

Standards Project Summary

This repository contains supplemental materials for the manuscript entitled “Opportunities for K-8 Students to Learn Statistics Created by States’ Standards in the United States” by Travis Weiland and Anita Sundrani to be published in the *Journal of Statistics and Data Science Education*. This repository contains the excel workbook that contains our qualitative coding of the K-8 standards for states in the U.S. as well as copies of all the figures and tables and rscript for the figures created using ggplot in Rstudio Cloud.

Paper Abstract

Statistical literacy is key in this heavily polarized information age, statistical literacy is key for an informed and critical citizenry to make sense of arguments in the media and society. The responsibility of developing statistical literacy is often left to the K-12 mathematics curriculum. In this paper we discuss our investigation of K-8 students’ current opportunities to learn statistics created by state mathematics standards. We analyze the standards for alignment to the Guidelines for the Assessment and Instruction in Statistics Education (GAISE II) PreK-12 report and summarize the conceptual themes that emerged. We found that while states provide K-8 students opportunities to analyze and interpret data, they do not offer many opportunities for students to engage in formulating questions and collecting/considering data. We discuss the implications of the findings for policy makers and researchers and provide recommendations for policy makers and standards writers.

Keywords

Statistical literacy, Opportunities to learn, mathematics standards, Statistical investigative process, GAISE

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