ENSURING EVIDENCE-SUPPORTED PEDAGOGICAL PRACTICES THROUGH INSTRUCTIONAL COACHING

A disquisition presented to the faculty of the Graduate School of
Western Carolina University in partial fulfillment of the
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By:
Sarah Gillespie and Rebecca Welch

Chair: Dr. Jess Weiler
Associate Professor of Educational Research
Human Services Department

Committee Members:
Dr. Robert Crow
Dr. Tara Campbell
Dr. Brandy Nelson

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Abstract

Based on national test data, students are performing at a basic achievement level (below grade-level) in both reading and math (NCES, 2022). Research indicates four causes for low academic performance: poor pre-service preparation; inconsistent presence of standards-based, grade-level curriculum; lack of ongoing, evidence-based professional development; and lack of evidence-supported pedagogy. Our national and local problem is **students are consistently performing below grade-level proficiency**. This improvement initiative aimed to address the lack of access high school students have to evidence-based practices by focusing on cycles of targeted coaching support. The need for this initiative was identified as a result of continued evidence of below proficient student achievement in two districts. Improvement science, a methodology which uses inquiry with the goal of improving practice (Bryk et al., 2015), was employed throughout the Plan-Do-Study-Act cycles implemented as a part of the improvement initiative. We also utilized a Networked Improvement Community (Bryk et al., 2015) because the two districts in this initiative shared a common aim and visions for instructional practice.

Key Words: Coaching, Targeted Coaching Support, Professional Development, Evidence-Based Practices, Evidence-Supported Pedagogy, Grade-Level Curriculum

The Disquisition

The disquisition is formal, problem-based discourse. The disquisition is closely aligned with the scholar-practitioner role of Doctorate in Education (Ed.D.) students and thus takes on a practical focus rather than the theoretical focus of traditional Ph.D. dissertations. The purpose of the disquisition is "to document the scholarly development of leadership expertise in organizational improvement" (Lomotey, 2020, p. 5). The Ed.D. program at WCU nurtures and matures students as both scholars and practitioners who are trained to understand systems and institutional challenges and opportunities through a lens of research and scholarship. Students apply their knowledge, using their institutional access and positionality, directly to the educational institutions where they lead. The Ed.D. is an applied degree, and the disquisition is similarly an applied capstone experience for doctoral work.

The disquisition at WCU specifically utilizes an Improvement Science methodology, is shaped by critical theory and scholarly research, and engages the candidate in the application of the concepts in an applied manner through the development and implementation of an intervention within their local institution, focused on improvement of equity within that system. Ultimately, the disquisition serves as documentation and assessment of an improvement initiative that "contributes to a concrete good to the larger community and the dissemination of new relevant knowledge" (Lomotey, 2020, p. 5).[1]

Exploring the Problem: Low Academic Performance in Reading and Mathematics

A National Issue

According to National Assessment of Educational Progress (NAEP), 4th and 8th grade students are performing at a basic achievement level (below grade level) in both reading and math (NCES, 2022). The 4th and 8th grade average reading scores are 216 and 259 respectively, both 22 points below what NAEP considers proficient (or meeting grade-level expectations). Similarly, math scores are 235 and 273, 14 and 26 points below proficiency, showing that as students matriculate, they move further from proficiency than closer. The NAEP scale score is 0-500 for reading and math in each grade with the exception of 12th grade math, which is 0-300 (NCES, 2022). Table 1 shows the NAEP achievement levels and their corresponding scores.

Table 1

National Assessment of Education Progress Reading and Mathematics Achievement Levels

	4th Reading	8th Reading	12th Reading	4th Math	8th Math	12th Math
Basic	208	243	265	214	262	141
Proficient	238	281	302	249	299	176
Advanced	268	323	346	282	333	216

Figure 1 and Figure 2 outline the most recent NAEP scores, which show a variety of student groups who are not demonstrating proficiency - including some who are below basic achievement. Not surprisingly, achievement gaps persist between groups. However, regardless of students' race, disability, or poverty level, nearly all students are struggling to meet proficiency. The only student group who reached proficiency or performed above proficiency in both reading and math across grade levels were Asian students (NCES, 2022).

Figure 1

2022 Reading Scores from National Center for Education Statistics

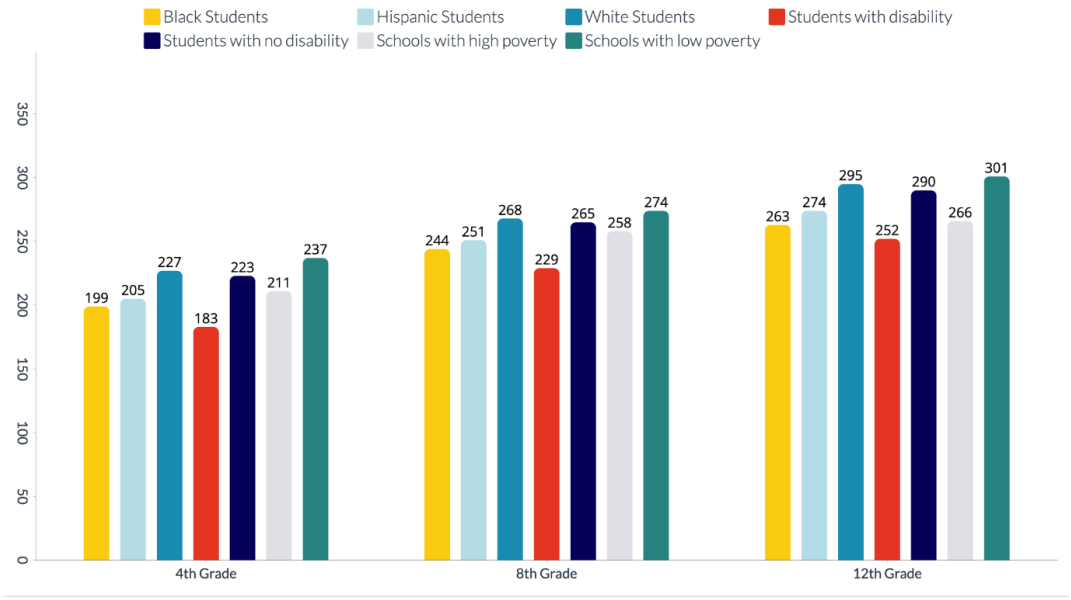
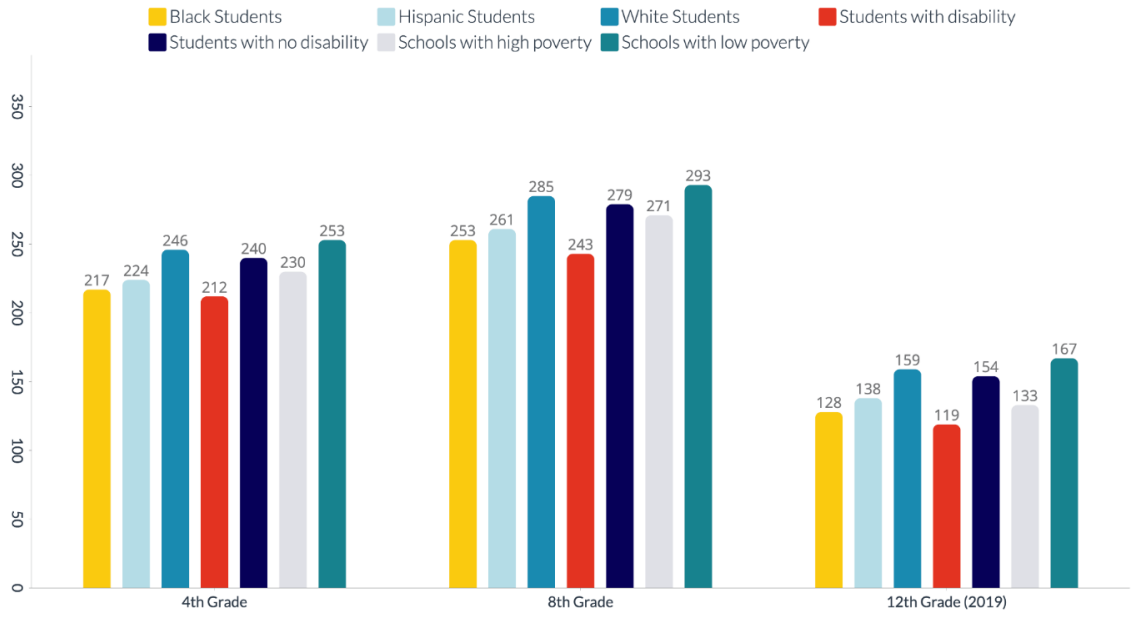


Figure 2

2022 Mathematics Scores from National Center for Education Statistics



Not only are students not meeting proficiency across student groups, their scores have either remained the same or decreased from 2019 to 2020 (Table 2). Focusing on the 8th grade

student groups below, the only group to see an increase were students at schools with the highest poverty rates. While the Covid-19 pandemic might be one reason for the decline, it cannot be the only reason. From 2017 to 2019, 8th Grade Reading scores decreased for Black, Hispanic, and White students, and math scores decreased for both Hispanic and White students, while remaining the same for Black students (NCES, 2022).

Table 2

Year-to-Year Comparison of 8th Grade Reading and Mathematics Scores

	2019 8th Reading	**2022 8th Reading**	**2019 8th Math**	**2022 8th Math**
Black	244	244	260	253
Hispanic	252	251	268	261
White	272	268	292	285
Students with disability	229	229	247	243
Students with no disability	268	265	287	279
Schools with high poverty	249	258	265	271
Schools with low poverty	279	274	301	293

The Impact of Low-Test Scores

Low test scores serve as one indicator of student performance in schools. If students are not demonstrating proficiency in critical subject areas, they are less likely to advance through school successfully – with high marks - and some will not graduate. This is problematic because high school completion and a strong academic transcript provides access to postsecondary opportunities that support one's quality of life. Further data from the NCES shows that employment rates for high school completion is 68%, *some* college is 75%, and a bachelor's degree or higher is 86%, so any postsecondary education, whether or not a degree is conferred, increases the likelihood of employment. The NCES also reports that higher education is linked to

higher earnings; those who completed high school average $36,600 while those who complete a bachelor's degree average $59,600 (NCES, 2022).

But education does not solely impact employment and income; it impacts health. Venkataramani et al (2016) explored how social mobility affects mortality rates and found as economic opportunity increased, death rates decreased. Ultimately, (and given our country's present system of healthcare) a person's health is determined by their personal economy, which is dependent upon employment, postsecondary education, and high school graduation. Given the importance of high school graduation to quality-of-life outcomes, we must recognize the critical role of educators in ensuring access not only to a diploma but also a quality education that prepares students to lead the lives of their choosing beyond high school.

