Closing the Gap between Math and Stats

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Objectives

➢ Understand and apply theories and methods of STEM.
➢ Apply the appropriate mathematical, statistical, or computational strategies to problem-solving.
➢ Create a new version of STA 308 for students in Bio/Eco/Wildlife
➢ Research questions:
1. Does including R Programming in the HW help students conceptualize key concepts?
2. What attitudes do the students have about math/stats/computation?
3. What majors should a STA 309 cater to? What topics should be covered?
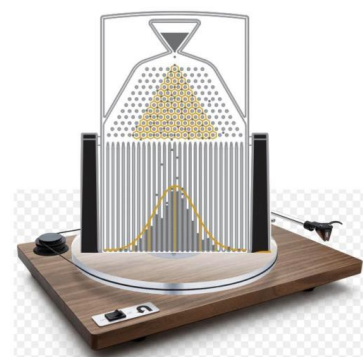
Project Details
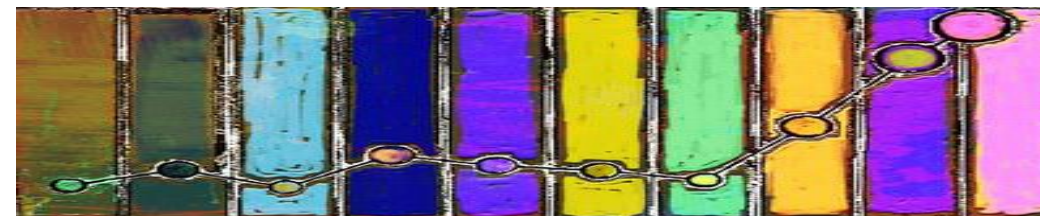
2 semesters of data
✓ Student-led discussion forums
✓ Hand-written conceptual exams
✓ Computer Projects: EXCEL and R Language

RQ3:

71% of my students are majoring in bio/eco/ wildlife, so the data sets and examples explored those fields.

"The key reason most undergraduate students tell me they don't know how to apply knowledge gained in statistics is that the examples were not relatable."

Conclusion

RQ2: Weekly discussions were designed to inquire about the student's ability to apply the statistical concepts to practical situations.

"The discussions helped me interpret my answers when the numerical answer wasn't sufficient."

"The Galton board helped me understand the normal distribution."

RQ1: Exam Median Score

No R on HW	85%
R on HW	90%