

Title: ADOPT A BACTERIA – HOW THIS PROJECT CAN IMPROVE THE LEARNING PROCESS IN MICROBIOLOGY.

Authors: Piantola, M.A.F.¹; Pisani, P.B.B.^{1,2}; Botte, D.A.C.¹; Panicio, F.G.²; Salla, L.²; Morales, L.M.P.²; Almeida, E.Y.²; Nishida, L.²; Araujo, M.R.²; Kleiber, N.²; Dardi, P.²; Ferreira, R.C.C.¹.

Institution: 1. Department of Microbiology – Biomedical Sciences Institute/USP
2. Undergraduate Students of Biomedical Sciences – Biomedical Sciences Institute/USP

Abstract:

The “Adopt a bacteria” project is based on the use of social networks as tools to improve the study of different microbiology fields. The approach involves the active participation of undergraduate students in the learning process and increases the exchange and the active role on the construction of microbiology knowledge. The main methodology consists into the use of the Facebook and laboratory classes. The students are divided into groups and each group adopted a specific bacterial genus. The students shall post specific information, followed by discussions with the whole class about the genus. We chose the Facebook because the easy access and widespread use, these factors stimulate productive discussions and an active construction of the desired knowledge. The groups were guided by mediators, in additions to the faculty responsible for the course. The mediators had the function of guide students on the discussion of specific topics and emphasize the subjects with higher relevance. At the end of the post period, the students presented seminars about the adopted genus. The project was initiated in the bacteriology field to students of Biomedical Sciences at the São Paulo University. The assessment was divided into two parts: the formative assessment, based on the posted topics, and the summative assessment that considered the presentation of the seminar about the adopted genus. To evaluate the project, the students filled an anonymous and voluntary survey. The survey was filled by 39 of 40 students that participate in the project. Every student considered that the project helped them to understand bacteriology related concepts. When students were questioned about the use of Facebook as a learning platform, 87% rated great or good. We also questioned the students if they would use the new source of information obtained during the course and 74% said yes. Most of them said that they would consult scientific articles more frequently. Six months after the end of post period, students were invited to fill a new survey when 22 students filled. In this survey we asked “What did they remember about the adopted bacteria?” 95% of them wrote about the gram staining, 64% morphology, 59% pathogenesis, 63% metabolism and 55% antibiotics. We concluded that the active and collaborative construction of knowledge provided by the project helped students to reach elevate cognitive skills, learning meaningfully and remember the main topics of the course after six months.

Keywords: Microbiology Education, Facebook