Findings and Results of Root Cause Analysis for Comprehensive Support and Improvement Schools

New Era Academy

September, 2019

MORGAN STATE UNIVERSITY

UNIVERSITY OF MARYLAND 1856

COLLEGE OF EDUCATION

CENTER FOR EDUCATIONAL INNOVATION AND IMPROVEMENT

BOWIE STATE UNIVERSITY 1865

TABLE OF CONTENTS

This report was prepared by the University of Maryland College Park Center for Educational Innovation and Improvement at the College of Education and in partnership with the Bowie State University College of Education and the Morgan State University School of Education & Urban Studies. The Root Cause Analysis process was facilitated by Erin Janulis and David Rease Jr., who also co-authored this report.

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I. INTRODUCTION

The purpose of this report is to share outcomes of a Root Cause Analysis (RCA) conducted to support New Era Academy in identifying underlying causes of school performance problems. The report provides an overview of the RCA process, school profile, problem statement, the RCA conducted at the school, and recommendations to address the root causes.

The Maryland Every Student Succeeds Act (ESSA) Consolidated State Plan requires schools that have been identified for comprehensive support and improvement (CSI) engage in an RCA process facilitated by a third party. CSI schools are defined as follows: the lowest achieving 5 percent of Title I schools, high schools that do not graduate one third or more of their students, or schools that have federal school improvement grants. New Era Academy was identified as a CSI school because of low graduation rates. Outcomes of the RCA must be used to inform the development of intervention plans to improve school performance.

CSI schools that were identified in the 2018-2019 school year have three years to exit CSI status. CSI school leaders will receive a leadership coach to support the development and implementation of the intervention plan. CSI principals will be required to participate in the Leading for School Improvement Institute, which provides customized professional learning experiences to support school improvement. CSI principals will be required to engage in monitoring visits by the Maryland State Department of Education (MSDE) to ensure that progress is being made toward school improvement goals.

The MSDE established a memorandum of understanding with the University of Maryland College Park to facilitate the RCA process. The University of Maryland College Park collaborated with the American Institutes for Research to develop RCA tools and train field teams. Field teams consisted of researchers, data analysts, and education practitioners from Bowie State University, Morgan State University, Johns Hopkins University, and other organizations. Field team members worked with all CSI schools to go through an RCA process. MSDE will support each school to engage in a long-term continuous improvement process that includes RCAs, recommended interventions, and evaluations of employed interventions. As part of this procedure, CSI schools were first required to go through a needs-assessment process that was used to drive the RCA work.

I. INTRODUCTION

RCA Process for CSI Schools

A Root Cause Analysis Facilitator Guide was developed to promote consistency in the root cause analysis process. The Facilitator Guide contains protocols designed to engage school leaders and stakeholders in identifying a specific problem and prioritizing root causes for the problem.

There was a four-step process used to facilitate the root cause analysis:

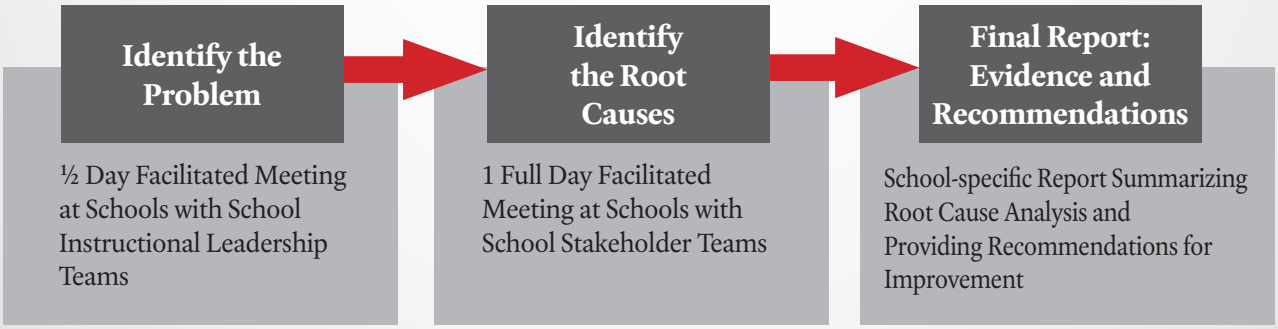
1. Craft a Problem Statement Based on Data
2. Brainstorm Causal Factors
3. Analyze Underlying Causes to Identify Root Causes
4. Prioritize Root Causes for Intervention

The root cause analysis process translates the successes and challenges identified through the CSI needs assessment into priorities to inform actionable improvement planning. The work with schools was staged in three steps: 1) identify the problem; 2) identify the root causes; 3) draft a school report with recommendations for improvement.

