School Start Times Survey Analysis

Prepared for Central Bucks School District

June 2019
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Introduction

In this report, Hanover Research analyzes and summarizes the results from the School Start Times Survey. In total, 11,007 respondents provided quality survey responses. The report includes results from 4,540 parents, 3,056 middle school students, 2,325 high school students, 602 staff members, 295 staff members who are also parents, 95 community members, and 94 alumni.

Goals:
1) Determine stakeholders’ perceptions of school start times
2) Examine stakeholders’ opinions on changing school start times

Approach:
Online survey of parents, students, staff members, community member, and alumni in April and May 2019.

Which of the following best describes your role at Central Bucks School District (CBSD)? (n=11,007)

- Parent or guardian of a student currently enrolled in a CBSD school: 41%
- Student currently enrolled in a CBSD middle school: 28%
- Student currently enrolled in a CBSD high school: 21%
- Teacher or other staff member at a CBSD school: 5%
- I am both a staff member and a parent of a student: 3%
- Community member: 1%
- Alumni of a CBSD school: 1%
Key Findings – Satisfaction with the Current Schedule

- **Respondents** are satisfied with current elementary school start times, but dissatisfied with middle and high school start times. Satisfaction with current start times varies across stakeholders; parents/guardians are more satisfied with elementary start times, while staff are more satisfied with middle and high school start times.

- **In general, respondents do not agree that current school start times are beneficial to students.** Just 27% of all respondents agree or strongly agree that current school start times benefit students, with the lowest levels of agreement reported for benefits to students’ emotional health (22%) and sleep (22%). The lowest levels of agreement are reported among middle and high school students, district alumni, and community members.

  - **66%** of respondents are satisfied with elementary start times
  - **27%** of respondents are satisfied with middle start times
  - **25%** of respondents are satisfied with high start times
  - **27%** of respondents agree or strongly agree that current school start times benefit students, including:
    - **17-22%** of middle/high school students
    - **33%** of parents
    - **36-37%** of staff/staff who are also parents
Key Findings – Support for Changes to Start Times

- The majority of respondents believe that Central Bucks School District should consider changing school start times. The highest levels of support for further considering this issue are reported among high school students, while the lowest levels are reported among staff and staff members who are also parents.

- Among respondents who are dissatisfied with current start times, the majority would prefer middle and high school begin “slightly later,” while a plurality would prefer elementary schools begin “slightly earlier.” The majority of respondents support or strongly support the high school day starting and ending 30 minutes to 45 minutes later than the current schedule (64% and 57%, respectively).

67% of respondents believe the district should consider changing school start times, including:

- 68-71% of middle/high school students
- 67% of parents
- 51-58% of staff/staff who are also parents

45% of dissatisfied respondents prefer elementary schools begin “slightly earlier”

59% of dissatisfied respondents prefer middle and high schools begin “slightly later”
Key Findings – Importance of Sleep & Perceived Impact

- Respondents who support consideration of changing start times feel that research on children’s sleep should be the most important factor in determining school start times. At the high school level, the majority of respondents believe that later school start times would have a positive impact on students’ sleep and wellbeing (76%).

- Despite perceived positive impacts for high schoolers, many respondents are uncertain about the potential impact of changes to school start times at the elementary level. More than one third of respondents believe that an earlier school start time would have a negative impact on elementary students’ sleep and wellbeing, and another 38 percent are unsure of the potential impact on elementary students’ sleep.

- 79% of respondents who support considering a change to start times think that research on child/adolescent sleep should be the most important factor or district leaders to consider when setting school start times.

- 76% of respondents believe that later school start times would have a positive impact on high school students’ sleep and wellbeing.

- 35% of respondents believe that earlier school start times would have a negative impact on elementary school students’ sleep and wellbeing.
Key Findings – Perceived Impact on Other Factors

- **Beyond impacts on sleep, respondents believe later start times will further benefit high school students.** High school stakeholders believe later start times would have a positive impact on students’ academic achievement, stress levels, and attendance. In contrast, the majority of elementary school stakeholders report uncertainty about the potential impact of an earlier school start time on factors such as transportation, safety, and attendance.

- **Among stakeholder groups, teachers and staff are less likely to support changes to start times and more likely to report concern over potential negative impacts.** Teachers and staff believe that changes to school start times will negatively impact their school- and non-school-related before-school activities at the elementary level and after-school activities at the high school level.

  - **67-68% of respondents** believe a later high school start time would improve students’ academic achievement, stress levels, and attendance.

  - **56-55% of teacher and staff respondents** think a later high school start time will negatively impact after-school activities/responsibilities.

  - **43% of teacher and staff respondents** think an earlier elementary school start time will negatively impact their before-school activities/responsibilities.
Recommendations

Based on survey results, Hanover recommends Central Bucks School District should...

- **Form a working group to further investigate the potential impact of changing school start times in the district.** The working group should be composed of various stakeholders (i.e., teachers, parents, students, administrators, and operational personnel), and should focus on the educational and practical implications of proposed changes to school start times, including potential benefits for learning as well as impacts on transportation, childcare, and before- and after-school programming.

- **Conduct a research brief on the literature surrounding school start times and children’s sleep schedules.** Stakeholders typically rank the research on children’s sleep as the most important factor in setting new school start times; as such, a public-facing research brief can help summarize what is known about school start times and children’s sleep schedules at various ages and ensure that stakeholders have the information needed to make key decisions.
SECTION I: PERCEPTIONS OF CURRENT SCHOOL SCHEDULES
Perceptions of Current School Schedules

Please rate your level of agreement with each of the following statements: The current school start times...

