TEACHING STATISTICS AT ELEMENTARY AND SECONDARY SCHOOLS

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The fact that statistics and probability are essential to the education of citizens and is assumed to be taught in the Brazilian National Curricular Parameter (PCN) for Elementary and Secondary Education, which for the first time, officially include the teaching of statistics since childhood in the Mathematics program, within the topic: “Handling of Information.” The program includes reading and interpreting statistical information; collecting, organizing, summarizing and presenting information; producing tables, graphs; computing and interpreting the measures of central tendency and dispersion, as well as first introduction to probability theory.

However, the teachers responsible for this job are either educators or graduates in Mathematics, and have not been prepared for the challenge of teaching this program to children and teenagers. The objective of this paper is to describe an experience of teaching statistics basic concepts to primary and elementary teachers.

We worked with three didactics sequences. In the first sequence “Working with the Students’ data” we show the teachers how to use the students’ data to collect, organize, present and interpret information, as well as to teach basic statistics concepts, such as population, sample, parameters, variables and its types: building tables, circular graphs and interpreting media, median and mode. The second sequence “Water Planet” presents various types of graphs and tables. The data represent water consumption bills, and we introduce concepts such as average annual, monthly daily per capita consumption and variability. In the third didactic sequence we work with historical data to analyze patterns of behaviour.

The didactics sequences were not limited to a list of recipes for procedures but starting from them, we try to instigate the teacher’s reflection on the worked concepts and procedures, giving supplementary information on how this method can be applied with the students, in different levels of teaching. The approach to the topics was interdisciplinary because the mathematics, statistical and health concepts were explored simultaneously, in a way that the teacher can adapt the sequences to various grades, depending on the students’ previous level. The didactics sequences were worded, as projects, in various workshops with teachers from primary and elementary levels and have been very successful, since participation in the courses is always increasing. The results show that the activities that involve learning situations, in familiar contexts, make the students create statistical concepts in a significant way. For this reason, this type of activity is recommended in the teaching of statistics in primary and elementary education.