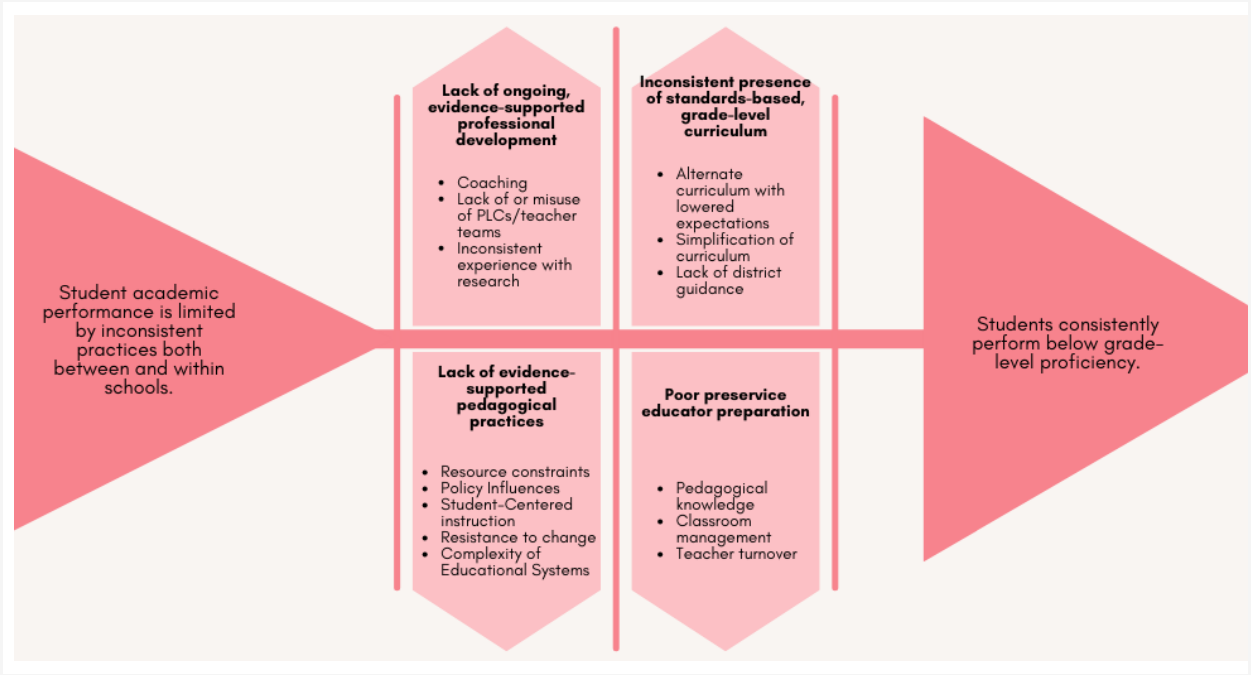
Causal Analysis

In this section we present a causal analysis. A causal analysis is a deep examination of the possible reasons an organization is experiencing a particular problem which involves describing the problem and detailing potential contributing factors (Bryk et al, 2015). Figure 1 is an Ishikawa fishbone diagram (Doggett, 2005). This type of diagram displays the root causes of the problem of practice and breaks down some of the contributing factors to this problem allowing the reformers to determine what factors are within their locus of control. We convened a team of individuals who were familiar with the local contexts and who had insight into the organizations. This team included ourselves, one executive director from Learning and Teaching, two directors from Learning and Teaching, and two assistant principals. For this improvement initiative, we identified four main causes for low academic performance: poor pre-service educator preparation; inconsistent presence of standards-based, grade-level curriculum; lack of

ongoing, evidence-supported professional development; and lack of evidence-supported (evidence-based) pedagogy. All are positioned in Figure 3.

Figure 3

A Fishbone Diagram for Causal Analysis



"Banking" education sees teachers as the knowledge keepers who deposit knowledge into their students (Freire, 2014), and is one theory that can explain how traditional beliefs about student capabilities can lead to curriculum simplification. Teaching through direct instruction is a result of the banking system of education. If the educator believes that they hold all knowledge and students hold none, it would be difficult to also hold the belief that students are capable of the analytical thinking required of grade-level curriculum. Rather, evidence-supported pedagogical practices make the paradigm shift from direct instructional models to more student-centered approaches where the teacher is viewed as the facilitator.

Poor Pre-service Educator Training

Teachers in Pre-k through twelfth grade have a variety of background experiences leading up to their position as a primary or secondary teacher. Some will have gone through comprehensive educator training through a college or university, others may have entered through a local residency program with some training. Still, many enter the teaching profession with virtually no educational training, instead relying on their industry experience to get them in the door. While effective pedagogy is learned on the job, it is also taught in teacher preparation programs and through pre-service teaching experiences. Boe, Shin, and Cook (2007) conducted a study that found 74% of teachers with extensive teacher preparation were able to effectively use a variety of instructional methods, compared to just 40% of teachers with little or no preparation. In the same study, 84% of teachers with adequate teacher preparation felt that they could effectively plan lessons, while 44% of teachers with little or no preparation felt they could do the same. While our work cannot address pre-service training educators did or did not receive, we felt it imperative to name this as a causal factor in the lack of high-quality learning experiences students receive.

Inconsistent Presence of Standards-based, Grade-level Curriculum

Some teachers feel they are doing right by students in simplifying ("dumbing down") the curriculum. Teachers alter, simplify, or break-down the state content standards and curriculum because they believe students are not capable of learning at higher levels (TNTP, 2018) or believe that learning is linear with prerequisites that must be met before moving forward. While this manner of teaching may be necessary in situations where students receive the learning as an onramp to new learning, many teach prior content just in case students did not learn it before and end up spending too much time on below-grade level work. However, teaching and learning is

about more than content standards and topics. Rather, learning incorporates characteristics, spaces, functions, and potentialities (Sibilio & Zollo, 2016) which produce a complete educational picture for students and contribute to their success in the classroom. The unfounded belief that teachers should simplify the curriculum often leads to a lowering of expectations (TNTP, 2018). A guaranteed and viable curriculum (GVC) (Marzano, 2003) is a powerful way to improve learning outcomes as the floor of expected learning. While a district may provide the GVC, effectiveness depends on the implementation and usage at the school and teacher level.

Insufficient Professional Development

Effective implementation of any practice, including evidence-supported practices, requires ongoing professional development (Georgiou et al, 2023; Ledford et al, 2017; Foster, 2014). If teachers do not receive adequate training, resources, and support, they may struggle to integrate new approaches into their daily instructional practices. One day spent in professional development will do very little in making effective shifts in pedagogy (Ledford et al, 2017; Foster, 2014; Wei et al., 2009). Rather, ongoing, job-embedded professional learning that builds the collective expertise of educators provides more maningful experiences for teachers that more easily transfer to the classroom environment (Hargraves & Fullan, 2012; Killion & Harrison, 2006; Guskey, 2003).

Inconsistent Experience with Research

Educators may face challenges accessing and interpreting relevant research findings. The dissemination of research to the broader educational community may be inconsistent, and teachers may not have the time or expertise to navigate academic literature to inform their practices (Georgiou et al, 2023; Foster, 2014; Burns & Ysseldyke, 2009). The research environment does not, and cannot, account for the varying, complex environments in which

research is attempting to be applied (Foster, 2014). While the strategy might have proven successful in one environment, applying it to another environment can be challenging and usually requires a breadth of research to determine the relevant items to apply to a unique context – much akin to improvement science and the aim of this work. If educators' time cannot extend to learning and practicing a new strategy (Georgiou et al, 2023; Gardner et al, 2021; Foster, 2014), it certainly cannot extend to delve into reading and understanding research and research methods (Georgiou et al, 2023).

Lack of Evidence-Supported Pedagogy

Generally speaking, student engagement as a concept may be the "key to diminishing student apathy and enhancing learning (Fredericks et al., 2004, p. 82)." This apathy exists in nearly every observed classroom in one form or another, which can lead to reduced motivation to participate in or complete tasks (Deci et al., 1991). Limited peer collaboration and increased dependency on teacher guidance are symptoms of low student engagement that prohibit students from taking initiative in their own learning (Lohman & Woolf, 2010), limit their ability to work independently (Treffinger & Barton, 1979;), and reduce the sharing of ideas and collaborative problem-solving (Mercer & Littlejohn, 2007; Johnson & Johnson, 1986). In addition, students may begin to display negative behaviors including disruption due to boredom or frustration, related to teaching methods and management (Marzano, R., Marzano, J., & Pickering, D., 2003). As a result, students have limited opportunities for critical thinking and creativity (McLoughlin & Hodson in Padget, 2012). They struggle with problem-solving and critical thinking tasks, experience limited expression of creativity in projects or assignments, and rely on memorization rather than a deep understanding of concepts.

Policy Influences for "Evidence-Based" Pedagogy

Education is shaped not only within individual classrooms but also by national policies attempting to bridge the gap between research findings and educational implementation. The No Child Left Behind Act (NCLB), enacted in 2001, aimed to enhance accountability and improve student outcomes by emphasizing evidence-based interventions, requiring standarized testing for accountability purposes, and providing alternative schooling options for students at low-performing schools (US Department of Education, nd). In 2015, Every Student Succeeds Act (ESSA) replaced NCLB. It includes protections for high-need students, focuses on college and career-ready standards, mandates annual statewide testing, invests in preschool, and requires accountability and action to change lowest-performing schools. (US Department of Education, nd). Despite policy intentions, challenges persist in changing teaches' pedagogical practices from what teachers know and have experienced to what researchers say is supported by evidence (Georgiou et al, 2023; Gardner et al, 2021; Burns & Ysseldyke, 2009). The Office of Elementary and Secondary Education (2020) defines evidence-based practices as "activities, strategies, and interventions" (para. 1) that are informed and supported by research and student performance. The persistent lack of evidence-based (or evidence-supported) practices in public education is a complex issue influenced by a myriad of factors at various levels of the education system. Several key reasons contribute to this ongoing challenge.

Resource Constraints

Limited resources, including time, funding, and materials, can impede the adoption of evidence-based practices (Gardner et al, 2021). Teachers may find it difficult to incorporate new strategies if they lack the necessary resources or if these practices require additional time that is not available in their already demanding schedules. Lack of time is a consistently reported barrier to implementing evidence-based practices (Georgiou et al, 2023; Gardner et al, 2021; Foster, 2014). Whether teacher-reported or researcher-observed, teachers lack adequate time to engage in ongoing professional learning (Georgiou et al, 2023; Foster, 2014), collaborate with colleagues for support (Ledford, 2017; Foster, 2014), and practice new strategies in the classroom (Georgiou et al, 2023; Gardner et al, 2021).

Resistance to Change

Districts, administrators, and teachers may resist adopting evidence-based practices because they are comfortable with their traditional methods (Viennet & Pont, 2017; Foster, 2014; Burns & Ysseldyke, 2009). Changing established practices can be met with skepticism and reluctance, particularly if educators are not adequately trained or supported in implementing new strategies. Teachers are driven by observable, positive impacts on students, and thus are motivated to make changes when they know a positive outcome will be achieved (Foster, 2014; Guskey, 2002). Teachers will change when they see something works, but unfortunately, they cannot see if it works if they are unwilling to try. It is also important to educators to be recognized as the professionals they are (Foster, 2014), which is supported by Knowles (1968) who defined androgogy and posited that adult learning must include utilizing the adult's lived experience. It seems resistance can be most attributed to how change is presented and not to the change itself.

Complexity of Educational Systems

Education is complex and multifacted, involving various interested partners and collaborators (policymakers, adminstrators, teachers, students, and parents). Coordinating and aligning efforts across these diverse groups in order to implement evidence-based practices can be challenging (Gardner et al, 2021; Viennet & Pont, 2017; Foster, 2014; Buzhardt et al, 2006). One essential element of effective coordination involves communication. When communication is open and consistent, changes are better supported, understood, and implemented (Buzhardt et al, 2006). Teachers must have the ability to synthesize through the various coordination and communication efforts, including the local school board, district leaders, principals and administrators, and their teacher teams to determine what content to teach, how to teach it, and how to make it meaningful in service of kids.

Focusing Our Improvement Efforts

The denial of evidence-supported pedagogical practices for students represents a formidable challenge within the education, exerting a profound impact on student academic performance. Addressing this critical issue is paramount, necessitating a comprehensive examination of the systemic barriers that obstruct the seamless integration of evidence-based pedagogies into classrooms. By acknowledging and rectifying this disparity, educators can pave the way for a more equitable and effective educational system that empowers students to thrive academically. For the purposes of this disquisition, we focused upon providing ongoing professional development through coaching in the areas of standards-based, grade-level curriculum and student-centered, engaging pedagogy.

