School Turnaround:
Differential Growth Targets for Achievement

Executive Summary

This document examines theoretical and empirical literature related to the growth trajectories in *The Compass: Our Pathway to Excellence*, Baltimore County Public Schools (BCPS). The Compass uses growth trajectories to set yearly, three, and five-year targets for improving English Language Arts and math achievement. The literature reviewed supports several aspects of the goals set forth by BCPS and is categorized into three themes: district support, growth targets, and monitoring. The articles included in this literature review are described in the appendix. Conclusions and implications are also discussed.

District Support

- BCPS created School Progress Plan (SPP) goals which differ depending on the baseline achievement of individual schools. The specific targets at each school are calculated based on the percentage of students meeting or exceeding standards in the baseline year.
- This method of goal setting is consistent with the reviewed literature.

Growth Targets

- Research suggests that different groups of students grow at different rates depending on their baseline achievement.
- The BCPS growth targets for the SPPs are either linear (i.e., consistent growth) or spline (i.e., characterized by slower initial growth followed by accelerated growth), depending on the achievement data in the baseline year.
- BCPS growth trajectories and targets are in alignment with the available evidence.

Monitoring

- BCPS plans ongoing school level monitoring of the SPP and semiannual written reports on the progress of targets.
- This monitoring and reporting timeline for schools and districts is supported by theory on school turnaround.
Background

Baltimore County Public Schools (BCPS) Strategic Plan, The Compass: Our Pathway to Excellence, was submitted by Superintendent Dr. Darryl L. Williams and adopted by the BCPS Board of Education in July 2020. Included in The Compass are commitments to increase the percentage of students meeting or exceeding the State of Maryland’s English Language Arts (ELA)/Literacy and Mathematics standards for college and career readiness. Internally, yearly targets and grade span targets by student group were developed for each school.

The annual targets for BCPS schools differ based on the percentage of students meeting or exceeding standards during the baseline year (2018–2019). Two categories of annual goals were created for schools, linear growth and spline growth. Schools with 35% or more students meeting or exceeding standards on the Maryland Comprehensive Assessment Program (MCAP) during the baseline year are expected to increase that percentage with a linear growth rate of 3% per year. Schools with less than 35% of students meeting or exceeding standards in the baseline year are expected to achieve a rate of growth that utilizes a spline to calculate a lower percentage of growth in the first three years with more rapid growth in the final two years. Therefore, regardless of the baseline percentage of students passing the MCAP at individual schools, all schools will achieve at least a 50% pass rate by fifth year of implementation of The Compass (2023–2024).

The purpose of this literature review is to identify and synthesize the literature relevant to the growth trajectories in the SPPs. The available literature is organized into three categories: district-level support, growth targets, and goal monitoring. Conclusions and implications are also discussed.

School Improvement or School Turnaround

Researchers who study and publish articles on school-level academic achievement use two different terms: school improvement and school turnaround. School improvement is sustained gradual improvement of academic goals, which could take place over a ten-year period (Calkins et al. 2007; Player & Katz, 2016). On the other hand, school turnaround is quick, dramatic gains in the academic achievement of low-achieving schools (Herman, 2012; Peck & Reitzug, 2013). Quick, dramatic gains are defined as increasing the pass rate on a state standardized assessment at least 10 percentile points within three years (Herman et al., 2008; Herman, 2012). Based on the five-year annual target structure included in the SPP, the school turnaround literature is the primary focus of this literature review. The appendix provides detailed information on all the reviewed articles related to school turnaround.

District Level Support

Rapid school improvement involves four domains: turnaround leadership, talent development, instructional transformation, and culture shift (WestEd, 2017). Most relevant to the development of SPP, the turnaround leadership domain recommends prioritizing improvement and communicating its urgency, monitoring short- and long-term goals, and customizing and targeting support at the district level to meet individual school needs. BCPS leadership has communicated the prioritization and urgency of increasing student achievement through the development of the strategic plan and the subsequent development of SPP. The other two recommendations, district -
level support and goal development and monitoring, are further expanded in subsequent sections and supported with additional literature.

The theory and research on district involvement in school turnaround is sparse; however, there are some recommendations relevant to growth trajectories for academic improvement. First, school turnaround is most effective when it is initiated by districts as compared to a state mandate (Knudson et al., 2011). Second, long term school turnaround requires a district coordinated approach that must be customized to meet the needs and conditions of individual schools (Knudson et al., 2011; WestEd, 2017). Finally, districts should provide support to principals that is aligned with the turnaround plan. At the school level, principals monitor the progress of the implementation and make changes in personnel, programs, or methods as needed. Principals should then generate annual school-level report to track progress, while districts should generate an annual report on multiple schools to track overall progress (Knudson et al., 2011). BCPS plans to report both school-level and district-wide progress, as supported by the research.

**Growth Targets**

*Classes of Growth Targets*

The empirical research on school improvement supports the two models (i.e., linear and spline growth) developed by BCPS. In a study of school level academic growth, Hallinger and Heck (2011) examined all elementary schools in one U.S. state and found evidence for three distinct classes of school improvement. Baseline academic scores: high, midrange, and low, determined the classification of schools.

The first two classes of schools, high and midrange, demonstrated linear improvement in the schoolwide average of a state standardized assessment. This class of schools is similar to the linear growth expectations of BCPS schools with greater than 35% of students meeting or exceeding the MCAP expectations.

The third class of schools had the lowest baseline academic scores. These schools demonstrated growth from year two to three which accelerated from year three to four. In other words, this class of schools yields evidence for the spline growth expectations of BCPS schools with a baseline of less than 35% of students meeting or exceeding proficiency on the MCAP assessment.

The work of Hallinger and Heck (2011) is the best evidence to support the two growth trajectories in the BCPS SPPs. Additional research on school level improvement is either focused on rapid improvement or sustained improvement, which provides additional support for the two growth trajectories.

*Evidence for Growth Targets*

Few longitudinal studies exist to demonstrate sustained gradual improvement (e.g., Hochbein, 2012). One such study examined 981 elementary schools in one U.S. state and reported that schools that started at a high level of proficiency demonstrated gradual continuous improvement (Hochbein, 2012). The work of Pham et al. (2020) supported the work of Hochbein (2012) and found that after six years schools maintained positive effects for student achievement in the district-led initiative. The evidence for continuous improvement is directly related to the linear
growth expectations for schools starting with greater than 35% of students meeting or exceeding MCAP benchmarks.

Additionally, there are some studies that provide evidence of initial rapid improvement of schoolwide proficiency on standardized assessments. Player and Katz examined 20 schools in one U.S. state which participated in a turnaround process. Results demonstrated significant meaningful improvement on state standardized assessments in two years which continued to increase through the fourth year (Player & Katz, 2016). It should be noted that the schools in this study focused on the improvement of all students as opposed to only focusing on students at the margin of proficiency. Another study examined low performing schools across three states (Hansen & Choi, 2012). Low performing schools were able to turnaround student achievement at a rate higher than previously reported, with statewide improvement rates ranging from 13% to 31% for low performing schools. Additionally, Hochbein (2012) reported that schools which started at a low level of proficiency had a dramatic increase in proficiency. Finally, studies which examined differences by subject area found improvement in reading achievement less common than math improvement (Bonilla & Dee, 2017; Hansen & Choi, 2012).

**Goal Monitoring**

In addition to the careful creation of goals, goal monitoring is important for improving school-level academic achievement. Throughout the turnaround process, school leadership should consistently monitor all goals, including both assessing the progress of goals and updating stakeholders.

As previously described, significant improvement in student achievement can be attained in a short time frame. Both proficiency and growth should be examined to assess progress on goals (Regenstein et al., 2018). Districts should create and monitor both short-term and long-term goals (WestEd, 2017). Short term goals should be used to develop early wins, while long-term goals should provide detailed steps to guide the turnaround process. These goals should be achievable and based on national growth rates (Regenstein et al., 2018). Finally, goals should be public with predetermined deadlines (Stanton & Segal, 2013). Communication of turnaround plans and goal updates should be completed quarterly in the first year and semiannually thereafter (Kowal & Ableidinger, 2011). The BCPS monitoring approach follows the Plan, Do, Study, Act cycle for continuous improvement, which requires schools to have ongoing monitoring at the school level and to provide written progress semiannually.

**Conclusion and Implications**

The literature reviewed is evidence for several aspects of the goals set forth by BCPS. There are many elements of the BCPS approach to SPP which are consistent with the recommendations and evidence in the literature.

First, BCPS demonstrated district-level leadership and set school level public goals. Throughout the goal development process, staff focused on ensuring goals were realistic and attainable. The end result is goals that differ depending on the baseline of individual schools. The specific goals at each school are calculated based on the percentage of students meeting or exceeding standards
in the baseline year at each school. Each of these elements of goal setting is consistent with the reviewed literature.

Second, the BCPS growth targets for the SPP are either linear or spline, depending on the achievement data in the baseline year. Although the empirical literature is small, the reviewed articles suggest that the growth trajectories and targets are in alignment with the available evidence. Specifically, empirical evidence suggests that there are different growth classes and changes in school wide achievement occur at different rates, dependent on the baseline achievement of the school.

Third, BCPS plans ongoing school level monitoring of the SPP and semiannual written reports on the progress of targets. As a consequence of frequent monitoring, BCPS school-based leadership will develop strategies and key actions based on goal progress. The theoretical literature recommends a similar monitoring and reporting timeline for schools and districts.

