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Concept maps in introductory statistics

P. 4-7

Jeffrey A. Witmer

Abstract

Concept maps are tools for organizing thoughts on the main ideas in a course. I present an example of a concept map that was created through the work of students in an introductory class and discuss major topics in statistics and relationships among them.

What do the stats tell us? Engaging elementary children in probabilistic reasoning based on data analysis

P. 8-15

Mairéad Hourigan and Aisling Leavy

Abstract

As part of Japanese Lesson study research focusing on 'comparing and describing likelihoods', fifth grade elementary students used real-world data in decision-making. Sporting statistics facilitated opportunities for informal inference, where data were used to make and justify predictions.

Teaching principles of inference with ANOVA

P. 16-21

Kevin R. Tarlow

Abstract

Analysis of variance (ANOVA) is a test of *mean* differences, but the reference to *variances* in the name is often overlooked. Classroom activities are presented to illustrate how ANOVA works with emphasis on how to think critically about inferential reasoning.

Using context variety and students' discussions in recognizing statistical situations

P. 22-24

José Luis Ángel Rodríguez Silva and Mario Sánchez Aguilar

Abstract

We present a proposal for helping students to cope with statistical word problems related to the classification of different cases of confidence intervals. The proposal promotes an environment where students can explicitly discuss the reasons underlying their classification of cases.

The attenuation of correlation coefficients: a statistical literacy issue

P. 25–28

David Trafimow

Abstract

Much of the science reported in the media depends on correlation coefficients. But the size of correlation coefficients depends, in part, on the reliability with which the correlated variables are measured. Understanding this is a statistical literacy issue.

Crime scenes and mystery players! Using driving questions to support the development of statistical literacy

P. 29–35

Aisling Leavy and Mairead Hourigan

Abstract

We argue that the development of statistical literacy is greatly supported by engaging students in carrying out statistical investigations. We describe the use of driving questions and interesting contexts to motivate two statistical investigations. The PPDAC cycle is used as an organizing framework to support the process statistical investigation.