Local Contexts of Practice

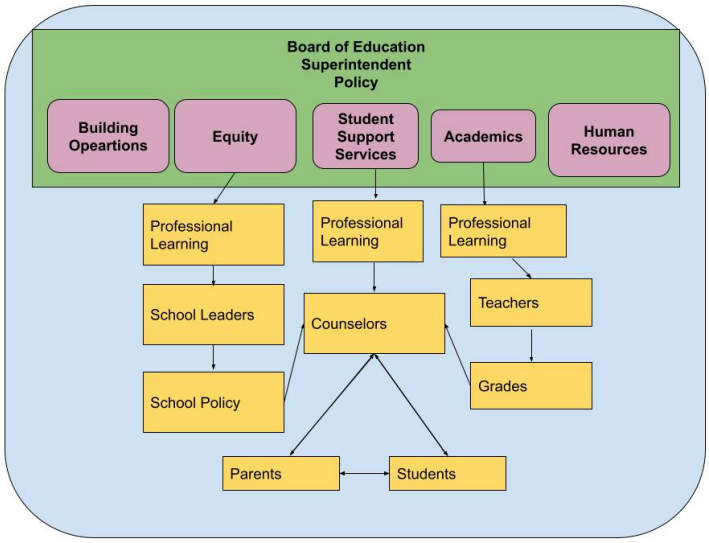
District One

The first district where we conducted our improvement initiative was a large, urban school system that served just over 143,000 students - 36.8% Black, 29.8% Hispanic, 24% White, 7% Asian, and .2% American Indian. At the time of our initiative, District One was one of the largest school districts in the country. The chances for social mobility in the area were one of the lowest in the country; a child born into low income in the area would most likely remain in low income throughout their life (Chetty et al, 2014). The city's population included 56.4% White, 33.2% Black, and 14.4% Hispanic (Census, 2020); however, poverty rates were staggeringly disproportionate. According to the U.S. Census (2020), the Hispanic poverty rate in the county was 19.4%, and the Black rate was 12.9% compared to a smaller 5.9% White (non-Hispanic) poverty rate.

Figure 4, below, is a system diagram and depicts the departments and stakeholders who were a part of the district. Under the umbrella of the Board of Education and the Superintendent, policies were created in five departments: Building Operations, Equity, Student Support Services, Academics, and Human Resources. Each of these divisions had its own chief of operations; the chiefs, along with the board members and the superintendent, form the Cabinet, which made all major decisions. The Cabinet entrusted the supervision and management of schools to Learning Community Superintendents. The 180 schools are divided into 9 learning communities and placement was determined by student enrollment, location, and poverty rates.

Figure 4

School System Map, District One



Historical and Current Initiatives, District One

In 2019, the school system began curriculum adoption for math and English Language Arts (ELA) in kindergarten through twelfth grade to address what they learned from the district's own work with The New Teacher Project (TNTP): that most students do not have classroom experiences that prepare them for post-secondary life. According to TNTP (2018), curriculum must require students to practice critical thinking, problem solving, and information processing, which are crucial skills for college and career. TNTP (2018) also stated that instruction should require students to do the cognitive lift of the grade-level content. However, TNTP (2018) found that while 71% of students were successful on their assignments, only 17% of those assignments met grade-level standards. Furthermore, only 16% of classroom observation consisted of strong instruction, defined by the actions of the teacher, actions of the students, and core material taught. The district then designed an extensive adoption process to meet those needs, beginning with nationally vetted curricula, and included all groups in the school community. Furthermore,

to support the implementation of the new English curricula, the district hired content specialists and school-based instructional coaches. The content specialists were to provide professional learning for both the instructional coaches while the instructional coaches were to support teachers within their schools by leading Professional Learning Communities (PLC), developing pedagogy, and modeling lessons.

However, several factors impacted the initial plan for curriculum implementation. After the first year of curriculum implementation, the board of education established new goals and guardrails to meet their strategic plan, and the focus shifted away from high school English to Math 1. The district also saw three different superintendents from the first day of curriculum adoption to the beginning of this initiative, a span of two years. With shifting goals and leadership, accountability became inconsistent among learning community superintendents who supervised and managed schools and school leaders. Some schools argued the materials were not rigorous enough for their students, while others claimed the materials were too challenging for their students. Many teachers replaced the grade-level curricula materials with below grade-level standard materials, or they supplemented the materials to the extent that students no longer had access to materials that would prepare them to meet the grade-level standards. In both circumstances, there were learning community leaders who held schools and teachers accountable for implementing the adopted curricula and others who did not. Many schools did not have the personnel for a designated school coach, and often, school-based coaches were new coaches or also had teaching responsibilities, which impacted their time and therefore their effectiveness. Ultimately, while the intent was there, the processes, procedures, and personnel to support instructional coaching never came to fruition.

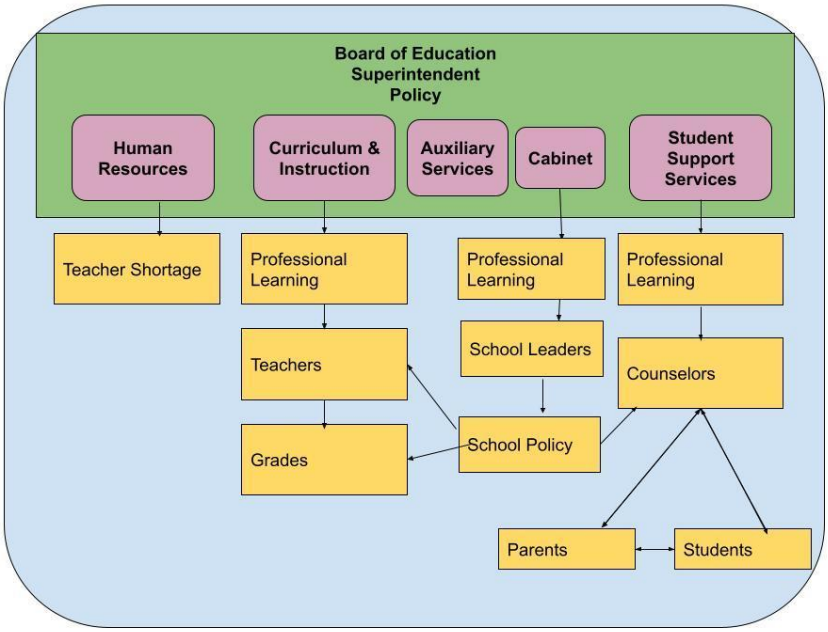
District Two

The second school system is a suburb of the first school system and at the time of the initiative, served almost 33,000 students – 22.2% Black and 46.6% White, 18.3% Hispanic, 7.7% Asian, 4.8% two or more races, 0.3% American Indian, and 0.1% Native Hawaiian/Pacific Islander. While this district was much smaller than the first, it was in the top ten largest school districts in the state. The district served students in multiple towns and cities ranging from affluent to poor, which affected the social mobility of the population, like the first district. According to the U.S. Census, the district population was 58.7% White and 21.8% Black, and 11.9% Hispanic while the overall county poverty rate was disproportionately 6.95% White, 13.11% Black, and 17.14% Hispanic (2020). However, the most affluent town had a White poverty rate of just 2.68% and a Black poverty rate of 6.34% while the neighboring city had a White poverty rate of 6.28% and a Black poverty rate of 12.99%. Though the second district differed from the first in that its largest demographic was not Black, there remained disproportionate outcomes within the community.

Figure 5, below, is a system diagram of the second district and is like that of the first. The Board of Education and Superintendent housed the departments where policies were created: Human Resources, Curriculum and Instruction, Auxiliary Services, Cabinet, and Student Support Services. As with the first district, the Cabinet made all large decisions for the district and influenced the other departments. They were also the supervisors for the three Assistant Superintendents for Elementary, Middle, and High Schools – which were the equivalent to the Learning Community Superintendents of the first district. Instead of learning communities, schools were grouped according to grade band.

Figure 5

School System Map, District Two



Historical and Current Initiatives, District Two

District Two has never had a guaranteed, viable curriculum in every classroom in every grade level. The district provisioned resources for teachers in elementary school literacy, but high school math and English allowed for choice. Previously, the district adopted resources that schools could choose to use or teachers could use their own materials. As with District One, the experience from school to school was inconsistent, with some students experiencing a much higher level of rigor than others.

In 2022, the districts' principals began working with NCEE (National Center on Education and the Economy) through a required professional learning series to identify one of three focus areas they believed to be an area of need: early childhood, recruitment and retention for diverse populations, or teaching and learning. In general, those who identified early childhood as a focus area mentioned possibly adding a daycare in their building both for the

teachers who were parents and needed childcare and possibly for the teenage parents. Those who identified teaching and learning as a focus area discussed relevance and authenticity of the curriculum, the need for standards-based grading, and the connection to a guaranteed, viable curriculum.

As a result of the identified teaching and learning focus area, the district was poised to potentially adopt curriculum in high school math and English. They were at the beginning of the process and were likely to move through many of the steps that District One experienced including convening focus groups of community groups, teachers, students, and other staff members. An extensive search process to adequately vet materials before provisioning them district-wide was beginning.

Commonalities in District One and District Two

In each district, the strategic plan was the guiding document for decision making and consisted of desired competencies of a high school graduate. In essence, these competencies were the outcomes that would occur if students successfully matriculated through twelfth grade. The primary principle was that students will graduate high school college or career ready. Both districts were graduating students at a steady rate, but many were not college or career ready according to the standards set by the state and the local districts, which were likely flawed criteria set forth by an inequitable system. Somewhere in the system existed a failure in policies, procedures, and belief in students, which reproduced outcomes that failed students.

While the list of policies is too exhaustive to name, a sampling of policies which existed in both systems that impacted student learning included dress code, discipline, and attendance. Students out of dress code were asked to change or sent home. Students who were suspended in-school or out-of-school were likely to enter a vicious cycle of repeat offenses. Students with ten

or more absences were required to make up the time or fail the course - no matter their grade or mastery of content. Each policy was focused on student compliance and the consequence for non-compliance directly impacted instructional time, denying learners access to teaching and learning. Despite the variety of beliefs about student discipline, perhaps we should question practices that keep students away from the learning environments they need to grow.

Additionally, District One's Board Policy IKA, adopted in 1966 and revised in 2015, dictated that the grading system should be based on professional judgment and include tests, quizzes, and evaluate objectives taught in class. It also required the inclusion of homework, participation, skill application, and attendance. District Two mirrored this policy with their Policy Code 3400: Evaluation of Student Progress, adopted in 1971 and revised in 2010. Again, this policy stated the grading system should be based on a continuous assessment of student assessment and performance but did not dictate specifically how this should be accomplished. In practice, these policies left room for interpretation and bias and led to the creation of district grading guidance. The intention was to reward students who worked hard, which is a subjective measure, but the policies quite often could do more harm than good. Families were led to believe students mastered content skills when their grades were inflated with grades based on compliance (participation and completion); what they truly mastered was how to comply with the system requirements. Contrarily, students who were not perceived as compliant or hard-working were harmed by grades that quite often did not account for the skills mastered. A grade should reflect student knowledge and skills, not student behavior (Feldman, 2019). Despite district guidance stating this belief, the named practices were in contradiction.

Furthermore, both school systems followed a standard treatment protocol prescribed by the Multi-Tiered Systems Support (MTSS) team – a commonality of most districts in the state.

MTSS identified and categorized students into different tiers. All students began in Tier 1 (Core Instruction); students were then identified and referred for Tier 2 (Supplemental Support) and Tier 3 (Intensive Intervention) based on their academic and social needs. However, students were often identified as unsuccessful in Tier 1 without consideration that the failure might have been in the instruction and not in the student.

