S.T.A.T. Year Four Evaluation

Dr. Jennifer R. Morrison
Dr. Steven M. Ross
October 2018
S.T.A.T. Evaluation Model

Professional Development
- Administrators
- S.T.A.T. Teachers
- Classroom Teachers

Measurable Outcomes
- Year 1+
  - Classroom Environment
  - Teacher Practice
  - Digital Content
- Year 1+
  - Student Engagement
- Year 2+
  - P21 Skills

Goals
- Years 3/4+
  - Student Achievement
    - MAP
  - PARCC
    - Graduate Globally Competitive Students
Data Sources

• Interviews and Focus Groups (principals, S.T.A.T. teachers, classroom teachers)

• Classroom Teacher Survey (CRRE survey)

• Classroom observations in schools (OASIS-21 Instrument)

• Student behavioral data

• MAP data (LH Grades K-6, non-LH Grades 1-3)
• PARCC data (BCPS Gr.3, LH 4-6)

• S.T.A.T.-specific climate survey items (BCPS survey)
Preview of Year Four Results

• Research on school-district technology integration initiatives shows¹:
  – Higher student engagement
  – Increases in student-centered instruction
  – Improved student achievement

• Fourth-year results in BCPS show:
  – Continued changes from teacher- to student-centered learning
  – Shifts to teacher coaching rather than presenting
  – Deeper and more varied use of instructional technology
  – Positive impact on student engagement

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  - Digital Content
- Year 1+
  - Student Engagement
- Year 2+
  - P21 Skills

Goals
- Year 3+
  - Student Achievement
  - MAP
  - PARCC
  - Graduate Globally Competitive Students
### Survey: PD Helpfulness

#### I was able to apply what I learned during PD in my classrooms.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
</tr>
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<tbody>
<tr>
<td>Cohort 1</td>
<td>27.8%</td>
<td>48.0%</td>
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<tr>
<td>Cohort 2</td>
<td>7.8%</td>
<td>13.7%</td>
<td>40.7%</td>
<td>37.7%</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>11.3%</td>
<td>47.3%</td>
<td>33.8%</td>
<td></td>
</tr>
<tr>
<td>Cohort 4</td>
<td>9.1%</td>
<td>19.8%</td>
<td>44.6%</td>
<td>26.4%</td>
</tr>
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</table>

#### I received sufficient PD on the use of technology in my classroom.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
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<td>7.4%</td>
<td>25.9%</td>
<td>59.3%</td>
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</tr>
<tr>
<td>Cohort 2</td>
<td>7.8%</td>
<td>13.7%</td>
<td>40.7%</td>
<td>37.7%</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>+</td>
<td>11.3%</td>
<td>47.3%</td>
<td>33.8%</td>
</tr>
<tr>
<td>Cohort 4</td>
<td>9.1%</td>
<td>19.8%</td>
<td>44.6%</td>
<td>26.4%</td>
</tr>
</tbody>
</table>

#### I received sufficient PD on the creation of a learner-centered environment.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
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<td>7.4%</td>
<td>25.9%</td>
<td>64.8%</td>
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<tr>
<td>Cohort 2</td>
<td>7.4%</td>
<td>8.8%</td>
<td>40.7%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Cohort 3</td>
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<td>9.5%</td>
<td>45.8%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Cohort 4</td>
<td>9.1%</td>
<td>19.0%</td>
<td>41.3%</td>
<td>30.6%</td>
</tr>
</tbody>
</table>

+ < 5.0%
S.T.A.T. Teacher Program

• Principals and classroom teachers continue to hold highly positive attitudes towards the S.T.A.T. teachers
• The consensus among these groups is that the S.T.A.T. teachers…
  – “Wear many hats”
  – Are highly accessible to teachers
  – Serve as non-evaluative coaches and mentors to teachers
  – Serve as a flexible resource in providing teachers with professional development, assistance with instructional planning, and assistance with technology integration
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Professional Development

- Administrators
- S.T.A.T. Teachers
- Classroom Teachers

Measurable Outcomes

- Year 1+
  - Classroom Environment
  - Teacher Practice
  - Digital Content

- Year 1+
  - Student Engagement

- Year 2+
  - P21 Skills

Goals

- Year 3+
  - Student Achievement
    - MAP
  - PARCC
    - Graduate Globally Competitive Students
Observation Rating Scales

- Not observed: Not observed in class
- Rarely: Received little emphasis/time in class
- Somewhat/Occasionally: Received modest emphasis/time in class
- Frequently: Received substantial emphasis/time in class
- Extensive(ly): Highly prevalent in class
### Impact on Classroom Environment

**Student acquisition of materials/resources**

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Not Observed</th>
<th>Rarely</th>
<th>Somewhat/Occasionally</th>
<th>Frequently</th>
<th>Extensively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (2014-15)</td>
<td>69.0%</td>
<td>20.7%</td>
<td>10.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 2 (2015-16)</td>
<td>68.1%</td>
<td>20.8%</td>
<td>9.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 3 (2016-17)</td>
<td>79.7%</td>
<td>10.2%</td>
<td>5.1% 5.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohort 4 (2017-18)</td>
<td>88.5%</td>
<td>7.7%</td>
<td>+</td>
<td></td>
<td></td>
</tr>
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</table>

**Student utilization of work spaces**

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Not Observed</th>
<th>Rarely</th>
<th>Somewhat/Occasionally</th>
<th>Frequently</th>
<th>Extensively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (2014-15)</td>
<td>31.0%</td>
<td>24.1%</td>
<td>24.1%</td>
<td>13.8%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Cohort 2 (2015-16)</td>
<td>51.4%</td>
<td>27.8%</td>
<td>9.7%</td>
<td>+ 6.9%</td>
<td></td>
</tr>
<tr>
<td>Cohort 3 (2016-17)</td>
<td>76.3%</td>
<td>5.1%</td>
<td>8.5%</td>
<td>+ 8.5%</td>
<td></td>
</tr>
<tr>
<td>Cohort 4 (2017-18)</td>
<td>96.2%</td>
<td>+</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- < 5.0%
# Impact on Teacher Practices

## Teachers acting as coach/facilitator

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Not Observed</th>
<th>Rarely</th>
<th>Somewhat/Occasionally</th>
<th>Frequently</th>
<th>Extensively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (2014-15)</td>
<td>13.8%</td>
<td>17.2%</td>
<td>10.3%</td>
<td>24.1%</td>
<td>34.5%</td>
</tr>
<tr>
<td>Cohort 2 (2015-16)</td>
<td>25.0%</td>
<td>9.7%</td>
<td>23.6%</td>
<td>18.1%</td>
<td>23.6%</td>
</tr>
<tr>
<td>Cohort 3 (2016-17)</td>
<td>22.0%</td>
<td>25.4%</td>
<td>28.8%</td>
<td>11.9%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Cohort 4 (2017-18)</td>
<td>11.5%</td>
<td>15.4%</td>
<td>30.8%</td>
<td>26.9%</td>
<td>15.4%</td>
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</tbody>
</table>

## Teacher presentation

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Not Observed</th>
<th>Rarely</th>
<th>Somewhat/Occasionally</th>
<th>Frequently</th>
<th>Extensively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (2014-15)</td>
<td>44.8%</td>
<td>27.6%</td>
<td>10.3%</td>
<td>10.3%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Cohort 2 (2015-16)</td>
<td>40.3%</td>
<td>15.3%</td>
<td>23.6%</td>
<td>12.5%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Cohort 3 (2016-17)</td>
<td>44.1%</td>
<td>16.9%</td>
<td>22.0%</td>
<td>6.8%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Cohort 4 (2017-18)</td>
<td>50.0%</td>
<td>23.1%</td>
<td>7.7%</td>
<td>7.7%</td>
<td>11.5%</td>
</tr>
</tbody>
</table>
• Teachers continue to favor coaching and facilitating instruction over presentations

• All three participant groups (principals, teachers, S.T.A.T. teachers) reported increases in student-centered, differentiated, and individualized instruction this year

• Participants believe that teachers are now making more frequent and varied use of instructional technology as compared with previous years

• Slight discrepancies were found between what was reported by participants during interviews, and what was observed by researchers during the observations
## Impact on Digital Content

**Deliver instruction customized to students' needs.**

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Never</th>
<th>At least once per month</th>
<th>At least once a week</th>
<th>At least once a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1</td>
<td>+</td>
<td>25.9%</td>
<td>70.4%</td>
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</tr>
<tr>
<td>Cohort 2</td>
<td>+</td>
<td>9.3%</td>
<td>36.3%</td>
<td>50.5%</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>7.2%</td>
<td>15.6%</td>
<td>40.9%</td>
<td>36.2%</td>
</tr>
<tr>
<td>Cohort 4</td>
<td>+</td>
<td>30.8%</td>
<td>37.5%</td>
<td>27.5%</td>
</tr>
</tbody>
</table>

**Develop assignments.**

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Never</th>
<th>At least once per month</th>
<th>At least once a week</th>
<th>At least once a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1</td>
<td>+</td>
<td>20.4%</td>
<td>24.1%</td>
<td>51.9%</td>
</tr>
<tr>
<td>Cohort 2</td>
<td>+</td>
<td>9.8%</td>
<td>14.7%</td>
<td>42.6%</td>
</tr>
<tr>
<td>Cohort 3</td>
<td>12.3%</td>
<td>21.0%</td>
<td>35.5%</td>
<td>31.2%</td>
</tr>
<tr>
<td>Cohort 4</td>
<td>11.6%</td>
<td>27.3%</td>
<td>33.1%</td>
<td>28.1%</td>
</tr>
</tbody>
</table>
Summary: Digital Content

• Most teachers reported regular use of BCPS One. The platform was used by teachers…
  – *Most often* to create customized instruction based on student’s needs
  – *Frequently* to develop assignments and assessments (particularly by secondary teachers)
  – *Infrequently* to create homework assignments

• Teachers and principals reported that technology integration has deepened as a result of the initiative.

• Teachers reported that technology is now a “very strong” part of both their teaching practice and instructional planning.
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- Year 2+
  - P21 Skills

Goals
- Year 3+
  - Student Achievement
    - MAP
  - PARCC
  - Graduate Globally Competitive Students
## Impact on Student Engagement

### Student use of digital tools for learning

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Not Observed</th>
<th>Rarely</th>
<th>Somewhat/Occasionally</th>
<th>Frequently</th>
<th>Extensively</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort 1 (2014-15)</td>
<td>31.0%</td>
<td>6.9%</td>
<td>31.0%</td>
<td>17.2%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Cohort 2 (2015-16)</td>
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<td>23.6%</td>
<td>15.3%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Cohort 3 (2016-17)</td>
<td>39.0%</td>
<td>10.2%</td>
<td>16.9%</td>
<td>13.6%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Cohort 4 (2017-18)</td>
<td>42.3%</td>
<td>7.7%</td>
<td>11.5%</td>
<td>19.2%</td>
<td>19.2%</td>
</tr>
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</table>

### Independent work

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Not Observed</th>
<th>Rarely</th>
<th>Somewhat/Occasionally</th>
<th>Frequently</th>
<th>Extensively</th>
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</thead>
<tbody>
<tr>
<td>Cohort 1 (2014-15)</td>
<td>20.7%</td>
<td>10.3%</td>
<td>37.9%</td>
<td>13.8%</td>
<td>17.2%</td>
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<tr>
<td>Cohort 2 (2015-16)</td>
<td>26.4%</td>
<td>12.5%</td>
<td>25.0%</td>
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<td>27.8%</td>
</tr>
<tr>
<td>Cohort 3 (2016-17)</td>
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<td>32.2%</td>
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<tr>
<td>Cohort 4 (2017-18)</td>
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<td>+</td>
<td>19.2%</td>
<td>30.8%</td>
<td>26.9%</td>
</tr>
</tbody>
</table>
Summary: Student Engagement

• During observations, students were frequently observed using digital tools for learning

• All three participant groups reported that student engagement has improved as a result of the initiative

• Participants shared mixed views on the impact on student behavior and classroom management
  – Challenges continue with students misusing devices (e.g., accessing recreational content on the internet)
  – Behavior challenges appear to be most prevalent in Cohorts 3 and 4
Impact on P21 Skills

**Project-based approaches to instruction**

- Cohort 1 (2014-15): 96.6%
- Cohort 2 (2015-16): 90.3%
- Cohort 3 (2016-17): 93.2%
- Cohort 4 (2017-18): 84.6%

**Learning incorporates authentic/real world contexts**

- Cohort 1 (2014-15): 75.9% Not Observed, 6.9% Rarely, 10.3% Somewhat/Occasionally, 6.9% Frequently, 6.9% Extensively
- Cohort 2 (2015-16): 68.1% Not Observed, 5.6% Rarely, 13.9% Somewhat/Occasionally, 5.6% Frequently, 6.9% Extensively
- Cohort 3 (2016-17): 64.4% Not Observed, 10.2% Rarely, 6.8% Somewhat/Occasionally, 5.1% Frequently, 13.6% Extensively
- Cohort 4 (2017-18): 73.1% Not Observed, 7.7% Rarely, + 11.5% Extensively

+ < 5.0%
Summary: Impact on P21 Skills

• Observation results were similar with baseline, regardless of cohort

• All three participant groups perceive that students’ P21 skills are improving – particularly as it relates to students’ abilities to collaborate with others

• More professional development on P21 oriented instruction may be warranted
Student Achievement

• NWEA MAP
  – BCPS Grades 1-3
  – Lighthouse Grades K, 4, and 5
  – Lighthouse Grade 6

• PARCC
  – BCPS Grade 3
  – Lighthouse Grades 4 and 5
  – Lighthouse Grade 6
Student Achievement: MAP Grades 1-3

• Mathematics
  – Grades 1 and 2: MAP scores improved across years (2013-14 through 2017-18)
  – Grade 3: MAP scores were comparable
  – All exceeded national average for meeting growth expectations