First, the RCA team worked with school leadership teams to craft a problem statement in a half-day meeting. Using the available school, school system, and state data, the school team selected a problem that relates to their CSI status and provides a direction for the root cause analysis.

Second, the facilitators returned to the school for a full-day meeting with the school's stakeholder team to better understand the root causes of the problem. Once the stakeholders worked through the process of determining the root causes, they prioritized those root causes based on importance, feasibility, and alignment to CSI status.

As a third and final step, the RCA teams created these school-specific reports with recommendations for addressing the problem and root causes in improvement planning.



I. INTRODUCTION

An RCA starts with asking the question: What problem do we face that, if solved or mitigated, would most effectively lead to our desired outcomes (in this case significant improvement in student outcomes that would lead to the school being removed from CSI status)? This "Problem Statement" is then studied and interrogated by a team of stakeholders through the RCA process that answers questions such as:

- Why do we get these outcomes?
- Who are the people involved in this problem?
- What policies, procedures, or rules contribute to this problem?
- What resources are currently engaging with this problem?
- What environmental issues impact this problem?

This process led to a small number of "root causes" to the problem designed to help school stakeholders design strategies and programs that are more likely to lead to significant improvement for students. In addition, the process will include conducting research on the problem and prioritized root causes and recommending evidence-based strategies for improvement.

II. SCHOOL PROFILE

School Name: New Era Academy
2700 Seamon Ave, Baltimore, MD 21225
(443) 984-2825

Total teachers: 19

Student Demographics								
Total Students	Asian	Black African Americans	Hispanic/ Latino	White	Other	% Economically Disadvantaged	% English Learners	% Students with Disabilities
334	<10	267	42	24	<10	60.03%	13.33%	21.82%

New Era Academy
MSDE School Report Card Profile for 9-12

Academic Achievement		School Quality and Student Success		Graduation Rate		Progress in Achieving English Language Proficiency		Readiness for Postsecondary Success	
% Proficient in Mathematics	4.4%	Students Not Chronically Absent	10.7%	Four-Year Adjusted Cohort Graduation Rate	63.9%	% English Learners Making Progress Toward Learning English	42.1	Credit for Well Rounded Curriculum	100%
Average Performance Mathematics	1.7								
% Proficient in English Language Arts (ELA)	0%	Access to Well Rounded Curriculum	61.4%	Five-Year Adjusted Cohort Graduation Rate	74.6%			On Track in Ninth Grade for Graduation	24.4%
Average Performance ELA	1.2								
Earned Points	4.8/30	Earned Points	7.1/25	Earned Points	10.1/15	Earned Points	4.2.10	Earned Points	6.2/10
Total Earned Percent:				26%					

To view this school's full report card, visit www.mdreportcard.org

III. PROBLEM STATEMENT

Description of the Process

A half-day meeting facilitated by a two-member RCA team was convened at New Era Academy on March 29, 2019 for day one of the RCA process. Members included the school leadership team, consisting of a local school system leader (i.e., principal supervisor, school improvement leader), and other key school staff. The primary goal of this meeting was to craft a "problem statement" that would drive the RCA. A problem statement is defined as a statement describing a situation, issue, barrier, impediment, or challenge that a school must address to significantly improve student outcomes, related particularly to those outcomes that led to the school being placed on the CSI list.

The goals of the first day were as follows: 1) to determine a problem statement to drive the analysis of the root causes, and 2) to identify stakeholders for day two of the RCA.

The primary data sources reviewed were the MSDE CSI Needs Assessment Report, the Maryland State School Report Card, and the School Climate Survey data and qualitative data from school stakeholders.

Problem Statement Criteria

Participants arrived at a problem statement by examining how CSI schools were identified, using data to understand why the school received CSI status, organizing data trends into themes, evaluating the feasibility of addressing those themes, and prioritizing addressable themes to identify the RCA area of focus. The problem statement was crafted based on the following criteria:

1. *How important is the problem to addressing our needs?*

Importance is determined by whether student outcomes will be improved, teacher efficacy is increased, and/or organizational systems will be improved.

2. *How feasible is it to address this problem?*

Feasibility is defined by the availability of adequate resources, staff, and capacity, and whether there is sufficient support and buy-in.

