the referred questions to fill in their card and thus achieving the Bingo. Crucially, reiterations of each game were highly demanded by participants during class, while individual reasoning was encouraged by exchanges with the undergraduate students, which were kept leveled by the role-changing, ludic nature of the activities. We assessed the effect of the activities by taking spontaneous individual statements, their shared Facebook posts and questionnaires, which were quite positive and encouraging.

We argue that we constructed a valuable educational resource: it promotes advances in the zone of proximal development, given that the learning process happens in a dynamic, simple, agile and objective way and it is respecting the individual development stage. By connecting theory and practice in a playful way, we facilitated knowledge acquisition of the pupils.

**Keywords:** board game, Learning tools, knowledge acquisition.