- Help students to get to school on time. (n=10,485)
  - Strongly Disagree: 22%
  - Disagree: 29%
  - Neither Disagree nor Agree: 22%
  - Agree: 18%
  - Strongly Agree: 9%

- Benefit students. (n=10,524)
  - Strongly Disagree: 23%
  - Disagree: 29%
  - Neither Disagree nor Agree: 21%
  - Agree: 17%
  - Strongly Agree: 9%

- Positively impact students' school readiness. (n=10,488)
  - Strongly Disagree: 25%
  - Disagree: 32%
  - Neither Disagree nor Agree: 19%
  - Agree: 16%
  - Strongly Agree: 9%

- Positively impact students' academic performance. (n=10,486)
  - Strongly Disagree: 23%
  - Disagree: 31%
  - Neither Disagree nor Agree: 23%
  - Agree: 15%
  - Strongly Agree: 9%

- Positively impact students' physical health. (n=10,451)
  - Strongly Disagree: 23%
  - Disagree: 30%
  - Neither Disagree nor Agree: 24%
  - Agree: 15%
  - Strongly Agree: 8%

- Positively impact students' sleep. (n=10,538)
  - Strongly Disagree: 40%
  - Disagree: 26%
  - Neither Disagree nor Agree: 12%
  - Agree: 13%
  - Strongly Agree: 9%

- Positively impact students' emotional health. (n=10,451)
  - Strongly Disagree: 27%
  - Disagree: 29%
  - Neither Disagree nor Agree: 22%
  - Agree: 14%
  - Strongly Agree: 8%
Perceptions of Current School Schedules

Please rate your level of agreement with each of the following statements: The current school start times...

("% of respondents who “agree” or “strongly agree")

- Parent or Guardian (n=4,238-4,259)
- Student- Middle School (n=2,951-3,001)
- Student- High School (n=2,251-2,268)
- Teacher or Staff (n=561-569)
- Both a staff member and a parent (n=270-275)
- Community member (n=86-89)
- Alumni of CBSD (n=84-86)

- ...help students to get to school on time.*
  - Parent or Guardian: 22%, 33%
  - Student- Middle School: 17%, 33%
  - Student- High School: 19%, 26%
  - Teacher or Staff: 26%
  - Both: 33%
  - Community: 19%
  - Alumni: 23%

- ...benefit students.*
  - Parent or Guardian: 22%, 33%
  - Student- Middle School: 17%, 33%
  - Student- High School: 19%, 26%
  - Teacher or Staff: 27%
  - Both: 36%
  - Community: 27%
  - Alumni: 31%

- ...positively impact students' school readiness.*
  - Parent or Guardian: 18%, 33%
  - Student- Middle School: 13%, 32%
  - Student- High School: 22%, 26%
  - Teacher or Staff: 25%
  - Both: 33%
  - Community: 26%
  - Alumni: 31%

- ...positively impact students' academic performance.*
  - Parent or Guardian: 19%, 31%
  - Student- Middle School: 13%, 31%
  - Student- High School: 20%, 32%
  - Teacher or Staff: 23%
  - Both: 32%
  - Community: 22%
  - Alumni: 31%

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
Perceptions of Current School Schedules

Please rate your level of agreement with each of the following statements: The current school start times...
(% of respondents who “agree” or “strongly agree”)

- **Parent or Guardian (n=4,238-4,259)**
- **Student- Middle School (n=2,951-3,001)**
- **Student- High School (n=2,251-2,268)**
- **Teacher or Staff (n=561-569)**
- **Both a staff member and a parent (n=270-275)**
- **Community member (n=86-89)**
- **Alumni of CBSD (n=84-86)**

- **...positively impact students' physical health.**
- **...positively impact students' sleep.**
- **...positively impact students' emotional health.**

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
SECTION II: SATISFACTION WITH START TIMES BY SCHOOL LEVEL
Elementary School

How satisfied are you with the current elementary school start time? (n=2,974)

- Completely Dissatisfied
- Somewhat Dissatisfied
- Neither Satisfied nor Dissatisfied
- Somewhat Satisfied
- Completely Satisfied

Would you prefer that elementary schools begin earlier or later than the current school start time? (n=755)

- Elementary schools should begin much earlier in the morning.
- Elementary schools should begin slightly earlier in the morning.
- Neither (keep it the same).
- Elementary schools should begin slightly later in the morning.
- Elementary schools should begin much later in the morning.

Note: Questions only shown to parents and staff who has a child or works at an elementary school.
Note: Only those respondents who reported dissatisfaction with current school start times were shown the question about preferences for a different start time.
How satisfied are you with the current elementary school start time?* (% “somewhat” or “completely” satisfied)

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent or Guardian (n=2,621)</td>
<td>67%</td>
</tr>
<tr>
<td>Teacher or Staff (n=154)</td>
<td>55%</td>
</tr>
<tr>
<td>Both a staff member and a parent (n=199)</td>
<td>62%</td>
</tr>
</tbody>
</table>

Would you prefer that elementary schools begin earlier or later than the current school start time?

