Facilitating Data Conversations

RP GROUP SUMMER INSTITUTE 2016
DAYLENE MEUSCHKE, COLLEGE OF THE CANYONS
I.R. Network and Highlight of Responsibilities

Student Services
- Needs Assessments
- Counts, percentages
- Surveys
- Prerequisite and Placement Test Validations
- Accreditation
- IPEDS

I.R. Offices
- Internal Ad Hoc Requests
- External Requests/Mandates
- Prerequisite and Placement Test Validations
- Accreditation
- IPEDS

Planning
- Program Review
- Educ/Facilities Master Plan
- Strategic Plan

Enrollment Management
- FTES monitoring
- Analyses to support E.M.

I.R. Success Act
- Grant Evaluations

Institutional Effectiveness
- License Renewals

Fact Books
- Economic Impact Report

Other Support Services
- External Groups
- Faculty
- License Renewals
- I.E. Reports
We are connected to a lot of departments and projects. How do we effectively facilitate data conversations?
A preview of lessons learned…

- Collaborative research and planning model yields more fruitful conversations, engagement, understanding, and action
- Anchor the presentation to the research questions (scaffolding)
- Always be ready for a question not yet thought of by the IR office
- Recognize the expertise of the “boots on the ground”
A preview of lessons learned…

- Be ready for a few revisions
- Get feedback on the presentation or meeting plan by a colleague within and outside the office
- Questions from the audience is a sign of engagement, not always an attack on the messenger 😊
- Nearly 80-90 percent of the facilitation is managing personalities and sometimes serving as a mediator (yes, that wasn’t in our grad programs)
Collaborative Model of Institutional Research, Planning and Institutional Effectiveness

Primary Responsibility
- Faculty/Staff
- Researcher
- Joint Activity

Key Features:
- Dialogue-rich
- Jointly-driven processes

Rob Johnstone, BRIC presentation
Never underestimate the time needed to prepare:

A little story on facilitating data conversations with a new placement model
Math – request from math faculty (November 2015)

Pre-Meeting with key administrators (December 2015)

Meeting #1 with math faculty & student services (January 2016)

Meeting #2 (added counselors curriculum and articulation)- February 2016

Meeting #3 (presented data and proposed changes)

Meeting #4 (Recap decisions and refine MM questions)

Meeting #5 (confirm direct placement criteria, branching questions, MMs)

Meeting #6 (confirm message to students and action items-tutors and stat sections)

Testing launched. Communication of non-math disciplines affected by changes.

Follow up meetings
Monthly review of data with new placement model in effect.

Follow up meetings to confirm eligibility rules and decision-tree for counselors

Many pre-meetings with key facilitators and hallway conversations with others
Where we have been and Where We Are Today? Success Rates for Math Courses 2012 vs. 2015

Success Rates for Math Courses
2012 vs. 2015

<table>
<thead>
<tr>
<th>Course</th>
<th>2012</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 25/27</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Math 58/60</td>
<td>64%</td>
<td>62%</td>
</tr>
<tr>
<td>Math 60/75</td>
<td>61%</td>
<td>59%</td>
</tr>
<tr>
<td>Math 70/83</td>
<td>61%</td>
<td>57%</td>
</tr>
<tr>
<td>Math 102 or Higher</td>
<td>64%</td>
<td>72%</td>
</tr>
</tbody>
</table>
Of all of the Latino/Hispanic students who took the placement in these individual years...

- Largest increase in 60/75
  - In Math 60/75, placements for this group increased by 19%.

- In 2012, 49% placing 3/4 levels below in 2012 vs. 29.9% placed (3-levels below transfer) in 2015.
Branching Question

What was the most recent high school Math course passed with a “C” or better?

- Elementary Algebra (Algebra I)
- Geometry
- Intermediate Algebra (Algebra II)
- Trigonometry
- Pre-calculus/Calc

Groups 2003, and 2004, Set to Off

Proposed Floors

MATH PLACEMENT CHART

NON-DEGREE APPLICABLE

MATH 058 OR 059 Algebra Preparation
Lecture OR Computer Assisted
(Element Algebra (5 units)

MATH 060 Elementary Algebra
(5 units)

MATH 070 Intermediate Algebra
(5 units)

MATH 075 Intermediate Algebra for
Statistics (5 units) FOR LIBERAL ARTS

ASSOCIATE DEGREE APPLICABLE

TRANFERABLE TO 4-YEAR COLLEGES

MATH 111 Finite Math (4 units)

MATH 130 Elementary Teachers (3 units)

MATH 140 Introductory Statistics (4 units)

PSYCH 104/ SOCI 137
Statistics for the Social & Behav. Sci. (3 units)

ECON 291 Statistical Methods in Business & Econ (3 units)

MATH 103 College Algebra (4 units)

MATH 240 Math Analysis for Business & Social Science (5 units)

MATH 102* Trig (3 units)

MATH 104 Precalculus (5 units)

MATH 211 Calculus I (5 units)
Branching Question

What was the most recent high school Math course passed with a “C” or better?

