To Study or Not to Study:
A look at study effectiveness for ACCUPLACER retesting.

Presented By:
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- Metropolitan university in Edmond, Oklahoma
- 16,000 undergraduate & 1,600 graduate students
- State assessment policy since 1992
  - ACT primary placement
  - Accuplacer secondary
- Administer approximately 5000 Accuplacer tests a year

- Testing policy
  - Required to test if ACT less than 19 in any subject area
  - Allowed 2 retests
  - Wait 4 weeks or:
    - English – 3 hrs study
    - Reading – 3 hrs study
    - Math – 6 hrs study
  - No cost for tests
UCO Policy

College Placement

Primary
- ACT
- 19

Secondary
- ACCUPLACER
- Elementary Algebra
- Sentence Skills
- Reading
Placement

- Math
  - Gen Ed
    - 75
- College Algebra
  - 98

College-Level Math
The Academic Support Center at UCO

- The study guides, self-paced programs, and online tutoring programs didn’t seem to be helping students
- Needed to change study software
  - Students scoring worse on subsequent tests
- Advisors suggesting students test out of developmental math
- Change in leadership allowed for a change in strategy
- Wanted to focus on helping students learn
- Researched to find the most efficient and cost effective study program designed to help students
• Versatility of site licenses
• Study in more than 1 area at no extra charge
• Simplicity and usability of the lessons
• Guided study for more individual learning

“...the most valid predictor of academic success...is the degree to which learners become actively engaged and thoughtfully focused on learning-relevant tasks.”
Current Study

Purpose

– To determine if students who study prior to retesting do better on the CPT than those who don’t.
– To evaluate the effectiveness of different methods of study.

Method

– Compared Elementary Algebra test scores of 100 students who studied more than 1 hour in the guided study program, 100 students who studied at least 4 hours using other study materials, and 100 who chose the 4 week waiting period.
No Study

- This group of students (n=104)
  - Waited 4 to 8 weeks before attempting to retest
  - Were not signed in to study in the ASC
  - May have enrolled in A+dvancer, but had no study hours
  - May have enrolled in Comfit, but had no study hours

✓ This does not account for outside study or individual tutoring
Self Study

• This group of students (n=106)
  – Studied more than 4 hours in the ASC
  – Computer programs, study guides
  – Did not enroll in A+dvancer
  – Did not enroll in Comfit
Guided Study

• This group of students (n=111)
  – Studied more than 1 hour using Comfit or A+dvancer
  – At home or in the ASC
  – Study time and progress was tracked by the program
Study Parameters

• Information collected
  – Average pre- and post-test scores
  – The calculated difference between the scores
  – The number of testers that improved their scores by more than 20 points on the post-test
  – The number of testers that qualified for college level math on the post-test
Average scores
Pre- and Post-Tests

<table>
<thead>
<tr>
<th></th>
<th>No Study</th>
<th>Self Study</th>
<th>Guided Study</th>
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</thead>
<tbody>
<tr>
<td>Pre-Test scores</td>
<td>58</td>
<td>62</td>
<td>68</td>
</tr>
<tr>
<td>Post-Test scores</td>
<td>62</td>
<td>56</td>
<td>56</td>
</tr>
</tbody>
</table>
Increase

Average Increase in Scores

- No Study
- Self Study
- Guided Study

Values:
- No Study: 5
- Self Study: 13
- Guided Study: 22
Major Score Increases

Number of Students Whose Score Increased > 20 Points

- No Study: 15
- Self Study: 34
- Guided Study: 49
College Level Math Placement

Number of Students Placed in College-Level Math

- No Study: 26
- Self Study: 38
- Guided Study: 49
Case Studies

**Megan**
- First test score of 64
- After Comfit, score jumped 37 points to a 101.
- Passed College Algebra with an “A.”

**Kandace**
- Used our previous study software and saw little improvement.
- After Comfit, her score went from a 41 to a 97.
- She took Math for General Ed and passed with an “A.”

**Ashley**
- Initial score was a 54.
- She studied 6 hours on Comfit and raised her score to 100.
- Placed at College Algebra level, but chose to take Math for General Education and passed with an “A.”
Recommendations

• Further study
  – Success in college-level courses
  – Evaluate time vs. progress
  – Methods to motivate students to use available resources

• Remove waiting period option

• Show progress instead of time studied
Conclusion

• Study does improve placement test scores
• Guided study is better than self directed study
• With a limited sample size it was noted:
  – Students with a large increase on the CPT were successful (C or better) in:
    • College Algebra (2)
    • Math for General Education (3)
    • College Algebra for Business (1)
• Paying for study software does not motivate students to study