Improvement Initiative Design and Plan: Ensuring Evidence-Supported Pedagogical Practices Through Instructional Coaching

In prior sections we detailed the problem, the causes of the problem, and a description of the local contexts (school districts) in which the problem existed. In this section, we will describe the improvement initiative and process for addressing the problem. District One and District Two formed a Networked Improvement Community (NIC) (Bryk et al, 2015; Hinnant-Crawford, 2020). A NIC is an initiative between communities that develops a shared problem of practice, a theory of how to address the problem of practice, theory of improvement, measurement and analysis, and improvement and research methods (Hinnant-Crawford, 2020). The purpose of a NIC is to build knowledge of reliable outcomes of these theories in multiple contexts when they are replicated (Bryk et al, 2015).

Our Role as Improvement Facilitators

Serving in our district roles, we co-developed and co-implemented a coaching cycle with the schools' instructional leaders that was to ensure instruction was grounded in grade-level standard curricula and engaging, research-based pedagogy. District One supported curriculum implementation with teacher professional learning and school-based instructional leaders. District Two supported math instruction with math coaches who served as the school-based instructional leaders. Many school-based instructional leaders were new leaders with little to no coaching experience who may or may not have understood the importance of ensuring grade-level standards curricula in classrooms or how to make that a reality within their schools. We hoped to bring our understanding of the problem of practice, the accompanying research for addressing the problem, our position as leaders, and our curriculum experience to the table to create a team of educators dedicated to providing all students with access to grade-level curricula and high-quality teaching and learning.

Theory of Improvement

Our theory of improvement held that providing ongoing professional development through coaching would increase use of grade-level, standards-aligned curricula instruction in high school Math and English. As a result, all students will receive high-quality instruction utilizing grade-level curricula.

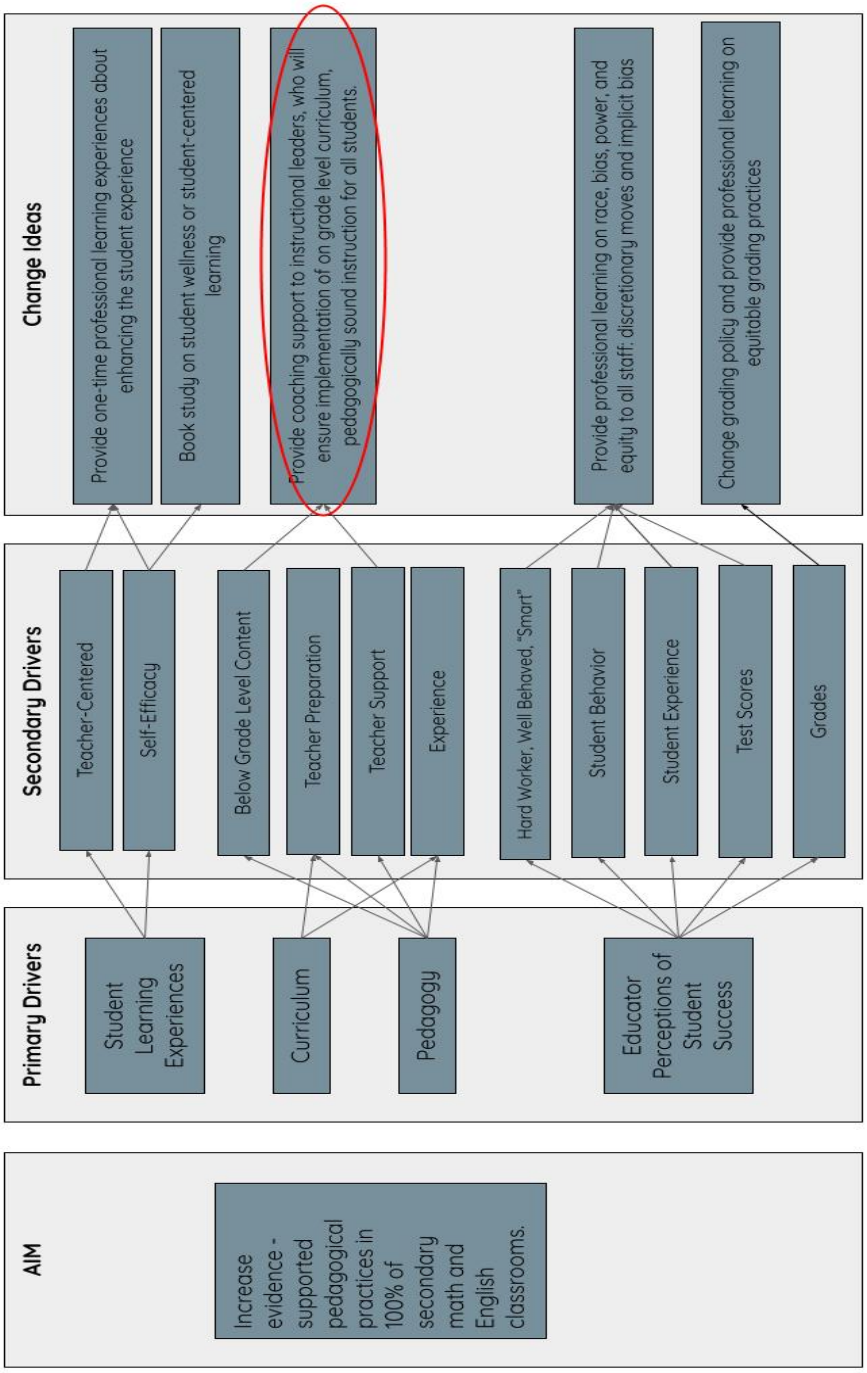
Driver Diagram

Figure 6, our driver diagram, shows our aim, the identified primary and secondary drivers and the proposed change ideas. A driver diagram is a tool the design team creates and utilizes which uses a common language and identifies "key levers for improvement" for a shared problem (Bryk et al., 2015, p.72). In order to understand our problem of practice from the lens of

our school community, we collected feedback through focus groups, interviews, and surveys that included 1) district staff: executive staff from Learning and Teaching and Equity and specialists from Equity, Math, and English and 2) school staff: assistant principals and teachers. The design team reviewed and discussed the collected data to determine the drivers of change. In the column on the left, we identified the aim of our improvement initiative: to increase evidence-supported pedagogy in math and English. The second column from the left lists our primary drivers: student experiences, curriculum, pedagogy, and educator perceptions, followed by the secondary drivers in the third column. Educators shared anecdotes of classroom observations and student interactions that paint a picture of classrooms with low expectations, watered-down curriculum, dull pedagogical practices, and a focus on behavioral compliance. We also learned about educator ideology and practices that also drive the problem. In high school, students ideally select their classes; however, counselors guide that process. They look at student grades and test scores and use these biased measures to make suggestions to students. Then, there are teachers who believe some students do not have the ability or intellect for rigorous work based on their perceptions of student behavior, engagement, and previous performance. Finally, our change ideas are listed in the fourth column. Many of our change ideas are linked to multiple drivers.

Figure 6

Driver Diagram



Drivers of Change

The Power of Ongoing Professional Development

Teacher practice is directly linked to professional development that centers around the content area, is job-embedded and sustained, is active and involves collaboration from teachers within a context (Desimone and Garet, 2015; Whitworth and Chiu, 2015; Darling-Hammond et al., 2009; Desimone, 2009). Student achievement rises when professional development (PD) is ongoing and includes between thirty and one hundred hours of PD in a period of six to twelve months (Wei et al., 2009). Two sustained PD practices which support changing teacher practice include coaching (Metz, 2015; Sugai & Horner, 2006; Joyce & Showers, 1982) and successful implementation of Professional Learning Communities (PLCs) (Hord, 2007; DuFour et al., 2006). If these practices are so promising, why are they not implemented? Instructional coaching requires adequate knowledge and skills to be effective and is often resisted by teachers because of the natural struggle with room for improvement (Knight, 2007). Additionally, PLCs meeting structures have become spaces for venting frustrations with unclear outcomes and little buy-in and trust (Hord & Sommers, 2008; Schneider & Bryk, 2002).

Targeted Coaching Support

Research suggests that professional learning is more effective when paired with instructional coaches who can support the instructional shifts and address the challenges of changing practice (Marshall & Khalifa, 2018; Toll, 2018; Eisenburg et al., 2017). Coaches have a direct impact on teacher reflection, collaboration, data use, and decision making, which are characteristics of effective teaching that lead to student academic success (Toll, 2018). Furthermore, Toll (2018) described various models of coaching and emphasized that the most effective coaches establish a supportive, collaborative relationship with teachers. A basic tenet of

educator-centered instructional coaching (ECIC) is to understand adult learners (Eisenburg et al., 2017). ECIC focuses more on how learning occurs and not on what is being taught. Coaching requires a collaborative relationship between coach and teacher where both are learning. One is learning how to improve instruction while the other is learning how to improve coaching. Further research suggests coaches also need the support of a coach (Eisenburg et al., 2017: Morel & Cushman, 2012). Morel and Cushman (2012) supported a gradual release model of coaching the coaches, beginning with weekly support meetings that shift to bi-weekly as coaches grow in their practice. Specifically, we proposed to provide district-coaching to school-based instructional coaches in order to provide students with access to high-quality teaching and learning in math and English, achieved through evidence-supported pedagogy.

Our improvement initiative aimed at changing teacher practice in order to implement grade-level standards curricula in math and English, along with student-centered instruction. Guskey (2002) asserted that teachers define their own success in terms of student learning outcomes; therefore, they must first change practice that leads to student success in order to believe a change is worthy. Hence, he posited that professional learning aimed at teacher buy-in and changing mindsets may not initiate the change desired. According to Guskey (2002), coaches need to balance curriculum fidelity and integrity (strict adherence versus informed and necessary adjustments), provide teachers feedback on student learning and self-efficacy, and support consistently and insistently. Coaching that includes cycles of preparation, action, reflection, and revision will be most effective in support of shifting teacher practice (Knight, 2019; Bambrick-Santoyo, 2016; Guskey, 2002). We planned to work with school-based instructional coaches in order to build their coaching capacity with teachers and follow a cyclical change model.

Professional Learning Communities (PLCs) are teams of teachers with a common purpose who regularly meet to accomplish goals such as lesson planning, student monitoring, assessment making, etc. (Blitz & Shulman, 2016). Effective implementation of a PLC involves constant collaboration and provides a space for teachers to assess and address problems that exist within their courses (Vescio et al., 2008). In our initiative, district coaches and school-based coaches utilized PLCs as one space to provide targeted support to teachers.

Ensuring the Use of Grade-Level Curriculum

Unsurprisingly, research supports that standard level classes that implement a simplified curriculum indeed have lower outcomes for students. Scarcelli and Morgan (1999) studied fourth grade remedial Language Arts classes and determined that students who received instruction that was not simplified and that met all the standards performed better than the control group.

Throughout our coaching cycles, we provided coaches and teachers with curriculum that is aligned to the grade-level standards. We supported coaches by building their understanding of curriculum design and content to build their capacity to differentiate between appropriate scaffolds that support student grade-level learning versus content with lowered expectations that are not aligned to grade-level standards.

Student-Centered Curriculum and Pedagogy

Student-centered learning spaces generate engaging experiences that involve collaboration, facilitation, student ownership of learning, and reflection (Patel-Junankar, 2017). Student-centered curriculum and pedagogy is not a new concept; it stems from the work of John Dewey, Lev Vygotsky, Maria Montessori, Jean Piaget, Jerome Bruner, and the like. Yet, classrooms continue to utilize pedagogical choices that make the teacher the center of the classroom and the keeper of the knowledge, rather than the facilitator of student learning. During

our improvement initiative, we provided teachers and instructional coaches with the knowledge and tools to provide students with a learner-centered experience through professional development and coaching.