- Elementary schools should begin much earlier in the morning.*
  - Parent or Guardian (n=647): 13%
  - Teacher or Staff (n=52): 10%
  - Both a staff member and a parent (n=56): 13%

- Elementary schools should begin much later in the morning.*
  - Parent or Guardian (n=647): 8%
  - Teacher or Staff (n=52): 5%
  - Both a staff member and a parent (n=56): 2%

- Elementary schools should begin slightly later in the morning.*
  - Parent or Guardian (n=647): 63%
  - Teacher or Staff (n=52): 48%
  - Both a staff member and a parent (n=56): 50%

- Elementary schools should begin slightly earlier in the morning.
  - Parent or Guardian (n=647): 35%
  - Teacher or Staff (n=52): 32%
  - Both a staff member and a parent (n=56): 34%

- Neither (keep it the same).
  - Parent or Guardian (n=647): 15%
  - Teacher or Staff (n=52): 16%
  - Both a staff member and a parent (n=56): 16%

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.

Note: Questions only shown to parents and staff who has a child or works at an elementary school.

Note: Only those respondents who reported dissatisfaction with current school start times were shown the question about preferences for a different start time.
How satisfied are you with the current middle school start time?
(n=5,310)

- Completely Dissatisfied: 28%
- Somewhat Dissatisfied: 35%
- Neither Satisfied nor Dissatisfied: 10%
- Somewhat Satisfied: 10%
- Completely Satisfied: 17%

Would you prefer that middle schools begin earlier or later than the current school start time?
(n=3,358)

- Middle schools should begin much earlier in the morning: 1%
- Middle schools should begin slightly earlier in the morning: 1%
- Neither (keep it the same): 3%
- Middle schools should begin slightly later in the morning: 59%
- Middle schools should begin much later in the morning: 36%

Note: Questions only shown to middle school students, and parents and staff who has a child or works at a middle school.
Note: Only those respondents who reported dissatisfaction with current school start times were shown the question about preferences for a different start time.
Middle School - By Stakeholder Group

**How satisfied are you with the current middle school start time?**
(% “somewhat” or “completely” satisfied)

- **Parent or Guardian (n=1,966)**
  - Somewhat or completely satisfied: 24%

- **Student- Middle School (n=2,977)**
  - Somewhat or completely satisfied: 26%

- **Teacher or Staff (n=214)**
  - Somewhat or completely satisfied: 57%

- **Both a staff member and a parent (n=153)**
  - Somewhat or completely satisfied: 34%

**Would you prefer that middle schools begin earlier or later than the current school start time?**

- **Middle schools should begin much earlier in the morning.**
  - Parent or Guardian (n=1,359)
    - Somewhat or completely satisfied: 0%
  - Student- Middle School (n=1,847)
    - Somewhat or completely satisfied: 2%
  - Teacher or Staff (n=64)
    - Somewhat or completely satisfied: 0%
  - Both a staff member and a parent (n=88)
    - Somewhat or completely satisfied: 2%

- **Middle schools should begin slightly earlier in the morning.**
  - Parent or Guardian (n=1,359)
    - Somewhat or completely satisfied: 36%
  - Student- Middle School (n=1,847)
    - Somewhat or completely satisfied: 57%
  - Teacher or Staff (n=64)
    - Somewhat or completely satisfied: 0%
  - Both a staff member and a parent (n=88)
    - Somewhat or completely satisfied: 0%

- **Neither (keep it the same).**
  - Parent or Guardian (n=1,359)
    - Somewhat or completely satisfied: 17%
  - Student- Middle School (n=1,847)
    - Somewhat or completely satisfied: 38%
  - Teacher or Staff (n=64)
    - Somewhat or completely satisfied: 6%
  - Both a staff member and a parent (n=88)
    - Somewhat or completely satisfied: 31%

- **Middle schools should begin slightly later in the morning.**
  - Parent or Guardian (n=1,359)
    - Somewhat or completely satisfied: 0%
  - Student- Middle School (n=1,847)
    - Somewhat or completely satisfied: 59%
  - Teacher or Staff (n=64)
    - Somewhat or completely satisfied: 0%
  - Both a staff member and a parent (n=88)
    - Somewhat or completely satisfied: 0%

- **Middle schools should begin much later in the morning.**
  - Parent or Guardian (n=1,359)
    - Somewhat or completely satisfied: 0%
  - Student- Middle School (n=1,847)
    - Somewhat or completely satisfied: 64%
  - Teacher or Staff (n=64)
    - Somewhat or completely satisfied: 0%
  - Both a staff member and a parent (n=88)
    - Somewhat or completely satisfied: 0%

**Note:** (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.

Note: Questions only shown to middle school students, and parents and staff who has a child or works at a middle school.

Note: Only those respondents who reported dissatisfaction with current school start times were shown the question about preferences for a different start time.
High School

**How satisfied are you with the current high school start time?**
(n=3,991)

- Completely Dissatisfied: 29%
- Somewhat Dissatisfied: 37%
- Neither Satisfied nor Dissatisfied: 9%
- Somewhat Satisfied: 9%
- Completely Satisfied: 15%

**Would you prefer that high schools begin earlier or later than the current school start time?**
(n=2,633)

- High schools should begin much earlier in the morning: 1%
- High schools should begin slightly earlier in the morning: 1%
- Neither (keep it the same): 2%
- High schools should begin slightly later in the morning: 38%
- High schools should begin much later in the morning: 59%

Note: Questions only shown to high school students, and parents and staff who has a child or works at a high school.