3. *How aligned is the problem to our needs?*

The problem statement should be related to the reason the school was identified as a CSI school. Also the school should be able to address the problem and its root causes by the effective selection and implementation of evidence-based practices.

Day One Summary

BMany of the conversations for this day focused on the ways in which the context of the school and its student body and staff shaped the data results. The team identified that not only were students struggling academically as evidenced by state assessment and iReady® scores, but also on other indicators of readiness for graduation. This quantitative data was accompanied with qualitative observations about the way students tend to not be fully engaged with academic learning and the possible reasons that might be fueling this phenomenon.

Another consistent theme in the conversation dealt with the features of the teaching staff. Many acknowledged that the high number of novice teachers in the school could be both a strength and a weakness. A strength is that these teachers may be less ingrained in doing something one way, but a weakness is that these teachers may need additional supports as they acclimate to their new profession and this new setting. Some discussion focused on how these issues might be influencing other data points.

Overall, the conversations often came back to the way many of these issues may be interconnected. The team expressed concern that focusing on a single distinct problem may not promote the wholistic change the team feels is necessary for improvement at New Era.

III. PROBLEM STATEMENT

Key Data Themes

Data Source	Key Takeaways
MSDE CSI Needs Assessment Report	• Student data on attendance and course completion is concerning: - 88% of students are chronically absent. - Dropout rates are going up. - Students not passing two or more courses is on the rise. - Students are not motivated or engaged in academic work (qualitative).
MSDE CSI Needs Assessment Report	• Composition of teaching staff is concerning: - 53% have only one to three years of experience. - 40% are conditionally certified. - 8% are not certified.
MSDE CSI Needs Assessment Report	• Most students (90%) start the year more than two grade levels behind in ELA and mathematics.
MSDE CSI Needs Assessment Report	• Some major progress observed in the last year: - The school has high average teacher attendance of 94.7%. - The school has no unfilled teaching positions. - Online enrichment programs for ELA and mathematics were offered. - Opportunities for remediation, credit recovery, Saturday school, and coach class were expanded. - Percentage of students completing service learning is on the rise.

III. PROBLEM STATEMENT

Themes Across Data Sources (Topics) (1 being highest priority)	Ranking
Organizational and systematic issues	1
Student outcomes	2
Teacher efficacy	3
Student achievement (capacity of students to do higher level work)	4
Contributing factors (motivation, past experiences, attendance, absenteeism, poverty, demographics)	5
Resources (intervention)	6
Staffing (quality, beliefs, workload)	7

Final Problem Statement

An array of data sources indicate that 47.4 percent of all students are not graduating on time within their four-year cohort. This low rate holds across multiple student groups.

Evidence Base for Problem Statement

This section represents a brief research summary of the evidence related to the significance and/or impact of the problem statement identified above.

Research suggests that, nationally, graduation rates have largely stagnated over the last few decades, and, despite some gains, African American and Hispanic students graduate at lower rates than their white peers (Murnane, 2013). Research also indicates that students who drop out of high school are more likely to experience economic hardship (Campbell, 2015), engage in substance abuse, experience mental health problems, and commit crimes (Maynard, Salas-Wright, & Vaughn, 2015). Given the advantages to graduating high school, New Era's problem statement is worthy of additional investigation. Because this problem statement describes a relatively high-level problem, the facilitators felt it necessary to ensure a deep dive on day two so the team could truly identify the relevant root causes to this problem.

IV. ROOT CAUSE ANALYSIS OF THE PROBLEM STATEMENT

Day Two Summary

The leadership team at New Era Academy convened on April 4, 2019 for day two of the RCA process. Day two was devoted to working with the school's stakeholder team to identify and prioritize the root causes of the problem so the causes could be addressed in the school's improvement planning efforts.

Stakeholders began the day by reviewing the problem statement developed by the instructional leadership team on day one. Following this review, they comprehensively brainstormed causal factors that contributed to the problem using a "Fishbone" activity. Individual causal factors were then organized into themes, and a causal factor statement was crafted for each theme. Using the "5 Whys Activity," stakeholders were encouraged to dig deeper into causal factor statements by asking "why" questions in order to arrive at underlying causes. Underlying causes were then collectively ranked in order to arrive at a prioritized list of root causes.

Specifically, the goals for day two included:

- Determining factors that contribute to the problem statement,
- Identifying underlying causes of the problem and determining which underlying causes are primary "root" causes, and
- Prioritizing the root causes based on the importance of impacting student outcomes and the feasibility of implementing strategies to address them.

