



The Use of a Knowledge Survey in Microbiology

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Acknowledgments

- Rachel Watson
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What is a Knowledge Survey?

- Confidence Surveys
- Knowledge Survey
 - Benefits
 - To Students
 - To Instructors
 - To Student/Instructor Interactions



Bloom's Categories

- Recall
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation



Objective

- Develop a knowledge survey question database
- Use it to develop a knowledge survey
- Pilot test knowledge survey
- Determine benefits
- Determine confidence/correctness correlation



Methods

- Institutional Review Board
- Spring 2011
 - Make the knowledge survey itself
 - Administer it as a pre and post test
 - Grade, obtain data
 - Determine statistics
- Fall 2011
 - Changes

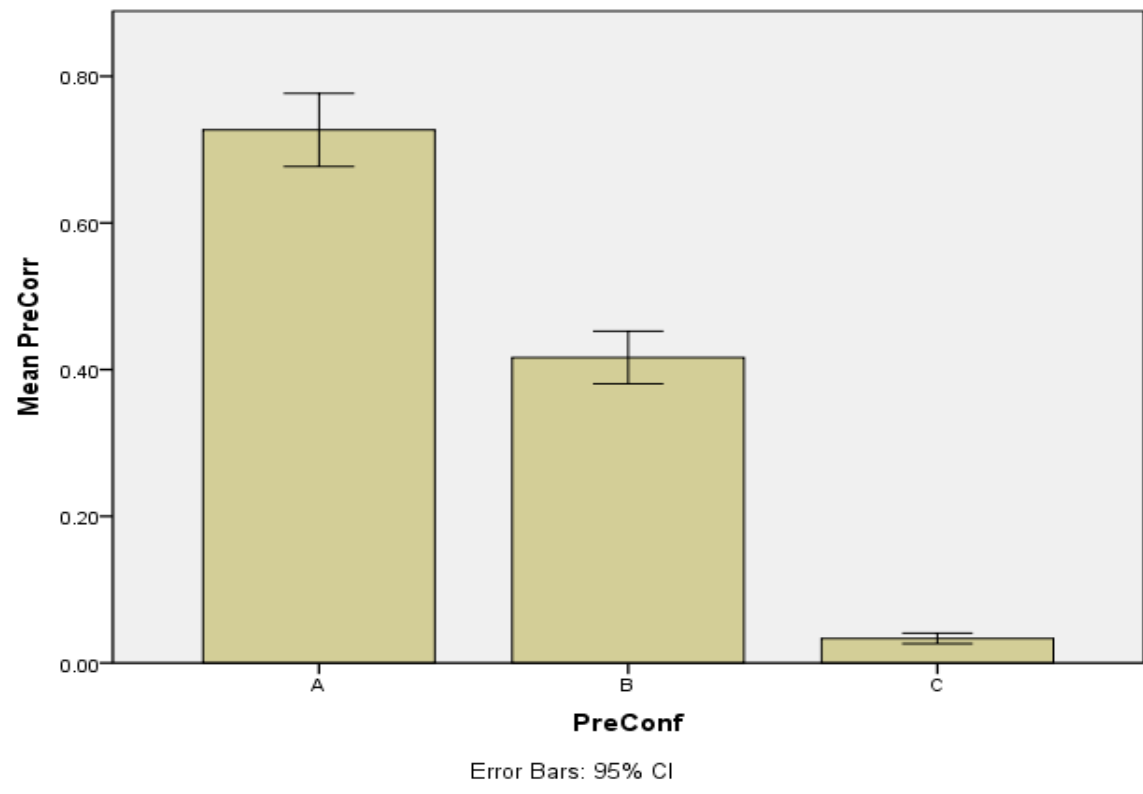


Results

- Spring 2011
- Fall 2011

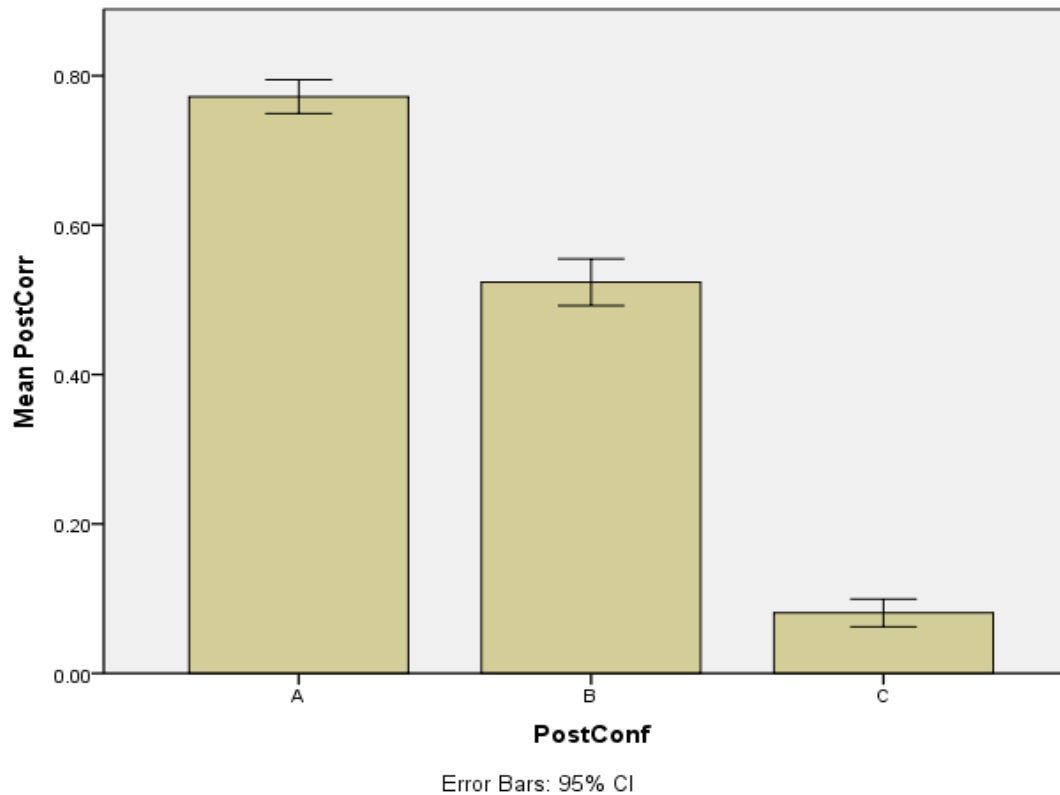


Pre-Test Correctness to Confidence Correlation Spring 2011





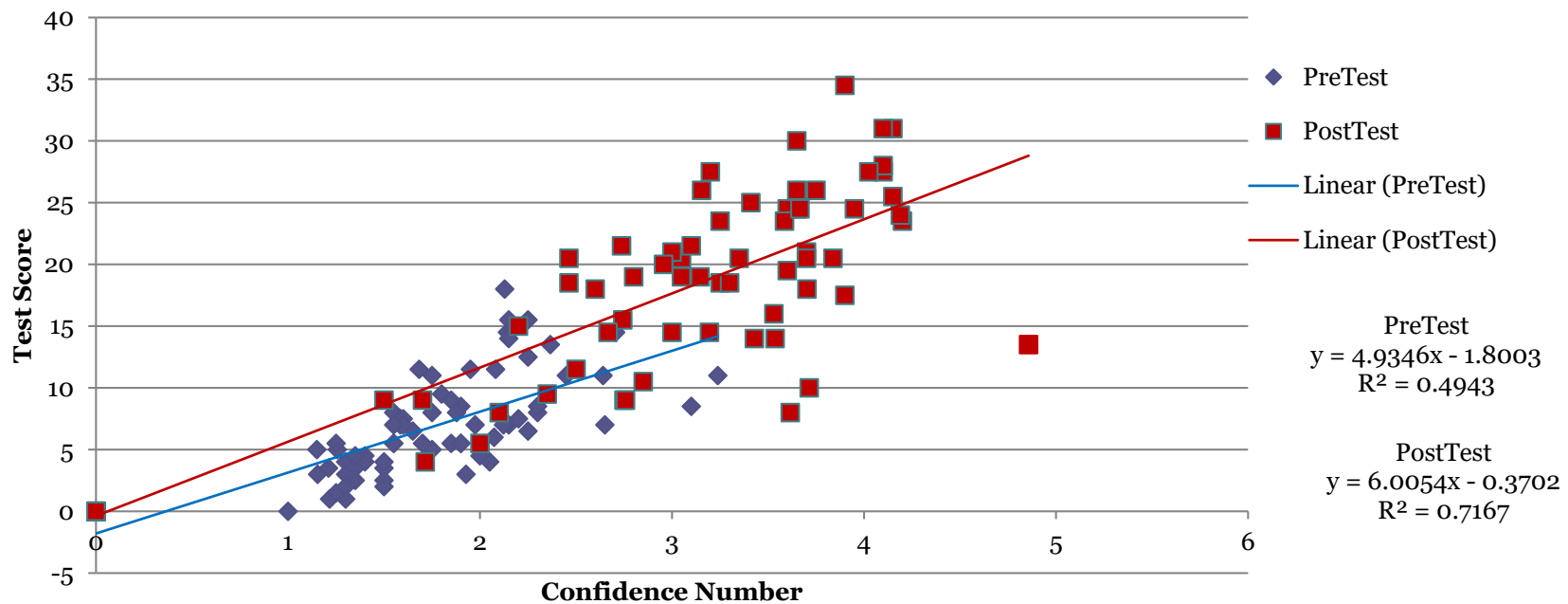
Post Test Correctness to Confidence Correlation Spring 2011