Note: Only those respondents who reported dissatisfaction with current school start times were shown the question about preferences for a different start time.
How satisfied are you with the current high school start time?* (% “somewhat” or “completely” satisfied)

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent or Guardian (n=1,390)</td>
<td>27%</td>
</tr>
<tr>
<td>Student- High School (n=2,250)</td>
<td>22%</td>
</tr>
<tr>
<td>Teacher or Staff (n=213)</td>
<td>41%</td>
</tr>
<tr>
<td>Both a staff member and a parent (n=138)</td>
<td>30%</td>
</tr>
</tbody>
</table>

Would you prefer that high schools begin earlier or later than the current school start time?

- Parent or Guardian (n=903)
  - High schools should begin much earlier in the morning: 0%
  - High schools should begin slightly earlier in the morning: 0%
  - Neither (keep it the same): 2%
  - High schools should begin slightly later in the morning: 3%
  - High schools should begin much later in the morning: 4%

- Student- High School (n=1,539)
  - High schools should begin much earlier in the morning: 0%
  - High schools should begin slightly earlier in the morning: 1%
  - Neither (keep it the same): 4%
  - High schools should begin slightly later in the morning: 3%
  - High schools should begin much later in the morning: 3%

- Teacher or Staff (n=103)
  - High schools should begin much earlier in the morning: 3%
  - High schools should begin slightly earlier in the morning: 4%
  - Neither (keep it the same): 0%
  - High schools should begin slightly later in the morning: 3%
  - High schools should begin much later in the morning: 3%

- Both a staff member and a parent (n=88)
  - High schools should begin much earlier in the morning: 3%
  - High schools should begin slightly earlier in the morning: 3%
  - Neither (keep it the same): 0%
  - High schools should begin slightly later in the morning: 2%
  - High schools should begin much later in the morning: 4%

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
Note: Questions only shown to high school students, and parents and staff who has a child or works at a high school.
Note: Only those respondents who reported dissatisfaction with current school start times were shown the question about preferences for a different start time.
SECTION III: PERCEPTIONS OF POTENTIAL START TIMES
Perceptions of Potential Start Times

Do you believe CBSD should consider changing the current school start times? (n=10,544)

- Yes: 67%
- No: 24%
- Don't Know: 9%

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
In your opinion, which of the following factors are most important for district leaders to consider when setting school start times?

*(n=7,024)*

- Research on child/adolescent sleep: 79%
- Time for homework: 40%
- Timing of extracurricular activities (e.g., athletics, clubs, part-time jobs): 34%
- Student safety: 31%
- Family routines (e.g., family time, family dinner): 24%
- Work schedules for parents/guardians: 20%
- Availability of transportation to/from school: 16%
- Traffic congestion dropping students off and picking students up: 10%
- Before- and after-school care for students and/or younger siblings: 10%
- Work schedules for school staff: 5%
- None of the above: 1%

Note: Question only shown to respondents who believe CBSD should change the start time.
Perceptions of Potential Start Times

Please indicate the type of impact that an earlier elementary school start time would have in each of the following areas.

- Negative
- Neutral
- Positive

<table>
<thead>
<tr>
<th>Area</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ time spent on homework (n=8,443)</td>
<td>17%</td>
<td>48%</td>
<td>35%</td>
</tr>
<tr>
<td>Family routines (n=8,478)</td>
<td>22%</td>
<td>45%</td>
<td>33%</td>
</tr>
<tr>
<td>Non-school sponsored or related activities (n=7,647)</td>
<td>19%</td>
<td>49%</td>
<td>31%</td>
</tr>
<tr>
<td>Students’ academic achievement (n=8,389)</td>
<td>22%</td>
<td>50%</td>
<td>28%</td>
</tr>
<tr>
<td>Teachers’ commute to/from work (n=663)</td>
<td>29%</td>
<td>43%</td>
<td>28%</td>
</tr>
<tr>
<td>Students’ before-/after-school care (n=6,988)</td>
<td>26%</td>
<td>47%</td>
<td>27%</td>
</tr>
<tr>
<td>Students’ sleep and well-being (n=8,605)</td>
<td>35%</td>
<td>38%</td>
<td>27%</td>
</tr>
<tr>
<td>Students’ school attendance (n=8,338)</td>
<td>21%</td>
<td>53%</td>
<td>26%</td>
</tr>
<tr>
<td>Students’ safety (n=8,241)</td>
<td>16%</td>
<td>59%</td>
<td>24%</td>
</tr>
<tr>
<td>Students’ stress levels (n=8,387)</td>
<td>31%</td>
<td>45%</td>
<td>24%</td>
</tr>
<tr>
<td>Teachers’ non-school related before-school activities/responsibilities (n=635)</td>
<td>43%</td>
<td>37%</td>
<td>20%</td>
</tr>
<tr>
<td>Students’ travel to/from school (n=3,463)</td>
<td>21%</td>
<td>60%</td>
<td>19%</td>
</tr>
<tr>
<td>Teachers’ families’ household expenses (n=589)</td>
<td>32%</td>
<td>48%</td>
<td>19%</td>
</tr>
<tr>
<td>Teachers’ school-related before-school activities/responsibilities (n=648)</td>
<td>43%</td>
<td>38%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Note: Not all statements shown to all respondents.
## % Positive Impact of Earlier Elementary Start Time