Two consistent themes emerged from the discussion on day two. First, everyone agreed that the students attending New Era have a wide variety of needs: socio-emotional, trauma, English language learning, and special education. They agreed that the school must continue to find ways to ensure these needs are being served sufficiently, so that these students can engage more meaningfully in their own learning.

Additionally, many also indicated that they get the impression from students that they do not see the value or need for much of what is learned in school. Many team members expressed the necessity to help students see this value and make more meaningful connections between their work at school and the world outside of high school.

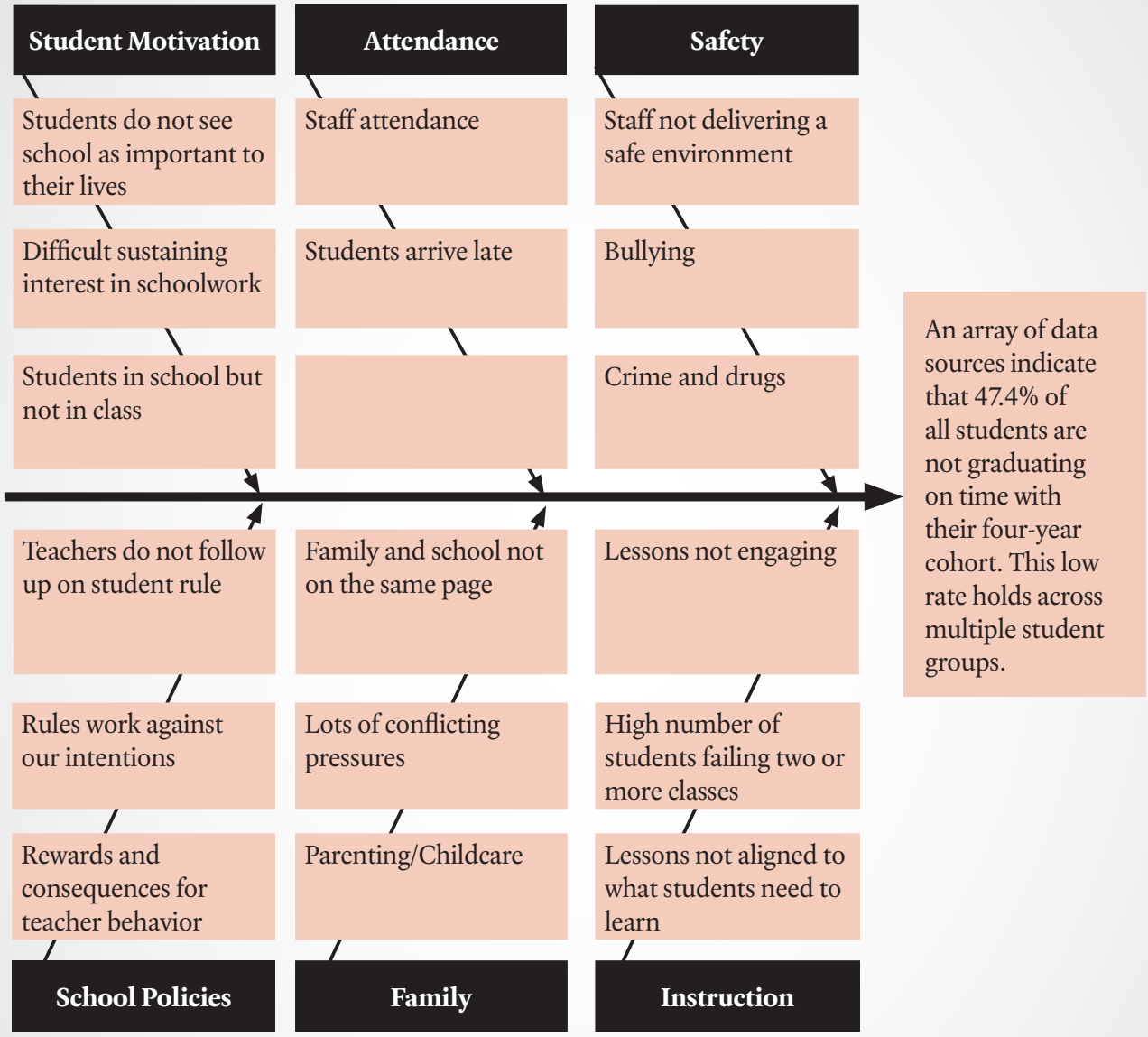
Stakeholders felt that addressing these two areas could greatly improve graduation rates.

