Results for Fall 2010

Traditional model:

The traditional model (with minor variations by instructor) was the standard practice prior to the redesign project. In Fall ‘09, Math 24 had a pass rate of **48.7% (out of 419 students)**. This is what we are using as our benchmark for determining a successful redesign.

Hybrid model:

The hybrid model is the most successful model implemented to date. In Summer ‘10, the pass rate for developmental courses (Math 24/25) were **75% (out of 75 and 109 students respectively)**. Of those who passed Math 24, 48% of these passed the next course the following semester (out of 46). Of those who passed Math 25, 64% of these passed the next course the following semester (out of 64). An adjusted version of this will be used in Fall ’11.

Self-paced model:

The newest redesign model is based on the emporium model employed by Cleveland State CC in Tennessee. In Fall ‘10, the pass rate was **32.77% (out of 415 students) the course within one semester.** We allowed some students to finish up this Spring. Our final pass rate that includes those who came back was **44.82% (51 students were able to finish).**
## Student Performance

(Focus group from one instructor)

<table>
<thead>
<tr>
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<th>Fall 2009</th>
<th>Fall 2010</th>
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</thead>
<tbody>
<tr>
<td>Average raw score on final exam:</td>
<td>17.75 (N=73)</td>
<td>21.56 (N=34)</td>
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<tr>
<td>Scores ranged from:</td>
<td>4 to 29 (out of 30)</td>
<td>15 to 28 (out of 30)</td>
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<tr>
<td>Number of problems per assignment:</td>
<td>25-45</td>
<td>25-45*</td>
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<tr>
<td><em>students had unlimited attempts per problem</em></td>
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<tr>
<td>Time spent on homework (textbook problems):</td>
<td>2-3 hours/wk * 16 wks = 32-48 hours (estimate)</td>
<td>35-152 hours (completed course)</td>
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<tr>
<td>Contact time with instructor:</td>
<td>2.5 hours/wk (in class) + 1 hour/wk (OH)</td>
<td>2 hours/wk (in class) + 2 hours/wk (lab)*</td>
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<td><em>Note this only reflects hours individual instructor is required per week. Students were free to seek help from other instructors.</em></td>
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## Advantages/Challenges of redesign

### Advantages

- Unit mastery vs. high stakes testing
- Multiple attempts on assignments helps prevent students from getting discouraged
- More individualized approach to teaching
- Flexible hours allow students to adjust weekly based on personal schedule
- Advanced students can move faster while challenged students can slow down
- Portfolio teaches organization and note taking skills
- Students now get the repetition they need to learn math at their own pace

### Challenges

- Motivating students (finishing on time)
- Training students to succeed in new model
  - Use multimedia options to learn
  - Independent learning
- Time management (students and instructors)
- Transitioning (from redesign Math 24 to traditional model course)
- Limited resources (funding)
  - Classroom (computer lab needed)
  - Number of instructors
  - Support staff (tutors, lab monitor, etc.)
IMPROVEMENTS

(Moving in the right direction)

- Incorporate “orientation” in first week of class
- Online office hours now available through Elluminate (MML upgrade)
- Make almost everything available in MML (final will be online for Fall 2011)
- Offering hybrid model (most successful model to date) for students who need more structure (Fall 2011)
- Require students to use resources before starting homework
- Take advantage of personalized homework (pre-quiz/pre-test) option that is now available in MML
- Creating an accelerated course for beginning algebra sequence (in discussion)
- Removing limits to “roll over” feature (in discussion)