Ouroboros: Playing A Biochemical

RODRIGUES,D.T.\textsuperscript{1,2}; GAYER, M.C.\textsuperscript{1,2}; ESCOTO, D.F.\textsuperscript{1}; DENARDIN, E.L.G.\textsuperscript{2}; ROEHRS, R.\textsuperscript{1,2}

\textsuperscript{1}Interdisciplinary Research Group on Teaching Practice, Graduate Program in Biochemistry, Unipampa, RS, Brazil
\textsuperscript{2}Laboratory of Physicochemical Studies and Natural Products, Post Graduate Program in Biochemistry, Unipampa, RS, Brazil

Introduction: Currently, teachers seek different alternatives to enhance the teaching-learning process. Innovative teaching methodologies are increasingly common tools in educational routine. The use of games, electronic or conventional, is an effective tool to assist in learning and also to raise the social interaction between students. **Objective:** In this sense our work aims to evaluate the card game and "Ouroboros" board as a teaching and learning tool in biochemistry for a graduating class in Natural Sciences. **Materials and methods:** The class gathered 22 students of BSc in Natural Sciences. Each letter contained a question across the board that was drawn to a group to answer within the allotted time. The questions related concepts of metabolism, organic and inorganic chemical reactions, bioenergetics, etc.. Before the game application, students underwent a pre-test with four issues involving the content that was being developed. Soon after, the game was applied. Then again questions were asked. Data analysis was performed from the ratio of the number of correct pre-test and post-test answers. **Results and discussion:** In the pre-test 18.1\% of the students knew all issues, 18.1\% got 3 correct answers, 40.9\% answered only 2 questions correctly and 22.7\% did not hit any. In post-test 45.4\% answered all the questions right, 31.8\% got 3 questions and 22.7\% got 2 correct answers. The results show a significant improvement of the students about the field of content taught through the game. **Conclusion:** Generally, traditional approaches of chemistry and biochemistry are abstract and complex. Thus, through games, an easy and fun way to learn, it is possible to favor learning and student interest. Games for teaching biochemistry can be used in both undergraduate and basic education.

Keywords: games, teaching and learning, biochemistry.