Casual Factors

The "Fishbone" diagram represents the stakeholder group's initial assessment of all of the individual factors contributing to the existence or recurrence of the problem statement.

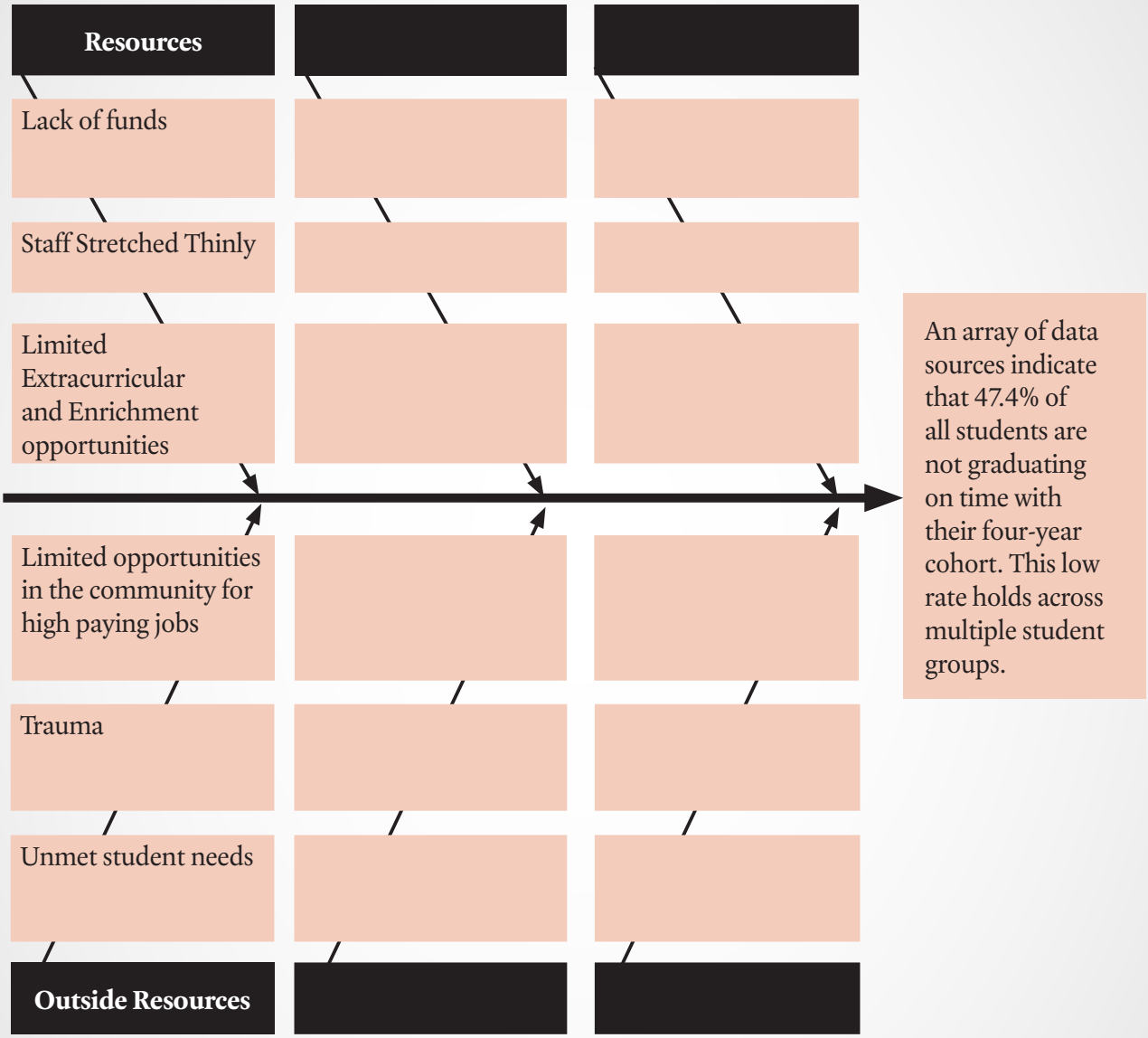
IV. ROOT CAUSE ANALYSIS OF THE PROBLEM STATEMENT

New Era Fishbone: Exploring Causes



IV. ROOT CAUSE ANALYSIS OF THE PROBLEM STATEMENT

New Era Fishbone: Exploring Causes



IV. ROOT CAUSE ANALYSIS OF THE PROBLEM STATEMENT

Prioritized Root Causes

Following several group exercises, the stakeholder group came to consensus on the priority root causes. These are the causes most critical to addressing the problem based on the criteria of importance, feasibility, and alignment.