- Elementary Algebra (Algebra I)
- Geometry
- Intermediate Algebra (Algebra II)
- Trigonometry
- Pre-calculus/Calc

Groups 2003, 2004, and 2005, Set to Off

Proposed Floors

MATH PLACEMENT CHART

MEETINGS 1 and 2

Transferable To 4-Year Colleges

- MATH 111 Finite Math (4 units)
- MATH 130 Elementary Teachers (3 units)
- MATH 140 Introductory Statistics (4 units)
- PSYCH 104/SOCI 137 Statistics for the Social & Behav. Sci. (3 units)
- ECON 291 Statistical Methods in Business & Econ (3 units)
- MATH 103 College Algebra (4 units)
- MATH 240 Math Analysis for Business & Social Science (5 units)
- MATH 211 Calculus I (5 units)
Of the total number of students taking the math assessment test (n=5,730), 760 (13%) placed into Transfer level math (Stats & Trig etc.)

Given the data on self-reported last Math course with B- or higher (pie chart)...

If Algebra II/Geom and below (group 2005) were disabled, 1,547 (27%) would place into Transfer level Math. This is a **2-fold increase** with 785 *more* students placing into Math 140 and 100+ level math classes.

Math dept. would need **approximately twice** the current number of Math 140 sections.

**Note**: Weekly or Monthly reports can be made available to assist in predicting the number of needed sections.
New Placement Model Launched...What do the data look like?

Sample Data from Follow Up Meeting
Math Placements (n= 414)

30% out of 33% are placing in this level due to Floor

43.2 % are placing in transfer-level Math or higher (Regardless of Statistics 140)

12.6% out of 17.7% are placing in this level due to Floor
## Math Placements (counts)

<table>
<thead>
<tr>
<th>Course</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math211 2009</td>
<td>32</td>
<td>7.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Math 104,240 2008</td>
<td>74</td>
<td>17.9</td>
<td>25.6</td>
</tr>
<tr>
<td>placed in transfer 100 due to floor 2006.1</td>
<td>52</td>
<td>12.6</td>
<td>38.2</td>
</tr>
<tr>
<td>Math-transfer 100-2006</td>
<td>21</td>
<td>5.1</td>
<td>43.2</td>
</tr>
<tr>
<td>placed into Math 070/075/083 due to Floor 2005.1</td>
<td>124</td>
<td>30.0</td>
<td>73.2</td>
</tr>
<tr>
<td>Math-070/075/083 2005</td>
<td>13</td>
<td>3.1</td>
<td>76.3</td>
</tr>
<tr>
<td>Math-060/075 2004</td>
<td>48</td>
<td>11.6</td>
<td>87.9</td>
</tr>
<tr>
<td>Math-058 2003</td>
<td>50</td>
<td>12.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>414</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
What percent of each placement group is receiving direct placement into MATH140/PSYCH104/SOCI137?

<table>
<thead>
<tr>
<th>Placement Group</th>
<th>2140</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 104,240 2008, or 2009</td>
<td>106</td>
<td>106</td>
<td>100%</td>
</tr>
<tr>
<td>Math-transfer 100- 2006</td>
<td>72</td>
<td>73</td>
<td>98.6%</td>
</tr>
<tr>
<td>Math-070/075/083 2005</td>
<td>112</td>
<td>137</td>
<td>81.8%</td>
</tr>
<tr>
<td>Math-060/075 2004</td>
<td>17</td>
<td>48</td>
<td>35.4%</td>
</tr>
<tr>
<td>Math-058 2003</td>
<td>12</td>
<td>50</td>
<td>24.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>319</strong></td>
<td><strong>414</strong></td>
<td></td>
</tr>
</tbody>
</table>
How many from each placement group are placing *directly* into MATH140/PSYCH104/SOCI137?

<table>
<thead>
<tr>
<th>Placement Group</th>
<th>Total</th>
<th>Percentage</th>
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<tr>
<td>Math 104,240, 2008, or 2009</td>
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</tr>
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<td>5%</td>
</tr>
<tr>
<td>Math-058, 2003</td>
<td>12</td>
<td>4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>319</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
How many are placing into transfer level (either through direct placement or otherwise)?

