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# What Can You Learn From A Deceptive Teacher? Sample But Not Population Statistics

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**Abstract:** The purpose of this study is to determine whether sampling procedure affected children's inferences about populations or samples or both. In two experiments children learned to predict the color of a toy from its shape. In the first experiment a deceptive or honest teacher sampled the toys, while the second contrasted random and non-random sampling (using a magnetic wand to select from a population with only some magnetic toys). We found no difference between the inferences made about the population and the sample in the helpful or random condition. In the deceptive or nonrandom condition, children were less accurate/confident about inferences made about the population than the sample. This effect held only for the trained predictions (color given shape). We did not see this pattern for reverse inferences (shape given color). Children were more likely to generalize given helpful sampling, but seemed to focus more specifically on the trained relations.