Final Output. Prioritized Root Causes:	Ranking
Teachers do not have the resources and skills to support diverse student needs in the classroom.	1
High rates of adverse childhood experiences (ACEs) impact student attendance.	2

Evidence Base for Prioritized Root Causes

Teachers do not have the resources and skills to support diverse student needs in the classroom.

Research suggests that having multiple effective teachers throughout a student's K-12 schooling can have considerable positive effects (Hanushek & Rivkin, 2006). Although effectiveness in the classroom is not unidimensional, researchers also find that schools whose teachers provide personal support were more likely to have higher course passing rates (Allensworth & Easton, 2007). Furthermore, research studies conducted in Los Angeles Unified School District and Chicago Public Schools found that each failed class reduces a student's chance of graduating from high school between 10 to 15 percent (Silver, Saunders & Zarate, 2008). Thus, although no studies specifically link improved graduation rates to serving diverse student needs (to the authors' knowledge), there is some evidence to suggest this type of support could have considerable positive effects on graduation rates.

High rates of adverse childhood experiences (ACEs) impact student attendance.

Evidence suggests that ACEs are prevalent in urban and low-income communities like the students served at New Era (Schilling, Aseltine, & Gore, 2007). Accordingly, this root cause is likely one at play in the school's setting.

Research also documents that ACEs are associated with a variety of negative outcomes for students, including reduced student engagement and grade retention (Porche, Costello, & Rosen-Reynoso, 2016). Most relevant to this report is the finding that students who have experienced some form of trauma are more likely to drop out of school than those who have not (Porche, Fortuna, Lin, & Alegria, 2011). Furthermore, the same study found that this effect was further exaggerated in African American and Hispanic students. Research has not specifically linked ACEs with poor attendance rates, but it does link ACEs to school dropout rates. As such, there is evidence to support this issue in relation to the school's problem statement.

Education psychology differentiates the roles of self-efficacy (the belief that one is capable of doing the work) and outcome expectancies (the belief that the work has value in attaining specific outcomes). Researchers document that high self-efficacy is strongly linked to motivation and academic achievement (Pajares & Schunk, 2001). Positive role models (both adult and peer) have also been observed to serve as "protective factors" to allow urban high school students to achieve at high levels (Reis, Colbert, & Hébert, 2004). Again, in both of these cases, the research links role models and beliefs to academic achievement. Although achievement alone will not improve graduation rates, it is likely a necessary precursor to improving those later outcomes.

V. RECOMMENDATIONS FOR IMPROVEMENT

Brainstormed Ideas for Improvement Planning from Stakeholders

At the conclusion of day two, the stakeholders had a brief opportunity to brainstorm ideas and strategies that might help to address the root causes identified. This brainstorming activity asked participants to list any good ideas they have. These ideas were not prioritized or identified as formal recommendations to the school.

- Teachers do not have the resources and skills to support diverse student needs in the classroom.
  - Provide coaching and training for teachers.
  - Provide resources and translators for students' home languages.
  - Use the master schedule to group students (where possible).
  - Allow time for teachers to share what is working.
- High rates of adverse childhood experiences (ACEs) impact student attendance.
  - Provide additional mental health support (including support in native languages).
  - Assess students' motivation, and follow-up with conferences.
  - Establish training around social emotional learning for staff and students.
  - Establish more structures to support the transition from middle to high school.
  - Start the conversation about what life could look like after high school beginning in ninth grade.
  - Provide more mentors for group sessions.
  - Increase the use of Naviance, college and career readiness online program that helps students track progress to goals.
  - Include students on decision-making committees.
  - Have more career-related events for students.

Recommendations for Evidence-Based Improvement

Final recommendations for this report have been developed by the University of Maryland College Park in consultation with RCA facilitators and leaders at MSDE. Recommendations were developed using the following process:

- Reviewing the ideas, notes, and stakeholder perspectives gathered throughout the RCA process;
- Conducting a scan of the research literature related to the problem statement and prioritized root causes identified throughout the process. Although a comprehensive research analysis was outside the scope of this project, the team reviewed research using the standards of evidence model outlined in the ESSA to offer studies that had moderate or strong evidence of effectiveness (Level 1 or 2 on the ESSA framework);
- Compiling, organizing, and categorizing over 150 recommendations submitted by RCA facilitators.

