

# EXPLORATORY STUDY ON INFERENTIALS CONCEPTS 'S LEARNING IN SECONDARY LEVEL IN SPAIN

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## SUMMARY

In this paper we in summary communicate the first results obtained in an exploratory study on the learning of statistical inference basic concepts for Spanish students in secondary level. This is a part of an ongoing research project, with the aim to determine problematic areas, the students' difficulties, favourable learning environments or methodological questions that can serve like base to improve the teaching of the statistical inference in the secondary level. The taking of data has been carried out in two courses of secondary level, in total 49 students of different age and previous statistical formation. The students have answered a written questionnaire whose content refers to inferential basic concepts as those of population and samples, the influence of the type and size of the sample in the realisation of inferences, the different sampling types role in the inferential process as well as the implications of the possible biases in the obtaining of data. The enunciates are posed in three different contexts, concrete, narrative and numeric. The analysis of the answers has been, fundamentally, of qualitative type. First, each one of the items separately; later, each researched conceptual nucleus, grouping for it all the results of the items that refer to the same one. As it is an exploratory study we intend especially to determine the open questions and to formulate queries to research later more than to reach accelerated conclusions. Nevertheless, we have obtained some first interesting results: a categorisation of answers about concepts, only seemingly easy, as those of population and samples; differences among the students' conceptions about the sampling process in connection with the age and the context in that the question it posed; appreciation lack about the importance of the randomness in the taking of data or the influence of the sampling type. All these questions have a certain social importance, given their incidence in the taking of decisions in situation of uncertainty for all the citizens, therefore, the improvement in the basic education in these aspects is so much an obligation of the educational system as of the teachers and the educational research.

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