Title: THE TEACHING - LEARNING PROCESS OF ENVIRONMENTAL MICROBIOLOGY IN HIGH SCHOOL: METHODOLOGICAL APPROACH

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Abstract:
The methodological difficulties to develop the Biology content in high school led to this work. It is essential in the teaching and learning process encourage curiosity attitudes, search and understanding of information, as well as the inclusion of scientific thought as a way to learn by doing. From this perspective, several didactic and pedagogical methodological alternatives have been used by teachers in schools. This work aimed to compare the degree of learning of student performance when subjected to different didactic sequences including: practical class, exposure/theoretical discussion and playful activity. In the first phase of work, a pre-test was applied (Q1) to a group, to examine the previous knowledge of students on Environmental Microbiology. In the second phase, the same group was divided randomly into three groups (A, B and C) and to each group was applied a different sequence classes, according to following order: Group A – theory, practice and game; Group B – practice, game and theory; Group C – game, theory and practice. At the end of each stage, the same questionnaire (Q2, Q3 and Q4) was applied to the three groups for verification of learning. The results indicated that the group B, which had experienced the sequence: practice session, play, and exposure/theoretical discussion, obtained the best result, and increased one hundred twenty-two percent compared to the pre-test. Considering these results, the third phase was started for the entire class, in which it was applied a fourth didactic sequence (practical class, exposure/theoretical discussion and playful activity), and the performance was evaluated by the questionnaires Q5 and Q6. The results showed that after the fourth sequence the average of the group have increased fifty percent from the overall average observed at the end of the second stage. It was concluded that begin the process with the experience of practical class (in the lab and / or field) triggered a greater interest of the students and, as a result, greater participation and greater ownership of theoretical concepts, whose setting was expanded with the development of playful activity. It is noteworthy that the results obtained in learning verification processes suffer interference from other factors, which indicates the need for new studies and analyzes with other educational themes and other student groups.

Key Words: Didactic Sequence, Environmental Microbiology, High School, Learning, Methodological Approach, Teaching.

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