These recommendations are offered by the University of Maryland College Park in consultation with MSDE. They represent only a portion of the potential strategies and interventions that will become a part of the school's three-year improvement plan developed in concert with the MSDE Title I office.

V. RECOMMENDATIONS FOR IMPROVEMENT

RECOMMENDATION	Four Domains Domain of Rapid School Improvement[1]
Provide high-quality differentiated instruction in all general education classes. Differentiated instruction serves a wide range of student abilities and needs in a single classroom. Studies suggest that differentiated classrooms produce similar or better results in reading compared to traditional classrooms (Connor et al., 2009; Reis, McCoach, Little, Muller & Kaniskan, 2011; Tieso, 2002). Research suggests that high-quality differentiated instruction includes the following features: 1) identification of each students' learning needs based on student performance data; 2) whole group instruction with various levels of examples and explanations, and subgroup instruction targeted at individuated students' skill levels with different levels and kinds of explanation and practice; 3) regular (informal and formal) assessment of student learning to identify new needs and goals following initial adjustment of instruction; and 4) continuous responsive adjustment of both what is taught and how it is taught based on the latest student assessment data (Alsalamah, 2017; Prast, Van de Weijer-Bergsma, Kroesbergen, & Van Luit, 2015; van Geel et al., 2019). Although much differentiation can occur through small and large group instruction in the regular classroom, some instruction may need to be more individualized based on student needs and will lead to pull-out interventions. Toward this end, randomized control trials on Computer Assisted Instruction (CAI) programs, such as through TutorMate, have shown remarkably positive results on elementary students reading performance (Kortecamp, Harper, & Green, 2016).	*Instructional Transformation*

[1]*The MSDE uses the Center on School Turnaround at WestEd's Four Domains for Rapid School Improvement: A Systems Framework as a framework for continuous improvement. The framework identifies four areas as central to rapid and significant improvement: turnaround leadership, talent development, instructional transformation, and culture shift. The recommendations in this report are aligned to the four domains as a way to organize and frame the improvement efforts. For more information: https://centeronschoolturnaround.org*

V. RECOMMENDATIONS FOR IMPROVEMENT

RECOMMENDATION	Four Domains Domain of Rapid School Improvement[1]
Implement coordinated "wraparound" supports for all students, which are customized to meet the specific needs of the school community. Research indicates that integrated student supports are associated with positive student outcomes. School-based supports can lead to improvements in students' attendance, behavior, social well-being, and academic achievement (Moore & Emig, 2014; Maier, Daniel, Oakes, & Lam, 2017; McDaniels, 2018). An essential component of such services is having the school-based personnel available to coordinate with other community agencies and organizations. All students would then be provided with the services that they need to overcome out-of-school learning barriers (The Maryland Commission on Innovation and Excellence in Education). Integrated student supports should provide coordination, outreach, and some direct staffing and programming for each of the following categories: 1) mental health, vision, dental, and medical services; 2) food, housing, and transportation assistance; 3) school-embedded school social workers, counselors, and psychologists; and 4) on-site childcare (secondary schools only). Well-developed resources are available to assist educators in transforming their schools into the community model, including the interactive Community School Playbook from the Partnership for the Future of Learning (https://www.communitiesinschools.org/our-model), the Coalition for Community Schools' interactive guide, *Scaling Up School and Community Partnerships: The Community Schools Strategy* (www.communityschools.org/ScalingUp), and Communities in Schools' Integrated Student Supports model (www.communitiesinschools.org/our-model).	*Culture Shift* *Turnaround Leadership*

V. RECOMMENDATIONS FOR IMPROVEMENT

RECOMMENDATION	Four Domains Domain of Rapid School Improvement[1]
Develop or expand a mentor program to ensure every student at risk of failure has an adult advocate in the school. Pairing students with an adult mentor and/or advocate gives at-risk students a positive role model in the school who can provide progress checks against key academic benchmark and graduation requirements, as well as serve as a conduit for referring students to other services as needed. Programs that provide this level of individual monitoring and feedback have been documented to have positive effects on school persistence for low-income urban students (Harris & Kiyama, 2015; Mitchell & Stewart, 2012). This type of intervention has also been demonstrated to be effective for students with disabilities (Pyle & Wexler, 2012). Built into this recommendation is the need to develop an accessible list of support services that mentors can use as a resource bank with students, as it is not reasonable to expect that mentors are able to combat all student needs. Such mentoring programs should focus on authentic goal setting for students that is related to college and career readiness. In addition, researchers recognize that effective mentoring and advocacy require orientation and training for those who serve in the role as mentors, including teachers and other school staff (Dynarski et al., 2008; Rumberger et al., 2017).	*Cultural Shift* *Turnaround Leadership*

