Solutions for Improved Student Placement and Student Assessment

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_In Media Res:_ Partway down the Road of Redesigning the Math Placement Process
DSP
Goal: Design and Implement an Online Process for Directed Self Placement (DSP)

➢ DSP questions include last math class, time since last class was taken, grade in that class, and high school GPA

➢ Also includes a “confidence” question
Pilot Process

➢ Started with an interactive, high-touch placement process (Summer 2017 pilot)

➢ Transitioned to an automated placement process (2018 pilots)
High Touch Placement Pilot (2017)

**Objective**: To determine the effectiveness of directed self placement for new students who are less than 2 years from their last high school math course.

The pilot targeted students who took Accuplacer either in their high school building in Spring 2017 or on COCC campuses in Summer 2017.

DSP questions included last math class, grade in that class, and high school GPA and based on responses we “hand-placed” them into a COCC math class.
Data From High Touch Placement Pilot

✓ 45 students took part in the study
✓ Approximately 90% placed lower by Accuplacer than by DSP
✓ 41 of the 45 took a fall math course and 38 of the 41 took the DSP recommendation
✓ 27 of the 38 (71%) were successful (A – C grade in the course) 11 of the 38 were unsuccessful (1 D, 4 F, 6 W)
✓ The 27 successful students saved a combined 39 classes ($15,600!!) by taking the DSP placement recommendation rather than Accuplacer placement
The Directed Self Placement Pilots (2018)

Pilot 1: Spring 2018 – current high school students
❖ controlled population
❖ select schools

Pilot 2: Summer 2018 – COCC students
❖ general population
❖ four different campuses
## Placement into College Level

**Using Accuplacer**: 13.0%

**Using DSP**: 77.5%

<table>
<thead>
<tr>
<th>Placement</th>
<th># of students</th>
<th>Accuplacer</th>
<th>DSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Level</td>
<td></td>
<td>101</td>
<td>234</td>
</tr>
<tr>
<td>Developmental</td>
<td></td>
<td>678</td>
<td>68</td>
</tr>
</tbody>
</table>
Pilot Assessment: Playing the Waiting Game

- First math course success data
- Persistence and retention beyond first math course
- Tracking the number of students moving between math class levels in the beginning of the term
- Survey to capture students’ perceptions of their placement
- Survey to capture instructors’ perceptions of the skill levels of their students
AMP
AMP: Adjust My Placement
Pilot Fall 2018 term

Goal: Provide an opportunity for students to be successful in a higher-level math class than originally placed.

The course is intended for students who desire to strengthen previously learned mathematical skills and problem solving abilities.

Provides a structured setting for students to refresh and review their math skills, facilitated by a math faculty member who also provides math advising.
AMP Structure

➢ 1-credit course graded Pass/No Pass

➢ Includes a critical thinking component to strengthen problem solving strategies and skills.

➢ Students enter their math course the following term with strong skills and confidence.

➢ Students placed into any course are eligible to register for AMP (from Developmental Math through Calculus).
COCC Placement Levels

There are 8 levels:

Math 10, 20 → Prealgebra (2 levels)
Math 60, 65 → Beginning Algebra (2 levels)
Math 95 → Intermediate Algebra (1 level)
College Level → QL 1 through Calculus (3 levels)
## Preliminary Results

<table>
<thead>
<tr>
<th># of levels changed</th>
<th># of students</th>
<th>% of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>6</td>
<td>9.8%</td>
</tr>
<tr>
<td>1</td>
<td>22</td>
<td>36.1%</td>
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<tr>
<td>2</td>
<td>24</td>
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<td>3</td>
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<td>9.8%</td>
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<tr>
<td>4</td>
<td>3</td>
<td>4.9%</td>
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</table>
AMP Student Placement

<table>
<thead>
<tr>
<th>Course</th>
<th>Original Placement (# of students)</th>
<th>Final Placement (# of students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prealgebra</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>Beginning Algebra</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Intermediate Algebra</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>College Level</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

Legend:
- Blue: Original Placement (# of students)
- Orange: Final Placement (# of students)