320 out of 414 = 77%

⇒ 106 (25%) are receiving a higher than 100-level + Math140 placement

So 52% are 100-transfer level placement
Last year (2015) 4,700 took placement April 1\textsuperscript{st} thru Oct, 14\% placed into transfer-level =660
-----300 of them went on to enroll (40\%)

What percent of the transfer placements went on to enroll in a Math course? 45\%

Using last year’s data, 4,700, if current data shows that 77\% placing into transfer level = 3,619
3,619 (2016FA) vs. 660 (2015FA)

\begin{itemize}
  \item 40\% of all placement takers, and 45\% of transfer level placements go on to enroll in Math course subsequent to placement = 1,628
  \item if we want to be conservative, 50\% go on to enroll= 1,809
\end{itemize}

1,809 (2016FA) vs. 300 (2015FA)
Plans for Major (n=414)

- Social Sciences or Business, 22.2%
- Allied Health or Public Safety (Nursing, Administration of justice etc.), 24.4%
- STEM, 29.0%
- Humanities, 3.1%
- Fine and Performing Arts, 7.7%
- Career and Technical Training, 3.1%
- Undeclared, 10.4%

- 29% are STEM majors
- 33% Liberal Arts
- 10% are Undeclared
- 3% Career Tech
- 24% Nursing, Admin justice ???
Projected enrollments

How many students completed MATH070/075 in Spring 2016?

Math 070: 27 sections  
832 students actively enrolled

Math 075: 19 sections  
532 students actively enrolled

*Some will go into 083 ----6 sections of MATH083 = 210

1,809 + 1,364 ← (those coming through the sequence from M070 (832) + M075(532)

Majors

<table>
<thead>
<tr>
<th>Major</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEM</td>
<td>543</td>
</tr>
<tr>
<td>LIBERAL ARTS</td>
<td>542</td>
</tr>
<tr>
<td>UNDECLARED</td>
<td>181</td>
</tr>
<tr>
<td>OTHER (Nursing, admin justice etc.)</td>
<td>434</td>
</tr>
<tr>
<td>Other CTE</td>
<td>54</td>
</tr>
</tbody>
</table>

29% are STEM majors
33% Liberal Arts
10% are Undeclared
3% Career Tech
24% Nursing, Admin justice*
1,809 + 1,364 = 3,173 transfer-level Math students

Of the 1809 placements,  
543 STEM (350 placed in 200 level Math)  
596 LIBERAL ARTS  
181 UNDECLARED

Of the 1364 coming through sequence,  
832 STEM, 624 completers  
532 Liberal Arts, 399 completers

Placements + Sequence = 2,558 in transfer-level Math. Of these…  
817 STEM  
1,260 LIBERAL ARTS/Admin justice  
181 UNDECLARED  
300 NURSING (STEM?)
Projected sections & enrollment

**CURRENT # of Sections Offered--- 1,553**
- 24 sections of MATH140 (one 140H =25) = 840
- 2 sections of SOCI-137 (CAP=24) = 48
- 2 sections of PSYCH104 = 70
- 9 sections of Math 102= 315
- 6 sections of Math 103= 210
- 1 section of Math 111 =35
- 1 section of Math 130=35
- *1 section of ECON291 = 35

**# of Sections Planned--- 2,148 students**
- 33 sections of MATH140 = 1,190
- 1 ‘frozen’ section of MATH140=35
- 2 sections of SOCI-137 = 48
- 2 sections of PSYCH104 = 70
- 4 sections of 075/140 PAL * = 140
- 11 sections of Math 102= 385
- 7 sections of Math 103= 245
- 1 section of Math 111 = 35
- 1 section of Math 130= 35
- *1 section of ECON291 = ?

*39 sections of MATH140 projected in mtg

LIBERAL ARTS: 1,340
STEM: 630
Now it’s your turn
Reflect on your homework from last night. Do you need to make any changes to your answers to the questions?

- What is your group’s data story?
- How can the group effectively convey that story to the audience?
- What research questions will guide your analysis?
- What kinds of questions do you anticipate from the audience?
- How can you make the data meaningful for each of these groups?
- What outcome do you anticipate or expect from the presentation?
- How can you facilitate action planning based on the data?
- What tools do you need to prepare your presentation?
- In what format will your group present (e.g., who will present which slides, or how will you provide a cohesive presentation as a group)?
- What additional data would be useful for gaining a broader understanding of the data?
Dress Rehearsal

- Report out from 3 teams
- Audience Feedback (What was the “sticky” for you? What needs to be refined? What other advice would you give the team?)
We’re all in the arena together

“When we spend our lives waiting until we’re perfect or bulletproof before we walk into the arena, we ultimately sacrifice relationships and opportunities that may not be recoverable, we squander our precious time, and we turn our backs on our gifts, those unique contributions that only we can make,” says Brown. “Perfect and bulletproof are seductive, but they don’t exist in the human experience.”

Thank you!
Best wishes on your journey and storytelling 😊

Remember...

You play an important role in connecting people with data that results in better informed-decisions