Did the Gamemakers Fix the Lottery in the Hunger Games?

P. 37-40

Kyle Caudle - Erica Daniels

Abstract

The Hunger Games is an annual event in the fictional country of Panem. Each year, 24 children (tributes) are chosen by lottery from 12 districts to fight to the death in the arena for the entertainment of the Capitol citizens. Using statistical analysis and computer simulations, we will explore the possibility that the Gamemakers, those in charge of planning the Hunger Games, fixed the lottery. Using the fictitious data from Suzanne Collins' book *the Hunger Games*, we show how students can learn how to perform a permutation goodness of fit test.

Motivating Inquiry in Statistics and Probability in the Primary Classroom

P. 41-47

Aisling Leavy - Mairéad Hourigan

Abstract

We describe how the use of a games environment combined with technology supports upper primary children in engaging with a concept traditionally considered too advanced for the primary classes: *The Law of Large Numbers*.

Active Learning and Threshold Concepts in Multiple Testing that can Further Develop Student Critical Statistical Thinking

P. 48-53

Desley White

Abstract

Two practical activities are described, which aim to support critical thinking about statistics as they concern multiple outcomes testing. Formulae are presented in Microsoft Excel spreadsheets, which are used to calculate the inflation of error associated with the quantity of tests performed. This is followed by a decision-making exercise, where an Excel calculator is used to adjust for multiple outcomes prior to deciding whether or not an intervention has been successful.

Numbers defy the law of large numbers

P. 54-60

Ruma Falk - Avital Lavie Lann

Abstract

As the number of independent tosses of a fair coin grows, the rates of heads and tails tend to equality. This is misinterpreted by many students as being true also for the absolute numbers of the two outcomes, which, conversely, depart unboundedly from each other in the process. Eradicating that misconception, as by coin-tossing experiments, should be incorporated early on into learning the law of large numbers.

Are we able to pass the mission of statistics to students?

Richard Hindls - Stanislava Hronová

Abstract

The article illustrates our long term experience in teaching statistics for non-statisticians, especially for students of economics and humanities. The article is focused on some problems of the basic course that can weaken the interest in statistics or lead to false use of statistic methods.