# USING SOFTWARE TO TEACH THE ACCOUNTING CYCLE IN INTRODUCTORY ACCOUTING: HYPE OR EFFECTIVE?

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**Hypothesis: Using accounting software to help students learn the accounting cycle in a beginning accounting course will enhance learning**

## The Accounting Software

*Solid Footing*, a supplemental accounting software program and text by Dan Wiegand, is used in the first third of the class (through Exam 1) to help introduce the accounting cycle.

Students use the software program as they read their text to view examples of journal entries, postings, and financial statement preparation.

Students then use *Solid Footing* to complete their own journal entries, postings, and financial statements as they work through their homework.

The final project is full preparation of journal entries and financial statements for one accounting cycle, where all student entries are done using *Solid Footing*.

## Research Question

Is there a statistical difference in student performance when using software to teach the accounting cycle in our introductory accounting course, versus no software?

## Study Design

Subjects:
This study examines learning outcomes (exam scores and exam grades) for over 1000 undergraduate students in a beginning accounting course at a Midwest liberal arts institution over a period of 13 years and all under the direction of the same accounting professor:
- 494 students over the six-year period 2001-2006 (pre-software group)
- 576 students over the seven-year period 2007-2013 (post-software group)

Performance Measurement:
Performance is measured based on raw exam scores and exam grades for three exams that have remained nearly identical for the full period under study.

## Initial Results

Raw Data

| | Mean Exam Scores | | | Mean Grades | | |
|---|---|---|---|---|---|---|
| | Before | After | | Before | After | |
| Exam 1 | 64.7 | 68.3 | ** | 2.87 | 2.91 | |
| Exam 2 | 67.3 | 63.4 | ** | 2.69 | 2.53 | * |
| Exam 3 | 95.3 | 92.3 | * | 2.52 | 2.42 | |

* p < .05 ** p < .01

### Exam Score Results

Exam 1: Significant increase in exam scores for the post-software group, consistent with expectations

Exam 2: Significant decrease in exam scores for the post-software group.

Exam 3: Significant decrease in exam scores for the post-software group.

### Exam Grade Results

Exam Grade Results: Significant decrease in Exam 2 grades for the post-software group.

## Interpretations

The significant improvement in student performance for Exam 1 is consistent with predictions, and suggests the accounting software is Improving students' learning outcomes.

The decrease in exam scores for Exam 2 and Exam 3 and the exam grade for Exam 2, while not predicted, is not inconsistent with the idea that the accounting software enhanced learning outcomes initially and, once removed, may have negatively impacted the learning environment.

## Study Limitations

Exam 1 results may be related to having additional learning resources (an additional text and the software) and not simply to the student using the software.

Exam 1 results may be skewed from changes in the effectiveness of the professor over time. However, this impact would have likely increased performance for all exams, and not just Exam I.

Results may be related to more student time being spent on the topic with the additional text and software resources provided.