Improvement Initiative Goals

Our goal was to ensure student access to high-quality teaching and learning using coaching as professional development to ensure the enactment of grade-level curriculum and evidence-supported, student-centered pedagogy. All materials received by participants used the term "high-quality teaching and learning," which is a variant of "evidence-supported pedagogical practices," used in our discussion of our work. We began by supporting educators in creating meaningful classroom experiences for their students. To balance shifting practice and shifting mindset, we designed professional learning that included research on coaching and teacher change from Guskey (2002) and Knight (2019), along with student-centered teaching and learning from Muhammad (2023). In both districts, teachers were not teaching grade-level materials with student-centered methods. The first resources were intended to support instructional leaders in their practices, and the second resources were intended to build leaders' capacity in addressing mindsets by focusing on the elements and guiding questions to design lessons with student backgrounds in mind.

The following were the outcome goals for our initiative:

1) Enactment: Learning Walk (classroom observation) results demonstrate that 80% of teachers score "Yes - true for all students" in all categories for math and English.
2) Learning: 100% of school-based instructional leaders who participated report on the post-survey that they strongly agree with all survey descriptions of high-

quality teaching and learning.

3) Learning: 100% of teachers who participated report on the post-survey that they strongly agree with all survey descriptions of high-quality teaching and learning.

Improvement Initiative Implementation Plan

The following were the main steps for our initiative:

1) Provide professional learning and coaching for school instructional leaders on leading PLCs, internalizing grade-level curriculum and standards, and high-quality teaching and learning.
2) Support instructional leaders in coaching teachers in internalizing the grade-level curriculum and providing high-quality teaching and learning.

First, we convened our design team to finalize the coaching cycle plan (Appendix A). The team included ourselves, along with the Director of Secondary Curriculum from District One; the Director of Advanced Studies from District Two, one math specialist, and one literacy specialist. Our roles in the process were that of scholars and practitioners who participated in and analyzed the process. The role of our directors was to ensure that our work aligned with district initiatives. The specialists served two purposes: they represented and worked with different schools and communities, and secondly, they had individual expertise to lend to the team. The math specialist had a long history in the district, serving in various roles, and was in the final semester of her PhD program in Education. The literacy specialist had over twenty years of experience teaching English and coaching teachers.

District One: Two schools chose to participate in the improvement initiative. At the time of the initiative, School One had 1,315 students: 50% Black, 39.2% Hispanic, 3.3% White, and 4.6% Asian. School Two had 2,381 students: 56.4% Black, 37.3% Hispanic, 2.0% White, and

1.6% Asian. Both PLCs were composed of three teachers with two beginning teachers (0-3 years of experience) in each.

District Two: Three schools participated in the improvement initiative. The population of School One consisted of 987 students: 40% White, 27% Black, 26% Hispanic, and 4% Asian. The PLC had four teachers. School Two was composed of 991 students: 35% White, 31% Hispanic, 27% Black, and 2% Asian. The math PLC had three teachers. School Three had 1,270 students: 46% White, 25% Black, 22% Hispanic, and 1% Asian, with only two teachers in their PLC. Five of the nine teachers were beginning teachers.

We recognized the many challenges that could come with shifting pedagogy. One of the challenges to consider was how our work was perceived. Instructional leaders and teachers have a heavy workload that is constantly met with new initiatives and additional tasks. We had to ensure we clearly aligned our work and goals with school goals and teacher planning. Another challenge and potential barrier was facing and changing deficit ideology. Most teachers believe they are doing what is best for their students and do not believe they are causing harm because they are not intending to. By focusing on creating high-quality teaching and learning experiences through grade-level materials and student-centered instruction, we hoped teachers would see how shifting their practices created spaces where students could be seen as lead learners - thus proving Guskey's (2002) assertion that teachers need to see success before believing in a change. Ultimately, to address the challenges, we ensured coaching directly connected with daily classroom practice, recognizing that adult learning tenets require all professional learning to be relevant to teacher daily work.

Analysis Plan for Improvement Initiative

Evaluation is imperative for assessing learning outcomes. Evaluation of our improvement science initiative was no different. While there were many circumstances that were under our control, there were also several conditions we could not predict or account for in our evaluation (Langley, et al., 2009). In both cases, formative evaluation helps inform practitioners along the way if the improvement initiative is having an effect or if changes should be made. Summative evaluation is important for evaluating the big picture of the initiative and whether the learning outcomes were met.

Formative Evaluation of the Improvement Initiative

We employed improvement science as we conducted our research. Improvement science aims to learn about an organization by asking questions, and gradually implement and test changes through multiple cycles of the Plan-Do-Study-Act approach (Bryk et al., 2015). The Plan-Do-Study-Act (PDSA) approach involves a cycle of learning, implementing a change, studying the change, and reacting based on the results of the change. Our improvement initiative involved two PDSA cycles within a larger PDSA.

In *Table 3* we describe the formative assessments we utilized before and during the improvement initiative. We used the Learning Walk Tool (Appendix B: Math and Appendix C: English) as the first assessment during the "Plan" phase that guided our entry into the work. The Learning Walk Tool, adapted from Achieve the Core (Student Achievement Partners, 2018), measured three things: if core curriculum was being taught (grade-level), if students were interacting in the classroom such that they were doing the cognitive lift of the lesson (student-centered), and if teachers were providing opportunities for students to experience learning in a meaningful way (student-centered). The data gathered established the current state of teaching

and learning and guided us and the instructional coaches in designing a plan to grow teacher pedagogy. The "Do" phase was the first strategy the coach and teacher attempted to improve instructional practice.

Table 3

Formative Assessment Data Table

Data Collection Instrument	**Audience**	**Timeframe**	**Measure Type**	**Information**
Learning Walk Tool	Design Team and Coaches	Before coaching plan began	Quantitative (Driver)	Assessment of classroom instruction prior to coaching cycles
Pre-Survey	Coaches	Beginning of coaching plan	Quantitative and Qualitative (Driver)	Coaching capacity and efficacy to implement coaching cycles for high-quality teaching and learning
Pre-Survey	Teachers	Beginning of coaching plan	Quantitative and Qualitative (Driver)	Teacher capacity and efficacy for high-quality teaching and learning
Learning Walk Tool	Design Team and Coaches	Bi-weekly during coaching plan	Quantitative (Process, Balance)	Assessment of classroom instruction during coaching cycles

Table 4 provides indicators for math and English that were designed to demonstrate instruction that was grade-level and student-centered.

Table 4

Learning Walk Indicators

	Grade-Level	**Student-Centered**
Math	The enacted lesson targets the aspects of rigor (conceptual understanding, procedural skill and fluency, and application) called for by the standard(s) being addressed. All materials are grade-level, standards-aligned.	● The teacher strengthens all students' understanding of the content by strategically sharing students' representations and/or solution methods. ● The teacher deliberately checks for understanding throughout the lesson to surface misconceptions and opportunities for growth and adapts the lesson according to student understanding. ● The teacher cultivates reasoning and problem solving by allowing students to productively struggle. Students persevere in solving problems in the face of difficulty. ● The teacher creates the conditions for student conversations where students are encouraged to talk about each other's thinking. Students share their thinking about the content of the lesson beyond just stating answers.
English	The anchor text(s) are at or above the complexity level expected for the grade and time in the school year. All materials are grade-level, standards-aligned.	● Questions and tasks address the analytical thinking required by the grade-level standards AND are sequenced to build knowledge by guiding students to delve deeper into the text and graphics. ● The teacher cultivates reasoning and meaning making by allowing students to productively struggle with grade-level texts and tasks. Students persevere through difficulty. ● The teacher creates the conditions for student conversations where students are encouraged to talk about each other's thinking. Students talk and ask questions about each other's thinking, in order to clarify or improve their understanding of grade-level material.

The Learning Walk Tool was also used throughout the improvement initiative as a process measure and balancing measure. The observation data taken throughout informed the coaching cycles as a process measure – the "Study" phases. Coaches studied the classroom data

to determine the next action they took with teachers for the “Act” phase, which often meant a new strategy was attempted or the same strategy was refined to continue growing teaching and learning practices. This repeated for two coaching cycles: "plan” using Learning Walk Data, “do” an improved pedagogical approach, “study” the effect, and “act” on improvement or need for change. The Learning Walk Tool also served as a balancing measure during the improvement initiative. Ultimately, the aim was for every indicator of the Learning Walk Action Tool to score “Yes - True for ALL students,” which meant the criteria was consistently observed for every student. If the initial walk indicated an area of growth in student engagement, for example, and showed rigor or complexity as a strength, we wanted to ensure that as the coach focused on increasing the teacher capacity in engaging students that the criteria in rigor or complexity would not fall to “Yes - True for SOME students,” or “No.” At the end of the initiative, the Learning Walk Tool captured quantitative data about the coaching cycles related to improved teaching and learning, as indicated by the Learning Walk indicators.

Both a coach survey (Appendix D and F) and a teacher survey (Appendix E and G) were administered at the beginning and end of the improvement initiative to capture self-perception and growth in beliefs of what students are capable of related to learning. Responses on the post-survey were used to determine if the changes were a result of the coaching initiative, and to compare if the participant-stated changes were captured in the assessment of their instructional practices and use of high-quality, standards-aligned curriculum.

A Likert scale, developed by Rensis Likert, measures attitudes and beliefs on an ordinal scale to show the extent a participant agrees or disagrees with a statement (Sullivan, G.M. & Artino, A.R., 2013). For the pre-survey, teachers were asked to rate their beliefs on a likert scale from 0 to 100 on the following questions:

1. Teachers can provide ALL students with grade level, standards-based curriculum, regardless of previous academic achievement.
2. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards-based curricula and instruction.

The post-survey included the additional question "How would you compare your initial responses to your current responses?" to help us explain any changes (or no changes) in beliefs and responses.

Coaches were also asked to rate their beliefs about instruction and learning environments, along with their beliefs pertaining to professional learning communities and their impact on instruction. These questions, below, were also asked with a likert scale from 0 to 100:

1. Teachers can provide ALL students with grade level, standards-based curriculum, regardless of previous academic achievement.
2. For teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.
3. For teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards-based curricula and instruction.

As with the teaching post-survey, coaches were also asked how they would compare their initial and final responses.

Summative Evaluation of the Improvement Initiative

In *Table 5* we outline the summative assessments, or outcome measures, we utilized to determine if our improvement initiative impacted and increased the evidence-supported pedagogy students receive. The school coach surveys provided qualitative data on beliefs about

PLC processes and structures, capability of students, teacher practice, along with coaching capacity and efficacy. The qualitative data captured the words and phrases that coaches used to describe their change in perspective from the beginning to end of the improvement initiative. Through coding strategies, these descriptions provided the context for the quantitative data from Learning Walk Tool, and their language choices demonstrated mindset shifts in both coaches and teachers.

Table 5

Summative Assessment Data Table

Data Collection Instrument	**Audience**	**Timeframe**	**Measure Type**	**Information**
Post-Survey	Coaches	End of coaching plan	Quantitative and Qualitative (Outcome)	Coaching capacity and efficacy to implement coaching cycles for high-quality teaching and learning
Post-Survey	Teachers	End of coaching plan	Quantitative and Qualitative (Outcome)	Teacher capacity and efficacy for high-quality teaching and learning
Learning Walk Tool	Design Team	Ongoing	Quantitative (Outcome)	Assessment of classroom instruction after coaching cycles

If the change initiative was to be determined a success, the teacher responses should indicate if coaching contributed to the instructional shifts observed in the classroom.

We utilized the Learning Walk Tool after the last coaching cycle and compared the results from the initial walk and overtime. If the change was an improvement, the quantitative data should show an increase in evidence-supported pedagogy, as evidenced by the indicators, and the qualitative and quantitative survey data should indicate a shift in beliefs about high-quality teaching and learning.

