COMMENTS ON THE PERCEPTION OF THE STUDENTS AND TEACHER IN A MATHEMATICAL MODELING DISCIPLINE IN AN ENVIRONMENTAL SCIENCES GRADUATION – A REMOTE EDUCATION EXPERIENCE

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1. Introduction and Justification

The purpose of the use of the Mathematical Modeling in Education is recent in history, according some authors, it was initiate in 1970's decade in Brazil. However, in other conceptions, it is linked to Mathematica History because the use of modeling is intrinsically associated to diary routine of the ancient people (Biembengut and Hein, 2003).

Into the studies of the Mathematical Education, a proposal for perform the mathematics teaching is the use of modern methodologies (Onuchic, 2012), for instance, and very suggested, is the active teaching.

In general, the higher education in Brazil shows a technical and mechanical approach in teaching, that is inconsistent with modern society (Alves and Aversi-Ferreira, 2019).

Because, the purpose of this work, was to analysis the use of the Mathematical Modeling methodology in a discipline of the Mathematical Modeling Applied for Environmental and Biological Sciences, offered in an Environmental Sciences graduation course.

2. Objectives

To analyze the perception of students and teacher in a discipline of graduation in Environmental Sciences, i.e., in a field different of exacts sciences.

3. Methodology

A structured questionnaire was performed, and the students answer and added spontaneous information about the discipline conducted using an active and traditional teaching, from March to June of 2020.

4. Results and Discussion

The most of students shown unsatisfaction with the change from the presential for remote classes. They prefer the presence of the teacher and interestingly they

wrote that felt shame to call the teacher in the social medias. No students had educational formation and less than half of them known about the active methodologies.

All students shown unsatisfaction with active methodologies and anxiety to solve problems derivate from the theory. All of them understood about the need to study and to solve problems by own effort, but the teacher felt that the absence of a structured algorithm and model that indicate a similar response was the main cause of difficult.

An unexpected situation was that all students complain about the time to dedicate to disciplines because the excess of tasks, probably because the implantation of remote studies and the teachers sent so much tasks.

According the perception of students and teacher about the discipline of Mathematical Modelling, there were problems for students to accept the remote studies and to absorb the active teaching methodologies. The teacher observed the difficulties in mathematical bases, that could have generated the unsatisfaction with the resolution of problems and the existence of comfort with the traditional teaching and the very strong necessity of model identical to purposed problems for application of algorithms without effort to solve the problems by students.

5. Final considerations

We, teacher and students, believe that there is a need of detailed explanation about the new methodologies for students in the first class to try obtaining the adherence for an active methodology of teaching, for instance.

6. References

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