

**STATISTICAL LITERACY THROUGH GUIDED BLOCK PLAY: AN EXPLORATORY
MULTIPLE CASE STUDY**

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Misconceptions, anxiety, and negative attitudes impair adult learning of statistics. Courses in statistics often fail to impart conceptual understanding. Current guidelines suggest statistics learning begin with inquiry in primary school. Yet statistics learning might begin even earlier. Learning about distributions holistically through play might help convey the idea that a data set is an aggregate with emergent properties of shape, spread, and center, and help prevent misconceptions and anxiety in later years. What can a preliterate child learn about a frequency distribution? In this study, children as young as five manipulated blocks under the guidance of a tutor and created “embodied” frequency distributions. They found descriptive statistics, made X-plots and box plots. Only after sensorimotor experience with embodied statistical concepts did they perform statistical inquiry.