Results

Driver

Driver measures are linked to the primary drivers of an improvement initiative (Byrk, 2015). As such, they are essential in evaluating a theory of improvement (Byrk, 2015). In our driver diagram, one of the primary drivers that was identified and became the focus of our work was pedagogy and curriculum.

Data Collection. We chose two instruments to drive our improvement: 1) the Learning Walk Tool (Appendix B and Appendix C) and 2) the coach and teacher pre-surveys (Appendix D and Appendix E). The Learning Walk Tool was used prior to beginning coaching work in order to collect observational data on the teachers participating in our improvement initiative. Our aim was to assess teacher current practice around grade-level material and student-centered pedagogy. Similarly, the coach and teacher pre-surveys were used prior to beginning coaching work to collect data on beliefs coaches and teachers hold regarding teacher capacity to provide a high-quality learning experience for all students.

Participants. We used the Learning Walk Tool to collect preliminary data on 15 teachers. In District One, six English teachers participated in the improvement initiative. In District Two, nine math teachers participated in the improvement initiative. The pre-survey was distributed to each coach (5) and teacher (15). Three coaches completed the pre-survey: one from District One and two from District Two. Nine teachers completed the pre-survey: six from District One and three from District Two. The pre-surveys were anonymous.

Data Analysis. This data was analyzed using mixed methodology.

Results. Table 6, also available in Appendix H, provides the indicator averages of coach and teacher pre-surveys. Question 1 (belief in students) and 4 (student engagement) were

provided to both participant groups. While both group averages were relatively high, the coaches' average ratings for both questions were higher than teachers.

Table 6

Average Rating of Pre-Survey

	Coach		Teacher	
	Average	**Minimum**	**Average**	**Minimum**
1. Teachers can provide ALL students with grade level, standards based curriculum, regardless of previous academic achievement.	93.33	85.00	81.11	30.00
2. In order for teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.	87.00	81.00	NA	NA
3. In order for teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.	87.33	82.00	NA	NA
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards based curricula and instruction.	91.67	90.00	84.33	50.00

PDSA Implications. The averages to Questions 1 and 4 on the pre-surveys indicated that coaches had a higher belief, if only slightly, in the ability of teachers and students than did teachers as a whole. For Question 1, the coach minimum was 85.00 while the teacher minimum was an astonishing 30.00, which could imply several things, including but not limited to: at least one teacher did not believe in 1) their own efficacy to teach ALL students, 2) the ability of other teachers or 3) the ability of ALL students. Similarly, the minimum for Question 4 was much lower for teachers compared to coaches. According to this data, at least one teacher showed

possible deficit ideology that could potentially impact how the coach approached the plan and how the plan was enacted by the teacher.

Process

A process measure is used to monitor how the change is progressing and if the change is showing an improvement (Byrk, 2015).

Data Collection. Our process measure was the Learning Walk Tool (Appendix B and Appendix C). We collected a second round of observational data utilizing the Learning Walk Tool midway through the coaching cycle. We visited each classroom for approximately 20 - 30 minutes. By collecting observational data at this point and utilizing the same instrument as our driver, we were able to evaluate if the change was showing improvement. We were also able to determine what, if any, coaching changes needed to be made.

Participants. We collected data from the 15 teachers involved in the improvement initiative, as noted in the driver measure.

Data Analysis. The data was analyzed using descriptive statistics, specifically mean (the average) and standard deviation. The sample size for both districts was relatively small, with the number of participants equal to six in District One and nine in District Two. No control groups were measured; therefore, there was no need to analyze using a t-test. Each indicator value was coded with a numerical equivalent. In each case, a “No” was coded a value of 0; “Yes - True for SOME students” was coded with a value of 1; and “Yes - True for ALL students” was coded with a value of 2. Averages scoring close to 0 tell that the indicator was not highly rated among this cohort of teachers. Averages scoring close to 2 tell that the indicator was very highly rated

among this cohort of teachers. Tables 7 and 8 illustrate the analyzed data. These tables are also available in Appendix I and Appendix J.

Table 7

Average Rating of English Indicators: District One

N = 6		**Indicator 1: Grade Level**	**Indicator 2: Student Centered – Analytical Thinking**	**Indicator 3: Student Centered – Productive Struggle**	**Indicator 4: Student Centered – Share Thinking**
Beginning	**Avg.**	1.167	0.500	0.333	0.000
	Std. Dev.	0.983	0.837	0.516	0.000
	% True for ALL Students	50%	17%	0%	0%
Middle	**Avg.**	1.667	0.500	0.3331	0.333
	Std. Dev.	0.516	0.548	0.516	0.516
	% True for ALL Students	67%	0%	0%	0%

Table 8

Average Rating of Math Indicators: District Two

N = 9		Indicator 1: Grade Level	Indicator 2: Student Centered – Student Representa-tions	Indicator 3: Student Centered – Checks for Understand-ing	Indicator 4: Student Centered – Productive Struggle	Indicator 5: Student Centered – Share Thinking
Beginning	**Avg.**	0.875	0.250	0.625	0.375	0.375
	Std. Dev.	0.835	0.707	0.744	0.518	0.744
	% True for ALL Students	22%	11%	11%	0%	11%
Middle	**Avg.**	1.500	0.375	1.000	0.625	0.375
	Std. Dev.	0.756	0.744	0.535	0.744	0.518
	% True for ALL Students	55%	11%	11%	11%	0%

PDSA Implications. The midpoint Learning Walk Data from both districts suggested that the change was impacting instruction. District One data showed slight growth in two of four (grade-level materials and sharing student thinking) indicators from the beginning to the middle. The indicator to increase the most was use of grade-level materials from 1.167 to 1.667. While Indicator 1, grade-level materials was nearing the 80% goal, coaching still needed to focus on increasing this indicator and all others. District Two data indicated growth in most criteria from the beginning to the middle. However, some changes were greater than others. Like District One, District Two also had the highest growth in grade-level materials between the first and second observation. Indicator 5 did not change, which suggested that future coaching cycles should

include a focus on supporting teachers in planning for ways for students to share each other's thinking during learning. Ultimately, the coaching that was occurring in both districts was having a positive impact on instruction and signified that growth would continue.

Balance

Many changes were implemented during our PDSA cycles, some of which could result in unintended consequences. As a result, we needed to have a measure in place that would focus on ensuring changes were not happening in other areas in response to our improvement initiative work. This measure is called a balancing measure (Bryk, 2015).

Data Collection. Our balancing measure was the Learning Walk Tool (Appendix B and Appendix C). We used this tool as our balancing measure to monitor that changes only increased indicators so that teachers did not sacrifice one area to improve another. This data was collected in the middle of the improvement initiative during a second walkthrough. School-based coaches also utilized the learning walk tool to gather observation data, inform their coaching, and provide teachers with feedback; however, the school-based data is not included here.

Participants. We collected data from the 15 teachers involved in the improvement initiative, as noted in the driver measure.

Data Analysis. The data was analyzed using the same methodology as the process measure.

Results. Tables 7 and 8 provide the indicator averages and standard deviations for the learning walk tool for Districts One and Two, respectively. All indicator averages for both English and math either increased or stayed the same from beginning to middle. This means changes that were made in one area did not negatively impact other areas for the groups. For example, when coaching during the first cycle focused on providing students with grade-level

aligned content, the averages for all other indicators did not decrease. However, in English, the percent true for all students decreased from 17% to 0% in Indicator 2 showing that at least one teacher decreased from a rating of 2, "Yes - true for ALL students," while others increased from 0, "No." For math, the percent true for all students increased in Indicator 4 and decreased in Indicator 5.

PDSA Implications. The first cycle of coaching focused on providing all students with on grade-level content that was standards-aligned. Coaching did not focus on student-centered instruction, yet those areas increased slightly or stayed the same for the groups. While the growth was not significant, it does indicate that providing students with grade-level instruction may contribute to improved instruction in other areas as well. As we moved from the first coaching cycle to the second coaching cycle, we noted that while the group averages increased, coaches would need to focus on individual teachers to ensure that a focus and change in one area did not negatively impact another area.

Outcome

An outcome measure assesses if progress was made on an improvement initiative, and is often used as accountability measures (Bryk, 2015). Some outcome measures, lagging measures, are most effective for telling if a change was an improvement, but take time to gather and are not available until after a study is completed (Bryk, 2015). Other outcome measures, leading measures, are more readily available and can predict the lagging measures (Bryk, 2015).

Data Collection. Our study had two leading outcome measures: the coach and teacher pre/post surveys (Appendix G-E) and the Learning Walk Tool (Appendix B and Appendix C). The survey data was collected at the beginning and end of the improvement initiative. The pre- and post-survey were comprised of the same questions, with the addition of one question on the

post-survey: “How do your responses compare to those on the pre-survey?” The final question in the post-survey was intended to provide us insight into the self-reporting of the participants and their thoughts on coaching. The data collected from the Learning Walk Tool also served as an outcome measure, with the comparison from beginning to end indicating if our changes were improvements.

Ultimately, student achievement will be the best outcome measure. This is a lagging measure and was not available for review at the time of this paper.

Participants. Outcome measure data was collected from coaches and teachers. The post-surveys were provided to all coaches and teachers; however, only 40% of teachers (6) and 60% of coaches (3) completed the post-survey – with only two teachers and one coach completing the open-ended response. The learning walk data was collected for all 15 teacher participants: six for English and nine for math.

Data Analysis. Learning Walk data was analyzed using the same descriptive statistics described in the balance and process measures. Pre/post survey data was analyzed using mixed methodology. The results from the pre-survey were compared to those of the post-survey using descriptive statistics and a comparison of the mean. We intended to conduct a qualitative analysis on the final question of the post-survey and code responses to determine common themes; however, we did not collect sufficient responses for this analysis. We also planned to run a t-test in our initial proposal of this improvement initiative, but the test would not be helpful due to the small sample size.

Results. Our initial goal was for 80% of teachers to demonstrate “Yes - True for ALL students” in each of the indicators. This goal was not met. However, District One did meet the goal in one of four areas - “all materials are grade-level, standard-aligned,” with 100% for all

classes observed. Despite not meeting the goal, Table 9 shows that both districts' outcome data indicated growth in each of the criteria when considered for the group as a whole. Note that the scale was 0, 1, or 2. We considered any increases 0.5 and above to be significant for the purposes of our improvement initiative.

Table 9

Difference Between Beginning and End Ratings on Learning Walk Tool

	Grade-Level Instruction	**Student-Centered Instruction**			
District 1: English	+.833	+1		+.667	+.667
% True for ALL Students	100%	67%		33%	17%
District 2: Math	+0.875	+0.625	+0.875	+1.375	+1.25
% True for ALL Students	66%	22%	44%	66%	55%

However, while the group data was positive overall, the individual teacher data showed that the impact was different for each teacher. Table 10 shows that most teachers in District One showed an increase in at least one area with two teachers (Teachers B and D) showing an increase in all four areas. Five of six teachers showed an increase from "No" to "All" in at least one area. Only one teacher (Teacher E) did not show any change. It is important to note that Teachers A, C, and E did not show growth in Indicator 1 because the initial observation was "Yes - True for ALL students." There were no decreases in any indicator ratings.

