TMI: Transformation through Messaging and Integration of Placement Changes

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Outline

Background and Information on scaling Disjunctive Placement

Results of placement

Speed Bumps-Adjusting and readjusting

Integrating Math faculty in Data explorations “Data Dives”

Integration for broader efforts (Canyons Completes)

Integrating Student Services in Data explorations “Why does Math placement matter in my advisement?”

Integrating Students: Messaging
Changes and Timeline

Accelerated Pathways

• Created a statistics pathway
• Pre-Statistics
  (2 levels → 1LBT)
• Removed Arithmetic

Improved Placement

• Multiple Measures
• Disjunctive
• Two Placements
Current Math Sequence (2015-present)

- Arithmetic
- Pre-Algebra
- Elem. Algebra
- Int. Algebra

Moved to non-credit

- Int. Algebra For Stats
- Statistics

STEM Transfer Courses

Accelerated Pathways
Improved Placement

What we know about Accuplacer?

Self-reported
• H.S. GPA
• Last Math Course
• Grade in last Math course

Direct Placement in Statistics

Floors (STEM)

Accuplacer Score + Multiple Measure weight (13% to 20%)
Two Placements

Students receive up to 2 placements

1. Direct Placement in Statistics*
   - HS information

2. STEM Placement
   - Floor (HS Math course & grade) and/or
   - Accuplacer score + MM weights

*Everyone goes through Accuplacer Assessment
Impact: Transfer Completion in 1 term

incoming Fall 2015 (n=1557)  
16.6%  
258

incoming Fall 2016 (n=1691)  
29.4%  
497
Transfer Completion 1 semester by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2015 (n)</th>
<th>2016 (n)</th>
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<tbody>
<tr>
<td>Latinx</td>
<td>748</td>
<td>858</td>
</tr>
<tr>
<td>African Am./Black</td>
<td>74</td>
<td>75</td>
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<tr>
<td>White</td>
<td>550</td>
<td>516</td>
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<tr>
<td>Asian</td>
<td>78</td>
<td>110</td>
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<tr>
<td>Filipinx</td>
<td>81</td>
<td>91</td>
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Speed *Bumps* on the way to Acceleration

Collect data, monitor data and make adjustments

- Intermediate Algebra
- *Pathway* Problem
Success in Below-Transfer courses

Average Success Rate

- Algebra Prep.: 48%
- Elem. Algebra: 49%
- Geometry: 57%
- Intermediate Alg. for Statistics: 68%
- Intermediate Algebra: 32%

Placed vs. Others

32% vs. 47%
Integrating Math faculty in Data explorations

“Data Dives”
Adjusting our speed

• Moved ‘floor’ to lower level

• Re-assessed Data
‘Floor’ Adjustment
Success in Intermediate Algebra 31% to 51%

<table>
<thead>
<tr>
<th></th>
<th>Placers (N)</th>
<th>Other (N)</th>
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<tbody>
<tr>
<td>Fall 2016</td>
<td>414</td>
<td>593</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>211</td>
<td>622</td>
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</table>

Bar chart showing:
- 31% of Fall 2016 students placed, 46% others
- 50% of Fall 2017 students placed, 46% others
Course Success Rates in Intermediate Algebra by GPA

- 18% (2.0, 2.7) (n=121)
- 24% (2.7, 3.0) (n=132)
- 38% (3.0, 3.5) (n=162)
- 63% (3.5, 4.0) (n=57)

Floor’ students based on Grade of C or better in HS Algebra 2, Trigonometry, or Statistics BY HS GPA; (Placed 2016 and enrolled in Math 070 in 2016-17, Fall, Winter, Spring)
Re-Adjusting our Speed

• Math faculty decided that 3.5 GPA students were allowed back in to Intermediate Algebra
“CANYONS COMPLETES”

“(IE)²’s Canyons Completes initiative is designed to facilitate positive movement towards completion of degrees, certificates, and skills building courses for students through improved programs, processes and services.”

(IE)² reviews student success data and performance indicators in order to identify opportunities to support student success. The three-year Canyons Completes workplan will identify strategies to meet or exceed performance set standards, with activities particularly targeted toward completion.

Implement Peer Check-ins
Re-Engineer Early Alert
Increase Career Exploration
Curricular Mapping and Meta-Majors
Develop Equity-Minded Practitioners
Enhance Noncredit Program
Improve Communication to Students
Statistics vs. STEM pathway is primarily determined by:

- Program of Study
- Transfer Institution
- Math Placement

Which should students be choosing?
Which are students choosing?
Which pathway are students pursuing?

Fall 2017 Active Students (N=16530)

- 21% are pursuing STEM

STEM includes: Biology, Computer Science, Geography, Geology, Physics, Engineering, Mathematics.

Note: Chemistry and Astronomy are considered STEM but are not program majors.

As of September 15, 2017
Which pathway are students completing degrees in?

- 11% of all Degrees awarded are in STEM

Degree Completers 2016-17  (N=1759)
Where are they starting?

**FIRST PROGRAM**

**DEGREE PROGRAM***
Transfer-Level STEM placements for 2016-17 degree completers

**FIRST PROGRAM**

- **NON-STEM**
  - 545 students

- **STEM**
  - 99 students

**DEGREE PROGRAM**

- **NON-STEM**
  - 476 students

- **STEM**
  - 140 students

- **28 students**
Below Transfer-Level STEM placements for 2016-17 degree completers:

- **NON-STEM students**: 801 students
  - STEM: 53 students
  - Nursing: 20 students
- **STEM students**: 50 students
  - Nursing: 20 students

**Percentage breakdown**:
- **NON-STEM (801 students)**: 745 (93%)
- **STEM (50 students)**: 11 (21%)
- **Nursing (20 students)**: 3 (6%)
Mapping trajectory to Math placement: NON-STEM to STEM

Of students who started in NON-STEM and ended in NON-STEM, 64% placed below transfer.
Of students who started in NON-STEM and ended in STEM, 30% placed in below transfer.
Of students who started in STEM and ended in NON-STEM, 43% placed below transfer.
Of students who started in STEM and ended in STEM, 20% placed in below transfer.
Takeaways

Super Majority are NON-STEM (completers and active)

Students who place below transfer...
• 90% NON-STEM starters end up in NON-STEM
• 75% STEM starters end up in NON-STEM

If you start in STEM but place below transfer level, likelihood of completing STEM degree is about 21%. 
PATHWAY PROBLEM

What percent of the students who were given the option, chose:

STEM Math-058
OR
Statistics Math-140
### 2016-17 Placements: All received Direct Placement

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<tbody>
<tr>
<td>Transfer (College Algebra, PreCalc, Calc)</td>
<td>260</td>
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<tr>
<td>1 Level Below Transfer Inter. Algebra/ for stats/Geometry</td>
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<td>2 Levels below Transfer Elem Alg./Alg. for Stats</td>
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<td>3 Levels Below Transfer Algebra Prep.</td>
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N=1,365
Messaging

• Counselors have this information
  Not all students see counselors
  Very few see counselors at the beginning

• How do we convey this information?
  • Emails to students
  • Assessment Center’s role shift to advising
  • Who needs to know about, and relay this information?
How are you, if you are, considering Math placement in your Guided Pathways efforts?

How do we guide students?
Resources:
