S.T.A.T. Year One Evaluation

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Displayed is the evaluation model including timeframes for when one may expect to see results. In year one and beyond, we will expect to see the impact of professional development on the classroom environment, teacher practice, and access/use of digital content. Also in year one and beyond, we expect to see the impact on student engagement. The impact on P21 skills will likely be evident in year two and beyond. The effect on goals, including student achievement, will be evident in years three to four and beyond.
End of year summative report examined
- Professional development received from the district in addition to the PD and support received by classroom teachers from S.T.A.T. teachers
- S.T.A.T. teacher roles, best practices
- the impact of professional development on measurable outcomes (classroom environment, teacher practices, student engagement/P21 skills, digital content)
### Data Sources

- **Lighthouse School Interviews and Focus Groups**
  (principals, S.T.A.T. teachers, classroom teachers)

- **Lighthouse Classroom Teacher Survey**
  (CRRE survey)

- **S.T.A.T. Teacher Program Survey**
  (BCPS survey)

- **Classroom observations in Lighthouse Schools**
  (OASIS-21 Instrument)

- **Digital content usage**
  (Engrade - BCPS One)

- **Student behavioral data from Lighthouse Schools**

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Data sources included
- interviews and focus groups with Lighthouse school participants
- The Lighthouse Classroom teacher survey
- STAT teacher program survey
- Classroom observations in April (40 classrooms observed for 20 minutes each = 800 minutes of observations)
- BCPS One usage as provided by Engrade
- Student behavioral data including attendance, office referrals, and suspensions
Preview of Year One Results

- Research on school-district technology integration initiatives shows\(^1\):
  - Success in bringing more devices into classrooms
  - Challenges in improving teaching effectiveness (i.e., changing traditional practices)

- First-year results in BCPS show:
  - Promising changes from teacher- to student-centered learning
  - Increasing cooperative learning and teacher coaching
  - Increasing focus on P21 activities (projects, inquiry, problem solving)
  - Decreasing focus on independent practice, teacher questioning and feedback
  - Increasing student engagement

Based on the S.T.A.T. logic model, professional development should lead to measurable outcomes and the achievement of BCPS goals.

A teacher survey was administered to all classroom teachers within the district to obtain their perspectives on the S.T.A.T. teacher program, an important component of the S.T.A.T. initiative.

Interviews and classroom teacher focus groups also solicited perceptions of professional development offered through the district and by the S.T.A.T. teacher
The S.T.A.T. teacher program survey was administered in October and again in April. April survey results, displayed on the slide, indicated that participation in large group PD was comparable, though classroom teachers within Lighthouse schools participated in small group, individual/1:1 support, and independent learning PD to a significantly greater extent than non-Lighthouse classroom teachers.

The reported participations in independent learning opportunities significantly increased between the October and April survey for classroom teachers in both Lighthouse and non-Lighthouse schools.
Classroom teachers and principals within Lighthouse schools viewed the S.T.A.T. teacher as critical to the successful implementation of S.T.A.T.

Classroom teachers in non-Lighthouse schools indicated the need for clearly defined roles and responsibilities for the S.T.A.T. teacher. There was concern expressed for this position relative to other priorities within non-Lighthouse schools. The more reserved attitudes of teachers seems understandable because they have yet to experience the impacts of technology integration and supports offered by S.T.A.T. teachers.

There was also the expressed need for S.T.A.T. teachers to have dedicated time within the school as classroom teachers conveyed their S.T.A.T. teacher was unavailable due to PD, working at another school, or completing tasks teachers did not perceive as fulfilling the S.T.A.T. teacher role.

S.T.A.T. Teacher Program

- S.T.A.T. teachers were viewed as knowledgeable, supportive, and a valuable resource
- Instrumental within Lighthouse schools
- Non-Lighthouse schools:
  - Need clearly defined roles of the S.T.A.T. teacher
  - Dedicated time within the school
In order to assess the early impact on the classroom environment and teacher practice, classroom observations were conducted in Lighthouse schools and results of April observations were compared with the December (baseline) observations.

Access to digital content was examined through teacher, student, and parent use of BCPS One.
The observation instrument examined components specific to the classroom environment, teacher practice, student engagement, and P21 skills. Each item was rated as to the extent it was observed during the 20-minute observation session.

### Observation Rating Scales

- **Not observed**: Not observed in class
- **Rarely**: Received little emphasis/time in class
- **Somewhat/Occasionally**: Receives modest emphasis/time in class
- **Frequently**: Receives substantial emphasis/time in class
- **Extensive(ly)**: Highly prevalent in class
Classroom observations examined aspects of the classroom environment. Students were observed utilizing different work spaces to a lesser extent in the spring as compared with the baseline observations, though the difference was not statistically significant. Interviews and focus groups with Lighthouse participants conveyed classrooms did support the use of different work spaces for different modes of instruction and further that students were often provided the choice of whether they wanted to work independently, in pairs, or in small groups.

There was also a slight decline in the degree to which students independently acquired materials or resources. We may expect less frequent movement by students within the classrooms as they access necessary resources on their individual devices.
Observation items also examined the impact on teacher practices. Observation findings indicated teachers were more frequently facilitating instruction than presenting information in the spring as compared with the baseline observations.
There was a reduction, however, in the degree to which teachers were flexibly grouping students based on needs. A possible explanation in the reduction of flexible grouping is the student choice in the format with which they desired to learn as described by Lighthouse participants. During spring observations, higher-level questioning was apparent, though to a lesser degree than observed in the fall.
During spring observations, we noted similarities in the frequency that higher-order instructional feedback was given to students but a decline in the occurrence of student-initiated communication.
Summary: Impact on Teacher Practice

• Reduction in questioning, feedback, and student-initiated communication
  – Less applicable supports in a student-centered learning environment

• Teachers discussed their shift to facilitating learning and relinquishing control of the learning process to their students.
One aspect examined in terms of digital content usage was how teachers were using BCPS One. Specifically, we looked at the frequency at which different categories of tiles were created across BCPS and by Lighthouse as compared with non-LH classroom teachers.

Similar to the first semester, we found that non-Lighthouse classroom teachers were using BCPS One mostly for assignments, whereas Lighthouse classroom teacher used BCPS One for instructional content as well as assignments. BCPS offered that this difference is likely due to the PD offered to Lighthouse teachers on using BCPS One for instruction as well as the availability of devices to facilitate student access of instructional materials on BCPS One.

We did note an increase in the creation of file and repository content tiles within Lighthouse schools during the second semester as compared with the spring. Concurrently, student views within these tile categories also increase. According to Lighthouse classroom teacher survey results, teachers were fairly frequently utilizing BCPS One to differentiate instruction to students.
We also examined the impact of PD on the second category of measurable outcomes, student engagement and P21 skills. We expected that since S.T.A.T. was still in its first year of implementation within Lighthouse schools that we might see a small amount of evidence relating to the effect on student engagement and P21 skills.
As with the fall observations, in nearly half of the classrooms observed during the spring, students were using digital tools for learning to a frequent or extensive degree. We observed multiple modes of student responses to a significantly lesser extent during the spring than we noted during the fall. Within classrooms observed in the spring, students primarily utilized one mode of response, typically verbal, physical, or written.
We also noted a decrease in independent work and an increase in collaborative learning in these spring observations. Students were less likely to be observed independently working on tasks and more frequently were observed working in pairs or small groups.

![Impact on Student Engagement](image)

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent work</strong></td>
<td>15.0% 32.5% 42.5% 10.0%</td>
<td>22.5% 12.5% 32.5% 22.5% 10.0%</td>
</tr>
<tr>
<td><strong>Collaborative learning</strong></td>
<td>57.5% 22.5% 7.5% 12.5%</td>
<td>55.0% 12.5% 12.5% 12.5% 7.5%</td>
</tr>
</tbody>
</table>

- Not observed
- Rarely
- Occasionally
- Frequently
- Extensively
Student discussion was documented when students engaged with their peers on a prompted or high-level topic. We noted an increase in the use of this strategy during the spring as compared with the baseline observations.
Interviews and focus groups within Lighthouse schools indicated a strong impact on student engagement. Participants frequently discussed students’ increased desire to learn this past year and referenced the ability for students to choose how they wanted to learn such as the format (independently, in pairs) and the mode (with or without technology). Classroom teachers described students selecting their own activities to deepen their understanding of a topic and the ability for the teachers to offer remedial instruction for those in need.

While significant differences were not observed in the number of office referrals and suspensions within Lighthouse schools during this first year of S.T.A.T. as compared with the previous year, principals discussed improvements in student behavior within their schools.
The impact on 21st century skills was also observed in classrooms. We saw an increase in the extent to which students engaged in problem solving and we also observed an increase in the use of authentic or real world contexts for learning.

Classroom teachers in Lighthouse schools indicated students were learning to become more independent when faced with a problem. Teachers provided examples of students working together to solve issues with their devices before approaching the teacher and to engage in critical thinking to a greater extent.
Although the presence of inquiry- and project-based approaches to instruction was still rare, we did note an increase in the use of these approaches during the spring.
Summary: Impact on P21 Skills

• Increased frequency for all observation items

• S.T.A.T. teachers:
  – Improvement in critical thinking and problem-solving skills
Overall, it appears that the S.T.A.T. teacher is viewed as a valuable resource and critical to the transformation within Lighthouse schools. There was, however, concern expressed by non-Lighthouse teachers regarding this position.

Lighthouse schools exhibited growth in many areas reflected in classroom observation findings during the spring. The growth may be attributed to the active, supportive, and resourceful S.T.A.T. teachers within these schools.
Based on the evaluation findings, we offer recommendations for future years of S.T.A.T.

1. Professional development:
   - offer differentiated sessions during the summer to accommodate those with less technological skills than others
   - Provide modeled teacher lessons videotaped to serve as examples for strategies and approaches

2. Curriculum:
   - Update the curriculum to reflect the student-centered approach to instruction and the thoughtful and planned integration of technology into the lessons

3. Technology integration:
   - Increase the focus on making sure technology tools are not just being used without clear curriculum and instructional purposes

4. S.T.A.T. message:
   - Leadership must understand and communicate that S.T.A.T. is using technology to support the goal of increasing higher-order, student-centered learning to improve academic achievement and mastery of P21 skills.