<table>
<thead>
<tr>
<th>Areas</th>
<th>Parent or Guardian (n=2,607-3,354)</th>
<th>Student- Middle School (n=2,414-2,662)</th>
<th>Student- High School (n=1,774-1,901)</th>
<th>Teacher or Staff (n=396-449)</th>
<th>Both a staff member and a parent (n=193-241)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ time spent on homework*</td>
<td>29%</td>
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<td>Non-school sponsored or related activities*</td>
<td>28%</td>
<td>34%</td>
<td>33%</td>
<td>-</td>
<td>35%</td>
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<td>Students’ academic achievement*</td>
<td>21%</td>
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<td>36%</td>
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<tr>
<td>Teachers’ commute to/from work</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30%</td>
<td>25%</td>
</tr>
<tr>
<td>Students’ before-/after-school care*</td>
<td>22%</td>
<td>29%</td>
<td>31%</td>
<td>-</td>
<td>23%</td>
</tr>
<tr>
<td>Students’ sleep and well-being*</td>
<td>20%</td>
<td>29%</td>
<td>36%</td>
<td>33%</td>
<td>25%</td>
</tr>
<tr>
<td>Students’ school attendance*</td>
<td>18%</td>
<td>29%</td>
<td>35%</td>
<td>25%</td>
<td>24%</td>
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<td>Students’ safety*</td>
<td>15%</td>
<td>32%</td>
<td>31%</td>
<td>21%</td>
<td>17%</td>
</tr>
<tr>
<td>Students’ stress levels*</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>19%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
Percent who said “positive” shown.
Perceptions of Potential Start Times

Please indicate the type of impact that a later high school start time would have in each of the following areas.

<table>
<thead>
<tr>
<th>Area</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ sleep and well-being (n=9,357)</td>
<td>9%</td>
<td>15%</td>
<td>76%</td>
</tr>
<tr>
<td>Students’ academic achievement (n=9,181)</td>
<td>8%</td>
<td>23%</td>
<td>68%</td>
</tr>
<tr>
<td>Students’ stress levels (n=9,215)</td>
<td>11%</td>
<td>21%</td>
<td>68%</td>
</tr>
<tr>
<td>Students’ school attendance (n=9,199)</td>
<td>7%</td>
<td>26%</td>
<td>67%</td>
</tr>
<tr>
<td>Students’ safety (n=8,949)</td>
<td>7%</td>
<td>43%</td>
<td>50%</td>
</tr>
<tr>
<td>Students’ travel to/from school (n=8,371)</td>
<td>12%</td>
<td>39%</td>
<td>49%</td>
</tr>
<tr>
<td>Students’ time spent on homework (n=9,122)</td>
<td>23%</td>
<td>35%</td>
<td>42%</td>
</tr>
<tr>
<td>Family routines (n=9,115)</td>
<td>20%</td>
<td>39%</td>
<td>41%</td>
</tr>
<tr>
<td>Students’ before-/after-school care (n=6,631)</td>
<td>15%</td>
<td>47%</td>
<td>38%</td>
</tr>
<tr>
<td>Students’ participation in activities that jointly use school fields/facilities...</td>
<td>27%</td>
<td>36%</td>
<td>37%</td>
</tr>
<tr>
<td>Non-school sponsored or related activities (n=8,092)</td>
<td>26%</td>
<td>41%</td>
<td>32%</td>
</tr>
<tr>
<td>Students’ jobs (n=5,192)</td>
<td>35%</td>
<td>36%</td>
<td>29%</td>
</tr>
<tr>
<td>Teachers’ commute to/from work (n=692)</td>
<td>39%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Teachers’ school-related after-school activities/responsibilities (n=709)</td>
<td>39%</td>
<td>55%</td>
<td>15%</td>
</tr>
<tr>
<td>Teachers’ families’ household expenses (n=589)</td>
<td>27%</td>
<td>59%</td>
<td>14%</td>
</tr>
<tr>
<td>Teachers’ non-school related after-school activities/responsibilities (n=697)</td>
<td>27%</td>
<td>56%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Note: Not all statements shown to all respondents.
### % Positive Impact of Later High School Start Time

<table>
<thead>
<tr>
<th>Areas</th>
<th>Parent or Guardian (n=2,275-3,647)</th>
<th>Student-Middle School (n=2,372-2,693)</th>
<th>Student-High School (n=1,833-2,102)</th>
<th>Teacher or Staff (n=400-501)</th>
<th>Both a staff member and a parent (n=151-251)</th>
<th>Community member (n=75-84)</th>
<th>Alumni of CBSD (n=69-79)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ sleep and well-being*</td>
<td>79%</td>
<td>70%</td>
<td>81%</td>
<td>69%</td>
<td>72%</td>
<td>67%</td>
<td>75%</td>
</tr>
<tr>
<td>Students’ academic achievement*</td>
<td>69%</td>
<td>65%</td>
<td>74%</td>
<td>58%</td>
<td>63%</td>
<td>67%</td>
<td>70%</td>
</tr>
<tr>
<td>Students’ stress levels*</td>
<td>73%</td>
<td>60%</td>
<td>74%</td>
<td>60%</td>
<td>62%</td>
<td>66%</td>
<td>74%</td>
</tr>
<tr>
<td>Students’ school attendance*</td>
<td>63%</td>
<td>65%</td>
<td>77%</td>
<td>61%</td>
<td>67%</td>
<td>63%</td>
<td>73%</td>
</tr>
<tr>
<td>Students’ safety*</td>
<td>50%</td>
<td>49%</td>
<td>52%</td>
<td>42%</td>
<td>49%</td>
<td>55%</td>
<td>49%</td>
</tr>
<tr>
<td>Students’ travel to/from school*</td>
<td>45%</td>
<td>50%</td>
<td>54%</td>
<td>-</td>
<td>42%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Students’ time spent on homework*</td>
<td>41%</td>
<td>42%</td>
<td>47%</td>
<td>25%</td>
<td>36%</td>
<td>47%</td>
<td>43%</td>
</tr>
<tr>
<td>Family routines*</td>
<td>43%</td>
<td>41%</td>
<td>43%</td>
<td>21%</td>
<td>33%</td>
<td>41%</td>
<td>42%</td>
</tr>
<tr>
<td>Students’ before-/after-school care*</td>
<td>32%</td>
<td>40%</td>
<td>45%</td>
<td>-</td>
<td>21%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Students’ participation in activities that jointly use school fields/facilities*</td>
<td>34%</td>
<td>43%</td>
<td>42%</td>
<td>15%</td>
<td>18%</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>Non-school sponsored or related activities*</td>
<td>29%</td>
<td>36%</td>
<td>35%</td>
<td>-</td>
<td>16%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Students’ jobs*</td>
<td>27%</td>
<td>-</td>
<td>33%</td>
<td>-</td>
<td>13%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teachers’ commute to/from work*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>18%</td>
<td>25%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teachers’ school-related after-school activities/responsibilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15%</td>
<td>15%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teachers’ families’ household expenses</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13%</td>
<td>17%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teachers’ non-school related after-school activities/responsibilities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12%</td>
<td>14%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
Percent who said “positive” shown.
SECTION IV: SUPPORT FOR ADOPTING NEW SCHEDULE
Support for Adopting New Schedule

