

GROWING SAMPLES TASK DESIGN

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In the growing samples task design, students are gradually introduced to increasing sample sizes that are taken from the same population. For each sample, they are asked to make sense of it and make an informal inference. They then predict what would remain the same and what would change in the following larger sample. Thus, students are required to search for and reason with stable features of distributions, and compare their hypotheses regarding larger samples with their observations in the data. They are also encouraged to think about how certain they are about their inferences.

Growing samples is a useful pedagogical tool to: a) sensitize and slowly introduce students to the decreasing variability of apparent signals in samples of increasing sizes; and b) support coherent reasoning with key statistical concepts. The growing awareness of students to uncertainty and variation in data can enable them to gain a sense of the middle ground of “knowing something” about the population with some level of uncertainty and help them develop a language to talk about the grey areas of this middle ground.

Suggested Reading

Ben-Zvi, D., Aridor, K., Makar, K., & Bakker, A. (2012). Students' emergent articulations of uncertainty while making informal statistical inferences. *ZDM - The International Journal on Mathematics Education*, 44(7), 913-925.