

**TITLE:** THE POTENTIAL OF THE EDUCATIONAL GAME "BATTLE OF MICROBES" AS A STRATEGY FOR SCIENTIFIC LITERACY AT THE SCIENCE AND LIFE MUSEUM IN DUQUE DE CAXIAS, RIO DE JANEIRO.

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### **ABSTRACT**

Museums and culture centers are known as environments that afford moments of contemplation, social interaction and ludic experiences further non-formal education and museum education. In cases of science museum, the literature indicates that these spaces have a considerable contribution to raise the scientific culture of society, because they have an important role in informal and non-formal education of their visitors. The educational materials can be used in association with expositions and activities inside the museum with the objective of reinforce concepts showed during the visitation and introduce other ones considered more complex and abstract. Therefore, evaluation of these educational materials is essential to substantiate their use effectively in non-formal teaching environments. In this context, several research groups has been creating and applying different methodological tools with the purpose of evaluating distinct educational materials aiming clarify the contribution of these educational activities developed inside museums for expand the process of scientific literacy. In these sense, the objective of these work is investigate the potential of the educational game "Battle of Microbes" in contributing to the process of scientific literacy of visitors to the Science and Life Museum in Duque da Caxias, Rio de Janeiro. Following the specific objectives: (1) to analyze "if" and "how" the educational material in question can contribute to the scientific literacy process of its visitors, using the theoretical-methodological tool "Indicators of Scientific Literacy"; (2) to investigate the motivation of the idealizers of the educational material "Battle of Microbes", through an in-depth interview; (3) to understand the associations that non-spontaneous visitors perform while playing and interacting with mediators and their peers, using non-participant observation; (4) to perceive the influence of the content of the educational game on the school life of the non-spontaneous visitors in the 15 days after the visitation of the exhibition through an interview with the science teachers. In preliminary analyzes, the game "Battle of Microbes" has shown potential to promote students' interest in Microbiology who felt they were discovering new information while playing, associating the game with fun.

**Keywords:** Scientific literacy; Educational material; Games; Game of microbiology; Science museum

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