

# PERCEPTION OF THE STUDENTS OF THE BAOC MODALITY: NUMERICAL METHODS IN ENGINEERING COURSE

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## Abstract

With the constant increase in the demand for enrollment of undergraduate students in Public Education Institutions, it is necessary to create new ways of conducting the teaching-learning process. In this paper, we analyse the BAOC (Big Academic Open Course), school courses for large groups, whose objective is to expand the coverage and optimize the resources of the institution. Its characteristics are based on b-learning and MOOCs applied to school courses.

The objective of this work is to measure the perception of students of the BAOC modality. A survey was applied at the end of the Numerical Methods in Engineering course in which BAOC was used during the years of 2012 to 2014. Questions were assessed such as: units of study, bibliography, counselling, interaction with their peers, the Virtual Learning Environment, study materials, student satisfaction with the BAOC modality.

The results obtained show that 87% of students consider the units of study adequate, 86% of students consider that the advice received was adequate, and on average 87% of the students consider that the BAOC modality met their expectations.

Keywords: MOOC, b-learning, BAOC, perception students, Big Academic Open Course.

## 1 INTRODUCTION

The number of students requesting entry to undergraduate level in Higher Education Institutions (HEI), increase every year. However, approximately 90% is rejected. The lack of physical and human resources to attend to all students is insufficient [1], [2], [3]. It is necessary to search for alternative modalities that allow more students to be attended with the existing resources in HEIs, as well as the use of virtual learning environments, in order to optimize the physical and human resources available in the institution [4].

The insufficiency of classrooms and lack of teachers limits the attention to a large number of students. In this context, there are proposals that combine face-to-face, b-learning and e-learning modalities, to serve large groups.

In [5] it was examined if the linguistics courses are suitable to be taught in a face-to-face environment, or in a virtual learning environment. A survey was applied with closed and open questions to inquire about the experiences and perceptions of the students in both environments. The results show that students with a higher average prefer classes face to face. It was noted that comfort is the main criterion that students use consistently as the reason to prefer the online linguistics course, this show some effectiveness in online linguistics course.

In [6] a study is presented that assesses the quality of online academic courses, using a multidimensional evaluation of students' activities and perceptions, using data mining and a survey. Students perceived the workload of the online course as low. In general, the learning experience was high and the students were satisfied.

At the state university of Boise in the United States in [7], they develop online courses with large groups to solve the problems of high-reprobation courses, keeping the learning solid, interactive and attractive experiences. They evaluated the LMS to validate the effectiveness and perceptions of students associated with online courses of large groups. Students' perceptions of online courses designed and implemented for health problems in large groups are positive.

In [8] is presented a work by university art teachers, who provided first-year students with hundreds of online film images, in a predominantly face-to-face degree course. Qualitative study in which the students formed work teams to analyze the cinematographic images online. The interviews and