Table 10

District One Learning Walk Difference Between Beginning and End

	Indicator 1: Grade Level	**Indicator 2: Student Centered – Analytical Thinking**	**Indicator 3: Student Centered – Productive Struggle**	**Indicator 4: Student Centered – Share Thinking**	**Overall Growth**
Teacher A	0	0	+1	+2	+3
Teacher B	+2	+2	+1	+1	+6
Teacher C	0	+2	0	0	+2
Teacher D	+1	+2	+2	+1	+6
Teacher E	0	0	0	0	0
Teacher F	+2	0	0	0	+2

Table 11 shows that most teachers in District Two showed an increase in at least two areas with three teachers (Teachers B, D, and H) showing an increase in all five indicators. Eight of nine teachers increased from “No” to “All” in at least one area. Teachers E and F are co-teachers (teach the same block of students together) and share observation data; they are the only two teachers who had a decrease in data. However, it is also important to note that they did not show growth in Indicators 1 or 3 because their initial observation was “Yes - True for ALL students.”

Table 11

District Two Learning Walk Difference Between Beginning and End

	Indicator 1: Grade Level	**Indicator 2: Student Centered – Student Represent-ations**	**Indicator 3: Student Centered – Checks for Understand-ing**	**Indicator 4: Student Centered – Productive Struggle**	**Indicator 5: Student Centered – Share Thinking**	**Overall Growth**
Teacher A	+2	0	+1	+2	+1	+6
Teacher B	+1	+2	+2	+1	+2	+8
Teacher C	0	+1	0	+1	+2	+4
Teacher D	+1	+1	+1	+2	+1	+6
Teacher E	0	-2	0	+2	+1	+1
Teacher F	0	-2	0	+2	+1	+1
Teacher G	+1	0	+1	+1	+1	+4
Teacher H	+2	+1	+1	+1	+2	+7
Teacher I	0	+2	+1	+1	0	+4

While the post-survey data (Appendix K) was limited to 12 of 20 participants, the responses indicated positive trends as well. Table 12 shows an increase in the mean for all four coach questions from pre- to post-survey, and an increase in one of two teacher questions. The statement regarding student engagement decreased on the teacher survey from 84.33 to 79. The most significant increase came from the coach survey regarding the impact of strong PLC practices. Each question regarding PLCs increased to 100% indicating that the change initiative positively impacted the coaches' beliefs in how essential strong PLC practices are to high-quality learning and teaching.

Table 12

Difference Between Pre- and Post-Survey Data

	Coach		Teacher	
	Pre	Post	Pre	Post
1. Teachers can provide ALL students with grade level, standards-based curriculum, regardless of previous academic achievement.	93.33	96.67	81.11	82.50
2. For teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.	87.00	100	NA	NA
3. For teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.	87.33	100	NA	NA
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards-based curricula and instruction.	91.67	96.67	84.33	79

Findings

We posited that ongoing professional development through coaching would increase the use of evidence-based pedagogy, and we found that most coaches and teachers who engaged in targeted coaching support did engage their use of grade-level content and evidence-based pedagogy. Overall, each of the Learning Walk indicators for both English and math increased from the beginning of the initiative to the end, which indicates targeted coaching support was an effective improvement initiative.

We found that beliefs changed slightly for both coaches and teachers with coaches indicating higher beliefs in what students are capable of on both the pre-survey and post-survey when compared to teachers. Coaches self-reported beliefs in what teachers can provide and about what a high-quality learning environment looks like increased in from the beginning of the initiative to the end. Teacher beliefs about what encompasses a high-quality learning environment decreased. Pre- and post-surveys indicate the professional learning we provided had more significant impact for coaches than for teachers. Teachers indicated they did grow in their

beliefs about what resources teachers can provide for students, but not in their beliefs of what a high-quality, engaging environment looks like – a tenet of evidence-based pedagogy. However, it is essential to note that only 12 of 20 participants completed the post-survey.

Lessons Learned and Implications

For our improvement initiative, we focused on four main areas: targeted coaching support; grade-level curriculum; and student-centered pedagogy. The following addresses lessons learned from the research-informed initiative aimed at ensuring students were provided evidenced-supported pedagogical practices through instructional coaching.

Lessons Learned

Use a Flexible, Gradual-Release Model for Scheduling

Our initial coaching plan was based on the gradual release model supported by Morel and Cushman (2012) and began with weekly coaching sessions between the district and the school coach and shifted to bi-weekly sessions midway through the nine-week cycle. However, gradual release must be responsive to the individuals involved and based on their capacity and the data that is informing the cycle steps. In District One, School Two, the school coach did not move from weekly check-ins to bi-weekly check-ins midway through the initiative, as outlined in the plan. The district coach and school coach made the decision to continue weekly support. The coaching cycles included preparation, action, reflection, and revision (Knight, 2019; Bambrick-Santoyo, 2016; Guskey, 2002), and upon reflection of coach's capacity to enact the plan with the PLC, they decided to revise their focus and the support provided.

District Two followed the coaching plan cycle, moving from weekly to bi-weekly coaching sessions. However, each of the three schools had different needs identified and the coaching was tailored to meet those needs. One school had no formal meeting structures in place

at the beginning of the improvement initiative, and seven out of nine weeks were spent working through the importance of common planning and assessments. Continuous collaboration is essential for opportunities to learn from colleagues, continuously improve instruction, and is a great way to ensure standards-alignment (Heineke & McTighe, 2018).

Our results showed an increase in all indicators, which may, in part, be due to the changes individuals made to the plans in response to their contexts. In the future, instructional coaching plans should include a gradual release model that is flexible; it cannot be pre-determined and applied to all in the same manner. While we intended all participants to move from a weekly to bi-weekly cycle at the same time, we found that we needed to be responsive to each group and adjust the schedule to meet their needs.

Establish the PLC as a Structure for Ongoing Professional Learning

An effective PLC requires consistent and constant collaboration (Blitz & Schulman, 2016; Vescio et al., 2008). While professional learning communities are not a new concept in education or either district, we found factors that created barriers to PLCs utilizing these spaces for professional learning: teacher absenteeism and vacancies, misguided purpose, and teacher experience. In District One, while both PLCs were fully staffed throughout the initiative, their meetings were canceled or rescheduled to support absences and vacancies in other areas. Furthermore, PLC meetings were not structured for discussion on content and instruction; teachers focused on school announcements, tasks from administration, pacing (regarding dates and not responsive instruction), and general conversation. The experienced teachers were perpetuating PLC practices they encountered in previous years, and beginning teachers were unfamiliar. In both schools, the district coaches needed to build a stronger understanding of PLC structures and purpose.

Interestingly, during the time of this improvement initiative, District Two identified a strong area of focus in professional learning communities. They adopted the work PLC+, a specific framework designed to enhance the work of PLCs in driving instruction, which was developed by Douglas Fisher et al. (2019). Pre-covid, the district had strong PLCs in place in every school. However, the same issues in District One plagued District Two, and they were struggling to establish the same baseline as before 2020. For this improvement initiative, two out of the three schools had PLC structures in place, and the work of PLC+ had not yet begun.

Our coach pre-survey indicated that coaches had a high (+81.00) belief in strong PLC practices to support high-quality learning and teaching, and those beliefs only increased after the initiative (100%). However, these were questions we omitted from the teacher pre-survey. In the future, we may have approached our improvement initiative differently if we had a better understanding of how teachers perceived PLCs.

Build Evidence-Based Pedagogy by Building Content Knowledge and Teacher Capacity

By focusing on grade-level, standard-based curriculum, we were able to see an increase in student-centered learning. In both districts, coaches identified that teachers, regardless of experience, needed support understanding grade-level standards and the appropriate materials and instruction to support learning.

While we did not meet our goal to have 100% of observed classrooms provide a student-centered experience for all learners, there was significant growth in this area in both districts. Comparing the beginning results to the end, students were eventually provided more opportunities to experience a productive struggle, demonstrate critical thinking, and share and expand upon their thinking with each other. While we believe we could have eventually met our

100% goal, we recognize that our improvement work was only a beginning for some teachers, and more work was needed with specific strategies for engagement and classroom management.

In District One, four of the six teachers were beginning teachers. In District Two, five of the nine teachers were beginning teachers, with three of those teachers in their first year of teaching. While strong teaching skills and years of teaching experience are not synonymous, most beginning teachers are in the early stages of building their pedagogy and capacity. While teacher experience should be considered in the creation of any responsive instructional coaching plan, it is especially important when it is a base for a desired outcome.

Implications for Practice

District One

Currently, the district can continue the work on a small scale, directly and intensively supporting a few schools with the five English specialists in the Learning and Teaching Department. However, the district has 34 high schools, and support within each school is varied. Some schools have dedicated English content coaches. Other schools have academic facilitators who are instructional coaches but may not be knowledgeable in English content. Many schools have only PLC leads (one for each English course, four total), who have teaching responsibilities to balance with their leading and who may only be in their first years of teaching as well. The district is not spared from the teacher shortage that is currently plaguing the nation, so many schools do not have experienced staff to take on leadership roles and must keep all available staff in classrooms. While specialist support is also complicated by the additional responsibilities they hold beyond school support, the district specialists could provide targeted coaching support to 34 individuals. However, when schools have four leads or when schools have leads who serve several content areas, the capacity within the district and within schools to support the work

diminishes. Coaching could positively impact the district by growing leaders, teachers, and students if the processes, procedures, and personnel to do so existed.

District Two

Central office is small, especially compared to the student population and number of schools served. As a result, adding this work to any one role within district administration is unlikely to be successful. The Curriculum and Instruction Department, along with Student Services (which houses exceptional students and multilingual learners) are most likely the best options to ensure one-on-one coaching in every school. Even with that model, there may be a need for widespread train-the-trainer professional learning. Alternatively, the district could select schools that demonstrate the greatest need for this coaching according to quantitative and anecdotal evidence. Ultimately, District Two will need to monitor both achievement and panorama data of the students who are impacted by the work of the initiative. As time passes, achievement data should begin to show more proportionality by student groups, and panorama data should suggest a higher sense of belonging among groups. This data was not collected in the duration of our improvement initiative but would be helpful to monitor progress and effectiveness of targeted coaching cycles.

Implications for Policy

District One

Policy A-EIR adopted in 2001 and revised in 2017 defines equity and equality to emphasize the difference between giving students what they "need" versus giving students the "same" resources. The policy also states that students should have access to materials that are "on-grade level" and/or "on-instructional level." While it is important to understand the difference between equity and equality, it is also important to understand that the ideals support each other. Bensimon (2018) expressed that equity work begins with equality. In other words, if some students have access to on-grade level materials while other students only have access to on-instructional level (if meaning below grade level) materials, there is inequality that leads to inequity. The students who receive on-grade level access will likely always have an advantage over those receiving on-instructional level access. However, if the policy stated that all students should have access to 1) on-grade level materials and 2) support for their unique instructional needs, it would be clear that the district believes in equality and equity together.

District Two

There are a series of policies in place impacting instruction. Specifically, Policy 3100 indicates that the curriculum is developed locally at the district level, but schools can make "appropriate" modifications to meet the needs of students (Policy 3100, 2023). Policy 3200 dictates that curriculum material selection must be vetted and approved by a local district committee or the school improvement team (Policy 3200, 2023). While these policies allude to the curriculum as grade-level and standards aligned, it is not explicitly stated, and there seems to be room for interpretation. Lodi Unified School District is an example of a district who attempts to address this need through policy. Their Policy 6161.1 necessitates that the district selects core

content material that is standards aligned, and that every student must have access to and utilize that core content material (Selection and Evaluation of Instructional Materials, 2016).

Recommendations for Practitioners

For practitioners considering engagement in coaching, we first recommend establishing a framework. This likely will require professional learning and reading studies such as this one. A common framework for coaching helps ensure consistency among teachers, professional learning communities, leaders, and schools. It also helps to identify strengths and areas of need for each context. It is necessary to understand that teachers have varying perspectives on what students are and are not capable of. While not every perspective may change, if practitioners focus on specific coaching goals that are agnostic of beliefs, it is possible to begin to see a shift in ideals. It is essential to be firm about next steps, but understanding of the realities that exist for everyone involved.