• Reading/ELA
  – Grades 1 and 2: MAP scores improved across years (2013-14 through 2017-18)
  – Grade 3: MAP scores were comparable
  – All exceeded national average for meeting growth expectations
Student Achievement: 
MAP Lighthouse Grades K, 4, 5

• Mathematics
  – All: MAP scores remained comparable through S.T.A.T. implementation years
  – Exceeded national average for meeting growth expectations

• Reading/ELA
  – All: MAP scores remained comparable through S.T.A.T. implementation years
  – Exceeded national average for meeting growth expectations
Student Achievement: MAP Lighthouse Grade 6

• Mathematics
  – Scores remained comparable during S.T.A.T. implementation
  – Exceeded national average for meeting growth expectations

• Reading/ELA
  – Scores remained comparable during S.T.A.T. implementation
  – Exceeded national average for meeting growth expectations
## PARCC Comparisons

<table>
<thead>
<tr>
<th></th>
<th>Total Enrollment</th>
<th>Race/Ethnicity</th>
<th>Free and Reduced Price Meals (FARMS)</th>
<th>LEP</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>African American %</td>
<td>White %</td>
<td>Hispanic/ Latino %</td>
</tr>
<tr>
<td>BCPS</td>
<td>113,282</td>
<td>39.1</td>
<td>38.7</td>
<td>9.7</td>
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<tr>
<td>District A</td>
<td>81,379</td>
<td>20.6</td>
<td>55.4</td>
<td>13.7</td>
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<tr>
<td>District B</td>
<td>159,010</td>
<td>21.3</td>
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<td>30.1</td>
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<tr>
<td>District C</td>
<td>130,814</td>
<td>59.8</td>
<td>4.2</td>
<td>31.3</td>
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<tr>
<td>State</td>
<td>886,221</td>
<td>34.1</td>
<td>38.2</td>
<td>16.5</td>
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</table>
Student Achievement: PARCC Mathematics Proficiency


<table>
<thead>
<tr>
<th>Grade</th>
<th>Lighthouse</th>
<th>Non-Lighthouse</th>
<th>District A</th>
<th>District B</th>
<th>District C</th>
<th>State</th>
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</thead>
<tbody>
<tr>
<td>Gr. 3</td>
<td>13.64</td>
<td>9.63</td>
<td>5.68</td>
<td>5.90</td>
<td>13.95</td>
<td>12.22</td>
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<td>Gr. 4</td>
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<td>8.14</td>
<td>10.66</td>
<td>10.66</td>
<td>3.65</td>
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<td>Gr. 5</td>
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<td>0.82</td>
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<td>3.32</td>
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<td>Gr. 6</td>
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<td>2.34</td>
<td>3.29</td>
<td>2.54</td>
<td>2.34</td>
<td>2.34</td>
</tr>
</tbody>
</table>
Student Achievement: PARCC Mathematics

• Grade 3
  – Stable 2016-17 to 2017-18

• Grade 4 Lighthouse
  – Stable 2016-17 to 2017-18

• Grade 5 Lighthouse
  – Increased proportion from 2016-17 to 2017-18

• Grade 6 Lighthouse
  – Slight increase from 2016-17 to 2017-18
Student Achievement: PARCC ELA Proficiency


Point Change

Gr. 3  Gr. 4  Gr. 5  Gr. 6

Lighthouse  Non-Lighthouse  District A  District B  District C  State

-5.95  6.44  5.55  0.68  7.10  6.70  7.08  2.95  4.51  1.51  3.08  4.48  4.48  2.11  3.84  6.94  2.07  2.48
Student Achievement: PARCC ELA

- Grade 3
  - Stable 2016-17 to 2017-18
- Grade 4 – 5 Lighthouse
  - Stable 2016-17 to 2017-18
- Grade 6 Lighthouse
  - Slight increase from 2016-17 to 2017-18
Perceptions of S.T.A.T.

• Principals, S.T.A.T. teachers, classroom teachers:
  – View S.T.A.T. favorably
  – Instruction has become more student-centered and individualized

• Parents and students:
  – The majority hold positive perceptions towards personalized learning and the use of instructional technology
Recommendations

• Distribution of S.T.A.T. teachers

• Teacher planning time

• Targeted professional development

• Middle school students store the laptops at school
Conclusion

- Highly positive perceptions of S.T.A.T. teachers

- S.T.A.T. valued for moving instruction, district-wide, in a more student-centered direction

- S.T.A.T. viewed positively by all stakeholders (principals, teachers, students, and parents)

- Positive achievement trends on MAP, particularly for Cohort 1 implementers

- Greater PARCC mathematics and ELA proficiency change in some grades (Lighthouse 4-5)