Avoiding Potential Statistical Pitfalls of Quantitative Studies

Roundtable Discussion
with Patrick Dunn, PhD and Sarah Inkpen, MEd
Aim of the Roundtable Discussion:

To facilitate a creative, interactive, participative learning experience for all!
In addition:

- Assist professors and methodologists in building models of students’ thinking
- Assist students in writing concise research questions and choosing appropriate statistical tests.
  - Create and support relevant, productive and lasting insight into quantitative research
  - Create a list of pitfalls by reflection on student artefacts
Can you find the mistake?

*Women in Love: A Cultural Revolution in Progress* by Shere Hite (author of the Hite Report) based all her conclusions on 4500 replies that she received after mailing 100,000 questionnaires to various women’s groups.
Research Question: What is the impact of formal learning space on student learning?

The author conducted a quasi-experimental research to compare ACT scores between students in a traditional classroom and those that volunteered to participate in an Active Learning Classroom.
Research Question: People younger than 18 years of age, are more likely to watch horror movies.
Research Question: In comparing colleges, Seneca College is a better college than College of the North Atlantic.
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In comparing students from Seneca College and the College of the North Atlantic, Seneca College has a higher percentage of active alumni
Research Question: Objective considerations of contemporary phenomena compel the conclusion that success or failure in competitive activities exhibits no tendency to be commensurate with innate capacity, but that a considerable element of the unpredictable must invariably be taken into account.
Research Question: Among adult citizens, do those citizens who vote less frequently have lower levels of voter participation.
Research Question: Does caffeine make women think differently than men?

State the hypothesis?

Independent and Dependent Variable

The statistical analysis?
Research Question: Icing the kicker! Does a timeout by opposing coach, just before the kick in football decrease the chances of the kicker being successful?

What statistical test?
What factors?
What sample?
Pitfalls
Thank you for attending!

Additional questions?
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