What I’ve Learned as President of my Professional Association

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PowerPoint available at www.macalester.edu/~bressoud/talks

Serie Center, Macalester College
Saint Paul, MN
January 8, 2011
20,000 members
$8 M annual budget

Focus on undergraduate mathematics: teaching, research, exposition
In 2010: 36 trips (12 of them to DC)
32 talks
visited 20 colleges and universities
Bressoud, Carlson, Pearson, Rasmussen: *Characteristics of Successful Programs in College Calculus*

College factors that influence success in Calculus I and case study analysis of successful programs.
Math & Stats Majors by Gender

NCES data
Hispanic students as % of Bachelors Degrees in selected fields

- % of total degrees
- Engineering
- Mathematics
- Physical Sciences

NCES data
There were 1,089 Bachelors in Math or Stat earned by African-Americans in 1997. By 2008, that number was down to 818.
Fall enrollments (thousands) in 2-year undergraduate programs

<table>
<thead>
<tr>
<th>Year</th>
<th>Precollege</th>
<th>Introductory</th>
<th>Calc &amp; Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>482</td>
<td>294</td>
<td>113</td>
</tr>
<tr>
<td>1990</td>
<td>724</td>
<td>361</td>
<td>140</td>
</tr>
<tr>
<td>1995</td>
<td>800</td>
<td>415</td>
<td>142</td>
</tr>
<tr>
<td>2000</td>
<td>763</td>
<td>396</td>
<td>117</td>
</tr>
<tr>
<td>2005</td>
<td>964</td>
<td>501</td>
<td>120</td>
</tr>
</tbody>
</table>

CBMS data
Fall enrollments, Calculus and above, 4-year undergraduate programs, as percentage of 20–24 year-olds

CBMS & US Census data
In the Fall of 2010: 210,000 students entered four-year undergraduate programs with the intention of majoring in engineering, a physical science, mathematics, or statistics.

About half will succeed.

Over 600,000 of the entering students had passed a class in calculus while in high school.
“The mathematics profession as a whole has seriously underestimated the difficulty of teaching mathematics.”

Ramesh Gangolli
MER Workshop
May 31, 1991