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Visualizing the central limit theorem through simulation.

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Summary: The Central Limit Theorem is one of the most important concepts taught in an introductory statistics course, however, it may be the least understood by students. Sure, students can plug numbers into a formula and solve problems, but conceptually, do they really understand what the Central Limit Theorem is saying? This paper describes a simulation developed to help illustrate the Central Limit Theorem. Students use the computer mouse to hand draw a population of arbitrary shape and then watch as the sampling distribution grows with each sample selected. A simple assessment tool is also given to check students' understanding of this crucial concept.

Classification: K95 K45 K75 U75
Keywords: active learning; classroom demonstration; computer simulations; statistics; central limit theorem
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