Keeping in mind the current start time for CBSD schools, to what degree would you support or oppose the adoption of the following high school schedules?

High school would start and end...

- **...30 minutes later. (n=9,625)**
  - Strongly Oppose: 11%
  - Oppose: 11%
  - Neither Support nor Oppose: 15%
  - Support: 38%
  - Strongly Support: 26%

- **...45 minutes later. (n=9,628)**
  - Strongly Oppose: 16%
  - Oppose: 12%
  - Neither Support nor Oppose: 15%
  - Support: 35%
  - Strongly Support: 23%

- **...1 hour later. (n=9,637)**
  - Strongly Oppose: 22%
  - Oppose: 15%
  - Neither Support nor Oppose: 15%
  - Support: 21%
  - Strongly Support: 27%

- **...1 1/2 hours later. (n=9,606)**
  - Strongly Oppose: 35%
  - Oppose: 26%
  - Neither Support nor Oppose: 15%
  - Support: 15%
  - Strongly Support: 13%

- **...2 hours later. (n=9,597)**
  - Strongly Oppose: 47%
  - Oppose: 25%
  - Neither Support nor Oppose: 13%
  - Support: 7%
  - Strongly Support: 8%
Support for Adopting New Schedule - Stakeholder Group

Keeping in mind the current start time for CBSD schools, to what degree would you support or oppose the adoption of the following high school schedules?

High school would start and end...

- Parent or Guardian (n=3,818-3,845)
- Student- Middle School (n=2,734-2,743)
- Student- High School (n=2,104-2,109)
- Teacher or Staff (n=520-524)
- Both a staff member and a parent (n=258-261)
- Community member (n=82-83)
- Alumni of CBSD (n=78)

- ...30 minutes later.*
  - 53% Parent or Guardian
  - 59% Student- Middle School
  - 55% Student- High School
  - 50% Teacher or Staff
  - 52% Both a staff member and a parent
  - 50% Community member
  - 56% Alumni of CBSD

- ...45 minutes later.*
  - 50% Parent or Guardian
  - 52% Student- Middle School
  - 52% Student- High School
  - 54% Teacher or Staff
  - 54% Both a staff member and a parent
  - 54% Community member
  - 56% Alumni of CBSD

- ...1 hour later.*
  - 40% Parent or Guardian
  - 45% Student- Middle School
  - 45% Student- High School
  - 54% Teacher or Staff
  - 52% Both a staff member and a parent
  - 52% Community member
  - 45% Alumni of CBSD

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
Support for Adopting New Schedule - Stakeholder Group

Keeping in mind the current start time for CBSD schools, to what degree would you support or oppose the adoption of the following high school schedules?
High school would start and end...

- Parent or Guardian (n=3,818-3,845)
- Student- Middle School (n=2,734-2,743)
- Student- High School (n=2,104-2,109)
- Teacher or Staff (n=520-524)
- Both a staff member and a parent (n=258-261)
- Community member (n=82-83)
- Alumni of CBSD (n=78)

...1 1/2 hours later.*
- 24% Parent or Guardian
- 24% Student- Middle School
- 17% Student- High School
- 27% Teacher or Staff
- 21% Both a staff member and a parent
- 16% Community member
- 12% Alumni of CBSD

...2 hours later.*
- 22% Parent or Guardian
- 22% Student- Middle School
- 18% Student- High School
- 18% Teacher or Staff
- 12% Both a staff member and a parent
- 12% Community member
- 9% Alumni of CBSD

Note: (*) Denotes statistically significant difference between one or more groups at the 95% confidence level.
SECTION V: RESPONDENT CHARACTERISTICS
Respondent Characteristics: Students and Alumni

