Does secondary math proficiency affect Rhode Island students' postsecondary success?

Highlights from the Data Story
“Math Preparation and Postsecondary Success”

As presented to the Rhode Island Board of Education on January 13th, 2014
What Happened to Rhode Island’s 2005-2006 8th Graders?
Pipeline View from 2005 - Fall 2012

- Took 8th Grade NECAP in 2005-2006: 12,116
  - No 11th Grade NECAP: 2,815
    - Graduated HS: 8,296
    - Other: 1,005

- Took 11th Grade NECAP: 9,301

- RI Public Higher Education: 3,635
  - CCRI: 1,649
  - RIC: 605
  - URI: 1,381
  - Enrolled in 2nd Semester: 4,763

- Other Higher Education: 1,989
  - In-State Private: 483
  - Out-of-state, Private: 900
  - Out-of-state, Public: 606
  - Adult Basic Education: 160
  - No Additional Education Enrollments: 3,517

- Enrolled in 3rd Semester: 3,969
High math proficiency is related to higher college enrollment

Fewer than 42% of those who scored at Level 1 on the 11th-grade NECAP enrolled in higher education.

Nearly 81% of those who scored at Levels 3 and 4 on the 11th-grade NECAP enrolled in higher education.

Any Known Postsecondary Enrollment?

<table>
<thead>
<tr>
<th>11th Grade NECAP Level</th>
<th>Any Higher Education Enrollment</th>
<th>No Known Higher Education Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL 1</td>
<td>3,926 students</td>
<td></td>
</tr>
<tr>
<td>LEVEL 2</td>
<td>2,742 students</td>
<td>2,742 students</td>
</tr>
<tr>
<td>LEVEL 3</td>
<td>2,488 students</td>
<td>2,488 students</td>
</tr>
<tr>
<td>LEVEL 4</td>
<td>145 students</td>
<td>145 students</td>
</tr>
</tbody>
</table>
Where do they go?
Documenting an educational “brain drain”

Of the students who enrolled in postsecondary education, more than one-third (37%) of Level 3 students and nearly two-thirds (63%) of Level 4 students attended out-of-state institutions.
Low NECAP proficiency forecasts student need for remedial math at CCRI

Roughly 80% of students who scored a Level 1 on the math NECAP needed substantial remediation in math, as measured by Accuplacer at CCRI.

<table>
<thead>
<tr>
<th>Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL 1</td>
<td>79%</td>
</tr>
<tr>
<td>LEVEL 2</td>
<td>32%</td>
</tr>
<tr>
<td>LEVELS 3 &amp; 4</td>
<td>4%</td>
</tr>
</tbody>
</table>
Yes, high school math proficiency strongly correlates with academic success in college

Only 24% of Level 1 students enrolled in and persisted to a third semester of college.
Actions Under Way: K-12

- Implementing the Common Core State Standards and aligned assessments across all grade levels.

- Increasing the rigor of mathematics instruction in high school.

- Providing additional support to students whose achievement falls below proficiency.

- Continuing to implement the Rhode Island Diploma System to ensure our students are better prepared for success beyond high school.
Actions Under Way: Postsecondary

- Funding personalized academic student support services at each of Rhode Island’s public postsecondary institutions.

- Partnering faculty members with local school districts to provide intensive professional development in math instruction.

- Conducting longitudinal research to better understand PK-20W student outcomes.
Actions Still Needed

- Ensure that districts are working to identify and support middle-school students with low achievement levels in mathematics and that high-school students enroll in course sequences that provide instruction aligned with the Common Core State Standards.

- Ensure that districts and higher-education institutions present more opportunities for contextualized mathematics learning with hands-on experiences.

- Ensure that intensive math remediation is available and that students are placed in co-enrolled postsecondary, credit-bearing courses with remedial support.

- Ensure more significant state merit scholarships and internships are offered to motivate our highest-achieving math students to stay in Rhode Island.
Special Thanks

This Data Story was developed by a Longitudinal Data Analysis (LDA) Committee comprised of stakeholders from across the state. Special thanks go out to the following LDA members who met over the past 9 months to complete this project:

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Resources

These slides can be viewed and downloaded from:

ridatahub.org/math-success-slides

To view the full Data Story with additional content and graphs, please visit:

ridatahub.org/math-success