Performance and Challenges In Core

CRPT Community Meeting
October 20, 2017
Meeting #1: Core goals

- Convergence on three goals by all college constituencies.
- What is missing from these goals?
  - Three goals are too broad, invite a new, different “firehose.”
  - Mission statement: impact of work on society and social engagement.
  - Need to construct a core that is inclusive and supportive of all students
How Many Students Struggle in the Core and How Deeply Do They Struggle?
Struggle as Percent of Student Population
2010-16

- One: 10%
- Two: 5%
- Three: 3%
- Four: 2%
- Five: 2%
- Six: 1%
- Seven or more: 1%
How “Deep” is the Struggle?
2010-16

42% 20% 14% 7% 7% 5% 3% 1% 1% 0% 0% 0%
**Struggle by Course**

2010-16

[Graph showing struggle by course for 2010-16 at Harvey Mudd College]
Relationship between Student Characteristics and Performance in Core
HS Preparation and Grades in Core

- MV Calc HS
- International Math
- IB HL Math
- Diff EQ/LA HS
- College MV/DE/LA/Other
- College Calc Courses
- Calc - High School
- AP Calc
- AP BC Calc/BC Calc+
- AP AB Calc
- Adv Calc/Post BC/Math HS

F D C B A
Impact of Race & HS Prep on Course Performance

Adjusted R Squared

- Chem 23A: 17%
- Math 60: 10%
- Chem 23D: 9%
- Math 45: 9%
- Math 40: 6%
- Phys 51: 6%
- Math 65: 3%
Relationship Between Effort and Learning
First Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Effort</th>
<th>Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writ 1</td>
<td>49%</td>
<td>Low</td>
</tr>
<tr>
<td>Chem 23A</td>
<td>49%</td>
<td>Low</td>
</tr>
<tr>
<td>Chem 23B</td>
<td>39%</td>
<td>Low</td>
</tr>
<tr>
<td>Chem 23D</td>
<td>39%</td>
<td>Low</td>
</tr>
<tr>
<td>Math 30G</td>
<td>42%</td>
<td>High</td>
</tr>
<tr>
<td>Math 35</td>
<td>40%</td>
<td>Low</td>
</tr>
<tr>
<td>CS 42</td>
<td>52%</td>
<td>High</td>
</tr>
<tr>
<td>CS 5</td>
<td>50%</td>
<td>Low</td>
</tr>
<tr>
<td>Phys 23</td>
<td>53%</td>
<td>High</td>
</tr>
<tr>
<td>Math 30B</td>
<td>79%</td>
<td>High</td>
</tr>
</tbody>
</table>
How often **first semester** did you have enough time to pursue interests outside of class and homework?
Second Semester

High Effort/Low Learning

Chem 23S (36%)
Chem 23B (41%)
Bio 52 (34%)
Phys 22 (43%)
Chem 24 (34%)

High Effort/High Learning

Math 40 (51%)
Math 45 (50%)
HSA 10 (42%)
Writ 1E (50%)
Phys 24 (71%)
Phys24A (93%)

Low Effort/Low Learning

Low Effort/High Learning
How often **second semester** did you have enough time to pursue interests outside of class and homework?
Third Semester

High Effort/Low Learning

Low Effort/Low Learning

High Effort/High Learning

Low Effort/High Learning

- Engr 59 (52%)
- Math 65 (54%)
- Math 60 (60%)
- Engr 79 (65%)
- Phys 51 (57%)
- Core Lab (47%)
How often third semester did you have enough time to pursue interests outside of class and homework?

- Never: 13%
- Rarely: 30%
- Sometimes: 34%
- Often: 17%
- Always: 7%
Discussion questions go here

• Do these data impact your view of what the goals of our core should be? If so, in what way?

• Should workload be a design principle for the core? If so, how might be regulate it across courses?