IMPROVING ATTITUDES TOWARDS STATISTICS IN UNDERGRADUATE STUDENTS FROM TRUJILLO NATIONAL UNIVERSITY

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The aim of this research was to implement a “Program to Improve Attitudes towards Statistics” in Undergraduate students at the National University of Trujillo, Peru. We started from the identification of the most significant factors affecting negative attitudes towards Statistics, through a questionnaire of general data and causes for negative attitudes towards Statistics, which was applied to a stratified random sample of students in the year 2004.

The sample size was made of 131 students, 49 of them from area D (Administration and Economy), 49 from area C (Secondary Education specializing in Mathematics, Natural Sciences and Tourism), and 33 from the area B (Mechanical Engineering, Statistics, Agro-industrial Engineering). These students were following a Statistics course (general Statistics, applied Statistics, Statistics and Probability, etc); a previous investigation showed that these areas have higher percentages of students with negative attitudes towards Statistics.

We considered the following variables: negative attitudes (basing on the results of the previous year’s investigation): aversion feelings, dissatisfaction, irritation, fear, tension, insecurity and confusion of the application.

We analyzed the data, using Factor Multiple Correspondence analysis and Problem Trees. Results served to determine the most significant causes for undergraduate students’ negative attitudes toward Statistics at the U.N.T. that were as follows: confusing course contents on the part of the student (63%), inadequate means and materials used by the lecturer (61%), excessive formulas presented in the course (58%), inadequate methodology used by the lecturer (46%), diversity of symbols in the presentation of formulas by the lecturer (41%), students’ lack of attention to the lesson (41%), student’s lack of dedication to the course (33%).

These results were used to formulate the Program of Improvement, with the strategic objective of reorienting students’ negative attitudes and strengthening positive attitudes toward Statistics. We hope this process will lead to halve the causes of negative attitudes toward the Statistics in undergraduate students in the first year of the Program.