Directions for Future Research

This improvement initiative lasted a brief moment when considering the time teachers spend in the classroom. We only saw glimpses into the learning environments of the classrooms we observed. As a result, future research should focus on the longitudinal effects of coaching, on both the teacher and student experience. Student data should be collected and analyzed, including but not limited to samples of student work, along with formative and summative assessments. Student surveys could also be included to capture possible shifts in how students are experiencing coursework and their overall sense of belonging. Future research may want to be more specific in the indicators they are evaluating during walk-throughs and perhaps only focus on one or two indicators at a time.

Limitations of the Study

Our improvement initiative was conducted with a small sample size. While this enabled us to complete our work with intentionality and a strong focus, the data analysis is limited. Our initial goal was for 80% of teachers to demonstrate "Yes - True for ALL Students" in each of the indicators. With such a small sample size, this number was difficult to achieve, and it was more beneficial to examine growth from one cycle to the next. Additionally, due to research stipulations in District One, our coaching cycles overlapped with holidays and multiple school breaks. As such, traction with student-centered and on-grade level instruction may have increased without the break in coaching. Also, we did not account for any feedback teachers may have received from a mentor or administrator during this time or any other professional learning with which they may have engaged – both of which could have impacted pedagogy. We understand that the data collected indicated coaching cycles were effective for the districts, grade levels, and content areas we studied for our improvement initiative; however, school districts are unique, and any coaching would need to be tailored to meet the needs of that district and the students/teachers who are a part of it.

A glaring limitation of this study includes the lack of acknowledgement of systemic problems that exist. We asked that students and teachers conform to the standards created by state lawmakers, but never questioned who wrote them and if they are inherently biased. We also did not address structures that exist within the schoolhouse that help perpetuate the problem such as tracking and pull-out. We understand this is an issue but could not make it a focus of the research and data collection due to limitations in time and scope.

Conclusion

Our improvement initiative aimed to increase evidence-supported pedagogy (high-quality teaching and learning) through instructional coaching focused on materials, professional learning communities and student engagement. District coaches supported school coaches through one-on-one coaching focused on identifying a current reality, determining a goal, enacting a plan, and then, reflecting and revising based on formative assessment. School coaches then supported teachers through PLC and one-on-one coaching with a similar process of identification, enaction, reflection, and revision. While we assessed the change through observation and surveys, each gave a limited snapshot of teacher practice and mindset by collecting data on five or fewer criteria. Furthermore, even though the results and impact on five professional learning communities was positive, district to school to classroom coaching will need to be implemented in more settings with more data collected to further understand how the coaching model impacts various contexts across the districts.

Many structures in public education are in response to larger societal systems that school districts have little power to change and thus must operate within them and prepare students to do the same. However, school districts can ensure that all students have access to a high-quality education that leads to access and opportunities beyond the school walls.

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Appendix A: Coaching Plan

1. Provide professional learning and coaching for school-based instructional leaders on leading PLCs, internalizing grade-level curriculum and standards, and high-quality teaching and learning.
2. Support instructional leaders in coaching teachers in internalizing the grade-level curriculum and providing high-quality teaching and learning.

Week	Action	Resources
1	Identify the current reality. District discusses results of formative assessment with school coach (learning walk and teacher pre-survey) Identify the goal. District and school coach discuss professional learning part 1 takeaways and determine a goal based on current reality and professional learning. Determine next steps. District and school discuss the highest leverage PLC structure/practice to enact to meet the goal. School coach enacts plan.	- Coach Pre-survey - Teacher Pre-survey - Coaching PD Part 1 - Researcher collects baseline data: Learning Walk Tools
2	Check in. District and school discuss what has gone well, what progress has been made, and what roadblocks have been encountered. Determine if the goal needs to be changed and plan next actions. School coach enacts plan.	Coaching time 1:1
3	Check in. District and school discuss what has gone well, what progress has been made, and what roadblocks have been encountered. Determine if the goal needs to be changed and plan next actions. School coach enacts plan.	Coaching time 1:1
4	Check in. District and school discuss what has	- DQ Coaching PD Part 2

	gone well, what progress has been made, and what roadblocks have been encountered. Discuss professional learning part 2 takeaways and determine if the goal needs to be changed and plan next actions. School coach enacts plan.	
5	District and school conduct formative assessment learning walk. Identify the current reality. District and school coach discusses the results of formative assessment. Identify the current reality. School coach discusses the results of formative assessment with the teacher. Identify the goal and determine next steps. School coach and teacher discuss the highest leverage instructional move to enact to meet the goal. Teacher enacts plan.	- Researcher collects mid-point data: Learning Walk Tools
6	School coach observes lessons and records the teacher. Check in. School coach and teacher review the video and/or observation notes. They discuss what has gone well, what progress has been made, and what roadblocks have been encountered. Determine if the goal needs to be changed and plan next actions. Teacher enacts plan.	- Coaching time 1:1 - Learning Walk Tools
7	District and school conduct formative assessment learning walk. Identify the current reality. District and school coach discusses the results of formative assessment. Check in. School coach and teacher review the video and/or observation notes. They	- Coaching time 1:1 - Learning Walk Tools

	discuss what has gone well, what progress has been made, and what roadblocks have been encountered. Determine if the goal needs to be changed and plan next actions. Teacher enacts plan.	
8	School coach observes lessons and records the teacher. Check in. School coach and teacher review the video and/or observation notes. They discuss what has gone well, what progress has been made, and what roadblocks have been encountered. Determine if the goal needs to be changed and plan next actions. Teacher enacts plan.	- Coaching time 1:1 - Learning Walk Tools
9	District and school conduct formative assessment learning walk. Identify the current reality. District and school coach discusses the results of formative assessment. Check in. School coach and teacher review the video and/or observation notes. They discuss what has gone well, what progress has been made, and what roadblocks have been encountered. Determine if the goal needs to be changed and plan next actions. Teacher enacts plan.	- Researcher collects final data: Walkthrough Rubric - Coach Post Survey - Teacher Post Survey

Appendix B: Math Learning Walk Tool - ***Adapted from Student Achievement Partners Instructional Practice Guide (2018)***

Indicator	**Rating**

GRADE-LEVEL: The enacted lesson targets the aspects of rigor (conceptual understanding, procedural skill and fluency, and application) called for by the standard(s) being addressed. All materials are grade-level, standards-aligned.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: The teacher strengthens all students' understanding of the content by strategically sharing students' representations and/or solution methods.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: The teacher deliberately checks for understanding throughout the lesson to surface misconceptions and opportunities for growth, and adapts the lesson according to student understanding.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: The teacher cultivates reasoning and problem solving by allowing students to productively struggle. Students persevere in solving problems in the face of difficulty.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: The teacher creates the conditions for student conversations where students are encouraged to talk about each other's thinking. Students share their thinking about the content of the lesson beyond just stating answers.	● Yes - true for all students ● Yes - true for some students ● No

Appendix C: English Learning Walk Tool - *Adapted from Student Achievement Partners Instructional Practice Guide (2018)*

Indicator	**Rating**
GRADE-LEVEL: The anchor text(s) are at or above the complexity level expected for the grade and time in the school year. All materials are grade-level, standards-aligned.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: Questions and tasks address the analytical thinking required by the grade-level standards AND are sequenced to build knowledge by guiding students to delve deeper into the text and graphics.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: The teacher cultivates reasoning and meaning making by allowing students to productively struggle with grade-level texts and tasks. Students persevere through difficulty.	● Yes - true for all students ● Yes - true for some students ● No
STUDENT CENTERED: The teacher creates the conditions for student conversations where students are encouraged to talk about each other's thinking. Students talk and ask questions about each other's thinking, in order to clarify or improve their understanding of grade-level material.	● Yes - true for all students ● Yes - true for some students ● No

Appendix D: Coaching Pre-Survey

1. Teachers can provide ALL students with grade level, standards based curriculum, regardless of previous academic achievement.
2. In order for teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.
3. In order for teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards-based curricula and instruction.

Appendix E: Teaching Pre-Survey

1. Teachers can provide ALL students with grade level, standards-based curriculum, regardless of previous academic achievement.
2. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards-based curricula and instruction.

Appendix F: Coaching Post-Survey

1. Teachers can provide ALL students with grade level, standards based curriculum, regardless of previous academic achievement.
2. In order for teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.
3. In order for teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards based curricula and instruction.
5. How would you compare your initial responses to your current responses?

Appendix G: Teaching Post-Survey

1. Teachers can provide ALL students with grade level, standards based curriculum, regardless of previous academic achievement.
2. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards based curricula and instruction.
3. How would you compare your initial responses to your current responses?

Appendix H: Pre-Survey Data

Average Rating of Pre-Survey

	Coach		Teacher	
	Average	Minimum	Average	Minimum
1. Teachers can provide ALL students with grade level, standards based curriculum, regardless of previous academic achievement.	93.33	85.00	81.11	30.00
2. In order for teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.	87.00	81.00	NA	NA
3. In order for teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.	87.33	82.00	NA	NA
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards based curricula and instruction.	91.67	90.00	84.33	50.00

Appendix I: Learning Walk Data - District One

Average Rating of English Indicators

N = 6		Indicator 1: Grade Level	Indicator 2: Student Centered – Analytical Thinking	Indicator 3: Student Centered – Productive Struggle	Indicator 4: Student Centered – Share Thinking
Beginning	**Avg.**	1.167	0.500	0.333	0.000
	Std. Dev.	0.983	0.837	0.516	0.000
	% True for ALL Students	50%	17%	0%	0%
Middle	**Avg.**	1.667	0.500	0.3331	0.333
	Std. Dev.	0.516	0.548	0.516	0.516
	% True for ALL Students	67%	0%	0%	0%
End	**Avg.**	2.0	1.5	1	.667
	Std. Dev.	0	.764	.816	.745
	% True for ALL Students	100%	67%	33%	17%
Difference: End - Beginning	**Avg.**	+.833	+1	+.667	+.667

Appendix J: Learning Walk Data - District Two

Average Rating of Math Indicators

N = 9		Indicator 1: Grade Level	Indicator 2: Student Centered – Student Representat-ions	Indicator 3: Student Centered – Checks for Understand-ing	Indicator 4: Student Centered – Productive Struggle	Indicator 5: Culturally Responsive – Share Thinking
Beginning	**Avg.**	0.875	0.250	0.625	0.375	0.375
	Std. Dev.	0.835	0.707	0.744	0.518	0.744
	% True for ALL Students	22%	11%	11%	0%	11%
Middle	**Avg.**	1.500	0.375	1.000	0.625	0.375
	Std. Dev.	0.756	0.744	0.535	0.744	0.518
	% True for ALL Students	55%	11%	11%	11%	0%
End	**Avg.**	1.750	0.875	1.500	1.750	1.625
	Std. Dev.	0.463	0.835	0.535	0.463	0.518
	% True for ALL Students	66%	22%	44%	66%	55%
Difference: End - Beginning	**Avg.**	+0.875	+0.625	+0.875	+1.375	+1.250

Appendix K: Post-Survey Data

Average Rating of Post-Survey

	Coach		Teacher	
	Average	Minimum	Average	Minimum
1. Teachers can provide ALL students with grade level, standards-based curriculum, regardless of previous academic achievement.	96.67	90.00	82.5	50.00
2. In order for teachers to internalize grade level curriculum and standards, there must be strong PLC practices in place.	100	100	NA	NA
3. In order for teachers to provide high-quality learning and teaching to students, there must be strong PLC practices in place.	100	100	NA	NA
4. A true high-quality learning and teaching environment requires that ALL students are engaged with grade-level, standards-based curricula and instruction.	96.67	90.00	79.00	40.00