Sampling Distributions for Small Samples: A Cool Tool for Teaching Statistics

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Statistics is a discipline based on the idea that information about a population can be inferred by a sample. These inferences are not absolute but are stated in terms of probability with the aid of the sampling distribution. The Central Limit Theorem, the basis of statistics, is a statement that relates three concepts: population, sample, and the sampling distribution. In practice, we only have access to the sample. This can make it difficult for a student of statistics to see the connections. As an instructional tool, we present an application program that, when given the population frequency distribution, calculates the sampling distribution of means for small sample sizes. Sampling Distributions for Small Samples (SDSS) is intended for use in a classroom setting, where the class serves as the population. The article contains a description of the program, examples, and a summary of its development. A free beta version is available from our college website, at https://www.rctc.edu/academics/academic-disciplines/math/sdss/ and a revised edition is due at the year's end.

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