The school turnaround literature provides support for the SPP. In addition, BCPS is extending efforts on reporting and monitoring. *The Compass* highlights the importance of monitoring educational equity by various student groups. Since districts often do not provide student level data disaggregated by race/ethnicity for analysis, this element is absent from the literature base; however, examining data by cohort was highlighted in one study to better understand the changes happening within the turnaround process. Similarly, BCPS will analyze student level data by race/ethnicity and other student groups to better understand changes in the academic data. This effort extends the available literature by integrating the turnaround and equity literature bases.
References


## Appendix

### Table 1. Literature Related to the Goals Outlined in The Compass

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<thead>
<tr>
<th>Study</th>
<th>Description</th>
<th>Recommendations</th>
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<tr>
<td>Bonilla &amp; Dee (2017)</td>
<td>Sample of schools in Kentucky.</td>
<td>• Increase in math scores of 17% and 9% increase in ELA.</td>
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<td>Calkins et al. (2007)</td>
<td>A framework for improving student achievement in low performing schools.</td>
<td>• Comprehensive turnaround will be most effective when it is initiated by districts.</td>
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<td>• Significant improvement in student achievement can be achieved in a short time frame.</td>
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<td>• Three elements for turnaround at scale: changing conditions, building capacity, and clustering for support.</td>
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<td>Hallinger &amp; Heck (2011)</td>
<td>Classification of three distinct patterns of change in the school improvement process.</td>
<td>• Class one started with high scores and demonstrated gradual near-linear growth.</td>
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<td>• Class two started with midrange score and demonstrated near-linear growth.</td>
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<td>• Class three started with low passing scores. Demonstrated growth from year two to three that accelerated from year three to four.</td>
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<td>Hansen &amp; Choi (2012)</td>
<td>Evidence of improvement in chronically low performing schools across three states. One of a limited number of large-scale studies.</td>
<td>• Create performance categories based on trajectories.</td>
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<td>• Across the three states, 13% - 31% of low performing schools demonstrated an improvement trajectory.</td>
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<td>• Turnaround schools demonstrate improvement in scores overall and by cohort.</td>
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<td>Henry &amp; Guthrie (2015)</td>
<td>Evidence of improvement from low performing schools in North Carolina.</td>
<td>• Schools participated in efforts for four years.</td>
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<td>• 75% of turnaround schools increased graduation rates.</td>
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<td>• 60% of turnaround schools outperformed comparison schools.</td>
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<td>Herman et al. (2008)</td>
<td>IES guide which uses What Works Clearinghouse standards to evaluate the evidence for four recommendations.</td>
<td>• Low level of empirical evidence for all four recommendations: change in leadership, maintain consistent focus on improving instruction, visible early improvements, and building a committed staff.</td>
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<td>• Recommendations are explored in detail and analyze potential roadblocks and solutions.</td>
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| Hochbein (2012)       | A longitudinal analysis of 233 elementary schools in Virginia over a three-year period. | • Turnaround schools increased the percentage of students passing the math (32% increase) and ELA (17% increase) assessments in five years.  
• Turnaround schools increased the percentage of students passing math rapidly in the first two years, with slow additional gains.  
• Schools that started at a higher pass rate demonstrated a decreased pass rate prior to a gradual increase. |
| Knudson et al. (2011) | Provides district-level reform practices for systemic school turnaround. Six themes were identified. | • Two primary lessons for school turnaround:  
o Long-term school turnaround requires a district level approach.  
o Approach must customize efforts to meet the needs and conditions of schools. |
| Kowal & Ableidinger (2011) | Assessing progress on indicators during school turnaround. | • Develop early wins and later goals with detailed steps.  
• Communicate turnaround plans and goal updates quarterly in year 1; semiannually thereafter. |
| Player & Katz (2016)  | A comparative interrupted time series of 20 Ohio schools participating in a two-year program. | • Schools increased student achievement in the turnaround process.  
• Growth continued in the two years after completing the turnaround process for a total of one standard deviation of improvement. |
| Pham et al. (2020)    | Longitudinal evidence of continued school improvement.                     | • Six years after the turnaround process the district-led initiative maintained positive effects on student achievement.  
• The state led initiative did not yield positive effects. |
| Regenstein et al. (2018) | Recommendations for goal setting.                                           | • Use both proficiency and growth to assess progress.  
• Ensure goals are achievable, based on national growth rates.  
• A focus on improving the scores of all students is necessary to move the median of a score distribution. |
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<td>Stanton &amp; Segal (2013)</td>
<td>Describes the importance of ambitious public goals and annual reporting for turnaround success.</td>
<td>• Create clear public goals with predetermined deadlines.</td>
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<td>• Generate an annual report at the district-level on multiple schools to track progress.</td>
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<td>• Generate annual school level reports to track progress.</td>
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<td>WestEd (2017)</td>
<td>Provides a systemic framework for school turnaround with four domains of rapid improvement (e.g., Turnaround Leadership, Talent Development, Instructional Transformation, and Culture Shift).</td>
<td>• Within the Leadership domain, monitoring short- and long-term goals is emphasized.</td>
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<td>• Districts provide support to principals aligned with the turnaround plan.</td>
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<td>• Principals monitor the progress for the implementation and make changes in personnel, programs, or methods as needed.</td>
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