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Which school [do you currently/did you] attend? (n=5,475)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Bucks High School East</td>
<td>966</td>
<td>18%</td>
</tr>
<tr>
<td>Central Bucks High School South</td>
<td>825</td>
<td>15%</td>
</tr>
<tr>
<td>Tohickon Middle School</td>
<td>800</td>
<td>15%</td>
</tr>
<tr>
<td>Unami Middle School</td>
<td>788</td>
<td>14%</td>
</tr>
<tr>
<td>Lenape Middle School</td>
<td>725</td>
<td>13%</td>
</tr>
<tr>
<td>Central Bucks High School West</td>
<td>608</td>
<td>11%</td>
</tr>
<tr>
<td>Tamanend Middle School</td>
<td>596</td>
<td>11%</td>
</tr>
<tr>
<td>Holicong Middle School</td>
<td>139</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>28</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Please select your current grade level. (n=5,381)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Kindergarten</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 1</td>
<td>1</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 2</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 3</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 4</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 5</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 6</td>
<td>9</td>
<td>0%</td>
</tr>
<tr>
<td>Grade 7</td>
<td>1,159</td>
<td>22%</td>
</tr>
<tr>
<td>Grade 8</td>
<td>1,011</td>
<td>19%</td>
</tr>
<tr>
<td>Grade 9</td>
<td>929</td>
<td>17%</td>
</tr>
<tr>
<td>Grade 10</td>
<td>1,072</td>
<td>20%</td>
</tr>
<tr>
<td>Grade 11</td>
<td>841</td>
<td>16%</td>
</tr>
<tr>
<td>Grade 12</td>
<td>353</td>
<td>7%</td>
</tr>
</tbody>
</table>

Note: Questions shown to students only. Students were shown middle or high school selections based on their response to the following question: “Which of the following best describes your role at Central Bucks School District (CBSD)?” If a student indicated that they were currently enrolled at a middle school, they could select middle schools from the school list. Similarly, students who indicated that they were currently enrolled at a high school could only select high schools from the school list. However, when viewing the grade-level question, middle and high school respondents could select any grade. As a result, some middle school and high school students selected a grade that is misaligned with their school selection.
### Respondent Characteristics: Parents

#### Which school does your child currently attend? (n=4,835)

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>NUMBER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Bucks High School East</td>
<td>561</td>
<td>12%</td>
</tr>
<tr>
<td>Holicong Middle School</td>
<td>554</td>
<td>11%</td>
</tr>
<tr>
<td>Central Bucks High School South</td>
<td>553</td>
<td>11%</td>
</tr>
<tr>
<td>Central Bucks High School West</td>
<td>479</td>
<td>10%</td>
</tr>
<tr>
<td>Lenape Middle School</td>
<td>458</td>
<td>9%</td>
</tr>
<tr>
<td>Unami Middle School</td>
<td>451</td>
<td>9%</td>
</tr>
<tr>
<td>Tohickon Middle School</td>
<td>392</td>
<td>8%</td>
</tr>
<tr>
<td>Tamanend Middle School</td>
<td>364</td>
<td>8%</td>
</tr>
<tr>
<td>Butler Elementary School</td>
<td>317</td>
<td>7%</td>
</tr>
<tr>
<td>Groveland Elementary School</td>
<td>273</td>
<td>6%</td>
</tr>
<tr>
<td>Bridge Valley Elementary School</td>
<td>260</td>
<td>5%</td>
</tr>
<tr>
<td>Mill Creek Elementary School</td>
<td>249</td>
<td>5%</td>
</tr>
<tr>
<td>Cold Spring Elementary School</td>
<td>221</td>
<td>5%</td>
</tr>
<tr>
<td>Kutz Elementary School</td>
<td>200</td>
<td>4%</td>
</tr>
<tr>
<td>Warwick Elementary School</td>
<td>193</td>
<td>4%</td>
</tr>
<tr>
<td>Gayman Elementary School</td>
<td>181</td>
<td>4%</td>
</tr>
<tr>
<td>Doyle Elementary School</td>
<td>180</td>
<td>4%</td>
</tr>
<tr>
<td>Jamison Elementary School</td>
<td>177</td>
<td>4%</td>
</tr>
<tr>
<td>Titus Elementary School</td>
<td>169</td>
<td>3%</td>
</tr>
<tr>
<td>Linden Elementary School</td>
<td>166</td>
<td>3%</td>
</tr>
</tbody>
</table>

#### Which school does your child currently attend? (Continued, n=4,835)

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>NUMBER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckingham Elementary School</td>
<td>159</td>
<td>3%</td>
</tr>
<tr>
<td>Pine Run Elementary School</td>
<td>145</td>
<td>3%</td>
</tr>
<tr>
<td>Barclay Elementary School</td>
<td>144</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>1%</td>
</tr>
</tbody>
</table>

#### Please select your child’s grade level. (n=4,835)

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>NUMBER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Kindergarten</td>
<td>85</td>
<td>2%</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>402</td>
<td>8%</td>
</tr>
<tr>
<td>Grade 1</td>
<td>546</td>
<td>11%</td>
</tr>
<tr>
<td>Grade 2</td>
<td>552</td>
<td>11%</td>
</tr>
<tr>
<td>Grade 3</td>
<td>567</td>
<td>12%</td>
</tr>
<tr>
<td>Grade 4</td>
<td>618</td>
<td>13%</td>
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<tr>
<td>Grade 5</td>
<td>665</td>
<td>14%</td>
</tr>
<tr>
<td>Grade 6</td>
<td>813</td>
<td>17%</td>
</tr>
<tr>
<td>Grade 7</td>
<td>893</td>
<td>18%</td>
</tr>
<tr>
<td>Grade 8</td>
<td>785</td>
<td>16%</td>
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<tr>
<td>Grade 9</td>
<td>764</td>
<td>16%</td>
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<tr>
<td>Grade 10</td>
<td>765</td>
<td>16%</td>
</tr>
<tr>
<td>Grade 11</td>
<td>575</td>
<td>12%</td>
</tr>
<tr>
<td>Grade 12</td>
<td>410</td>
<td>8%</td>
</tr>
</tbody>
</table>