VI. CONCLUSION AND NEXT STEPS

Collaboratively with the Local School System (LSS) and stakeholders, CSI school teams will develop intervention plans that identify SMART (Specific, Measurable, Achievable, Realistic, Time-Bound) intervention goals with measurable annual outcomes and progress indicators that will guide schools toward meeting annual targets and exit criteria in three years. The outcomes of the RCA must be used to inform the development of the SMART intervention goals and identification of evidence-based strategies included in the intervention plan. Any evidence-based strategy must meet the ESSA evidence requirements (Level 1, 2, or 3). Intervention plans will be approved by the school, LSS, and the MSDE, and monitored annually by staff from the LSS and the MSDE. Additional information and resources are available on the MSDE Resource Hub. https://www.marylandresourcehub.com

APPENDICES

Appendix A: List of Stakeholders

Day 1
March 29, 2019

Name	Position
Travis Robinson	*Mathematics Teacher*
Nicole Scruggs	*Title 1, Comprehensive Support and Improvement*
Jackie Ramsay	*English as Second Language Teacher*
Laurie Lynn Sutton	*School System Personnel*
Margo Berish	*Mathematics Academic Content Liaison*
Robert Hathaway	*Special Education Liaison*
Chanta' Booker	*Principal*
Linda Stokes	*Guidance*
Doris Austin	*Administrator*
Tonya Carter	*Literacy Academic Content Liaison*
Darryl Richards	*Science Teacher*
Jennifer Moore	*Social Studies Teacher*
Julianne Ohanian	*English Teacher*

Day 2
April 4, 2019

Name	Position
Jimmy Little	*Community Member*
Julianne Ohanian	*English Teacher*
Travis Robinson	*Mathematics Teacher*
Linda Stokes	*Guidance*
Garry Colbert	*Junior Reserve Officer's Training Corps Instructor*
Quincy Jones	*College Access*
Nicole Scruggs	*Staff Specialist Title I*
Chanta' Booker	*Principal*
Margo Berish	*Mathematics Academic Content Liaison*
Robert Hathaway	*Special Education Liaison*
Tonya Carter	*Literacy Academic Content Liaison*
	Student

APPENDICES

Appendix B: Bios of Facilitators

Erin Janulis is a graduate assistant with the Center for Educational Innovation and Improvement and a fourth-year doctoral student in the Education Policy Studies Program in the Department of Teaching and Learning, Policy and Leadership at UMD. Prior to pursuing her PhD, she spent five years teaching middle and high school English and social studies in high poverty schools throughout Colorado. During this time, she served not only as a classroom teacher but also an active member of her schools' response to intervention team, school culture committee, AVID elective teacher, and data team lead. Her research focuses largely on policies and issues related to teacher retention in high poverty schools, particularly the ways school culture, climate, and leadership alter patterns of teacher attrition. She has also worked for the Maryland Equity Project for three years writing policy and data briefs on teacher staffing and school discipline trends in the state of Maryland. Erin received her Bachelor of Arts in English and political science, Master of Arts in communication from the University of Illinois Urbana Champaign, and teaching certification from the University of Denver.

David Rease, Jr. began his career as a secondary social studies teacher in the Durham Public Schools. From there, he joined the turnaround team for the North Carolina Department of Public Instruction, supporting schools across the state with their improvement efforts. Later, he joined the McREL International, based in Denver, CO, as a consultant with the systemic improvement team. Rease spent several years supporting the Prince George's County Public School system in Maryland (as a consultant for Purse Excellence, LLC and then as the executive director of the Systemic Improvement Office) in its efforts to scale an improvement process throughout schools and the district offices. While Rease has held a variety of professional roles as an educator, he also brings specific knowledge about comprehensive needs assessments from his work with schools and districts across North Carolina. He led teams through a multi-day analysis of school data, including interviews with parents, staff, and students; performance and other qualitative data analyses; and report preparation. He holds a Bachelor of Arts from Columbia University, a Master of Arts in Teaching from Duke University, and an EdLD from the Harvard Graduate School of Education.

APPENDICES

Appendix C: Citations of research

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