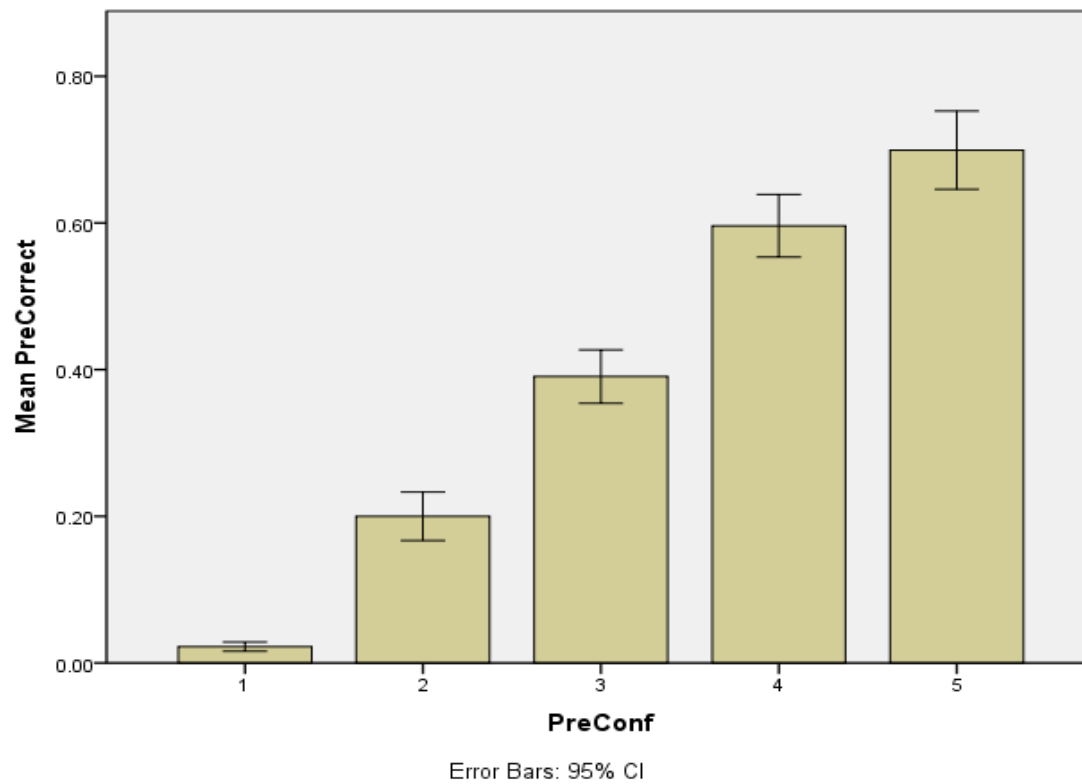
Scatter Plot Spring 2011

Scatter Plot and Trend Analysis of Confidence Score to Test Score Correlation



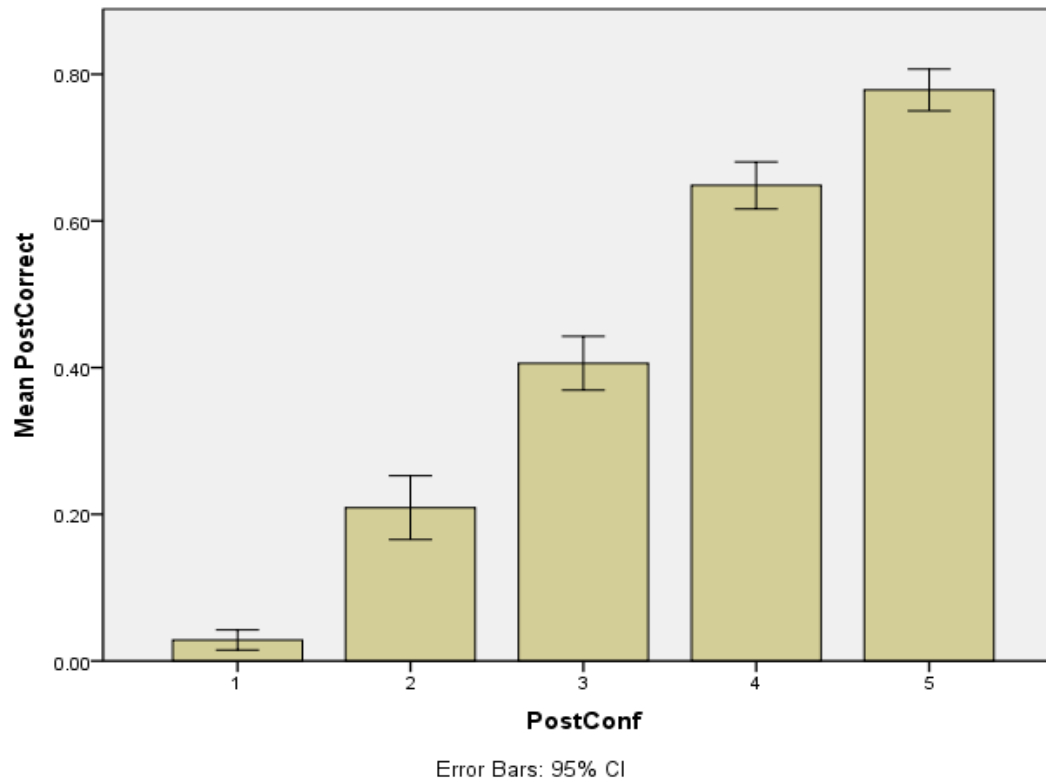


Pre-Test Correctness to Confidence Correlation Fall 2011





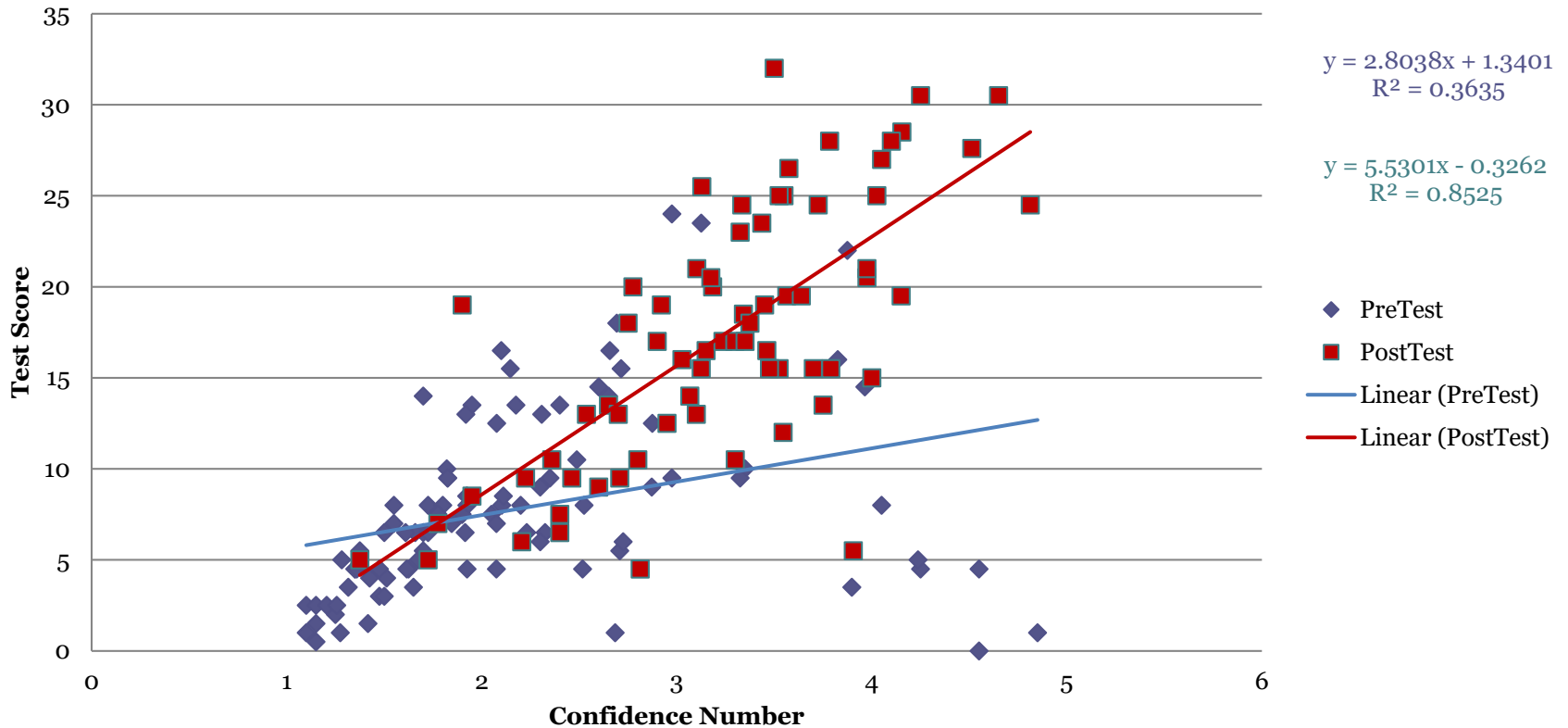
Post Test Correctness to Confidence Correlation Fall 2011





Scatter Plot Fall 2011

Confidence to Score Correlation Fall11





Conclusions

- Confidence does correlate with correctness
 - More strongly so on post tests
- The use of Bloom's Categories does evaluate curriculum
 - Comparing Bloom to correctness and confidence uncovers gaps and strengths in curriculum
- Another study is currently underway
 - Randomized so that some students answer both confidence and questions while some only answer confidence