Note: Questions shown to parents and respondents who are both a staff member and a parent.
## Respondent Characteristics: Staff

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>NUMBER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At which school or site do you currently work?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=897)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barclay Elementary School</td>
<td>33</td>
<td>4%</td>
</tr>
<tr>
<td>Bridge Valley Elementary School</td>
<td>23</td>
<td>3%</td>
</tr>
<tr>
<td>Buckingham Elementary School</td>
<td>21</td>
<td>2%</td>
</tr>
<tr>
<td>Butler Elementary School</td>
<td>33</td>
<td>4%</td>
</tr>
<tr>
<td>Central Bucks High School East</td>
<td>108</td>
<td>12%</td>
</tr>
<tr>
<td>Central Bucks High School South</td>
<td>108</td>
<td>12%</td>
</tr>
<tr>
<td>Central Bucks High School West</td>
<td>88</td>
<td>10%</td>
</tr>
<tr>
<td>Cold Spring Elementary School</td>
<td>28</td>
<td>3%</td>
</tr>
<tr>
<td>Doyle Elementary School</td>
<td>19</td>
<td>2%</td>
</tr>
<tr>
<td>Gayman Elementary School</td>
<td>17</td>
<td>2%</td>
</tr>
<tr>
<td>Groveland Elementary School</td>
<td>37</td>
<td>4%</td>
</tr>
<tr>
<td>Holicong Middle School</td>
<td>52</td>
<td>6%</td>
</tr>
<tr>
<td>Jamison Elementary School</td>
<td>20</td>
<td>2%</td>
</tr>
<tr>
<td>Kutz Elementary School</td>
<td>24</td>
<td>3%</td>
</tr>
<tr>
<td>Lenape Middle School</td>
<td>79</td>
<td>9%</td>
</tr>
<tr>
<td>Linden Elementary School</td>
<td>20</td>
<td>2%</td>
</tr>
<tr>
<td>Mill Creek Elementary School</td>
<td>30</td>
<td>3%</td>
</tr>
<tr>
<td>Pine Run Elementary School</td>
<td>13</td>
<td>1%</td>
</tr>
<tr>
<td>Tamanend Middle School</td>
<td>47</td>
<td>5%</td>
</tr>
<tr>
<td>Titus Elementary School</td>
<td>24</td>
<td>3%</td>
</tr>
<tr>
<td>Tohickon Middle School</td>
<td>45</td>
<td>5%</td>
</tr>
<tr>
<td>Unami Middle School</td>
<td>64</td>
<td>7%</td>
</tr>
<tr>
<td>Warwick Elementary School</td>
<td>25</td>
<td>3%</td>
</tr>
<tr>
<td>District Office</td>
<td>15</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>20</td>
<td>2%</td>
</tr>
<tr>
<td>None of the above</td>
<td>4</td>
<td>0%</td>
</tr>
</tbody>
</table>

Please select the grade level(s) you currently work with. (n=897)

<table>
<thead>
<tr>
<th>GRADE</th>
<th>NUMBER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Kindergarten</td>
<td>2</td>
<td>0%</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>109</td>
<td>12%</td>
</tr>
<tr>
<td>Grade 1</td>
<td>148</td>
<td>16%</td>
</tr>
<tr>
<td>Grade 2</td>
<td>144</td>
<td>16%</td>
</tr>
<tr>
<td>Grade 3</td>
<td>139</td>
<td>15%</td>
</tr>
<tr>
<td>Grade 4</td>
<td>141</td>
<td>16%</td>
</tr>
<tr>
<td>Grade 5</td>
<td>140</td>
<td>16%</td>
</tr>
<tr>
<td>Grade 6</td>
<td>130</td>
<td>14%</td>
</tr>
<tr>
<td>Grade 7</td>
<td>181</td>
<td>20%</td>
</tr>
<tr>
<td>Grade 8</td>
<td>191</td>
<td>21%</td>
</tr>
<tr>
<td>Grade 9</td>
<td>199</td>
<td>22%</td>
</tr>
<tr>
<td>Grade 10</td>
<td>270</td>
<td>30%</td>
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<tr>
<td>Grade 11</td>
<td>269</td>
<td>30%</td>
</tr>
<tr>
<td>Grade 12</td>
<td>261</td>
<td>29%</td>
</tr>
<tr>
<td>I do not work directly with students</td>
<td>38</td>
<td>4%</td>
</tr>
</tbody>
</table>

Note: Questions shown to staff and respondents who are both a staff member and a parent.
In the following report, results are segmented by stakeholder group (parents, middle school students, high school students, staff members, staff members who are also parents, community members, and alumni).

Sample sizes vary across questions as some questions only pertain to a subset of respondents.

Conclusions drawn from a small sample size (n<20) should be interpreted with caution.

For full aggregate and segmented results, please consult the accompanying data supplement.

Statistically significant difference (95% confidence level) between groups are noted with an asterisk (*); however, for some charts sample sizes may be small and results should be interpreted with caution.

The survey was fielded online using the Qualtrics software platform in April and May 2019.

After data collection, Hanover identified and removed low-quality 67 respondents.

“Don’t Know or Not Applicable” responses, and equivalent, are often excluded from the figures and analysis in order to focus on respondents who did express an opinion.
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