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“With Thanks”

To all who have made the
AASA Journal Of Scholarship and Practice
possible over the past 30 years, we offer a simple

“Thank you.”

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Reimagining Public Education: Leadership, Learning, and the Shift Towards Human-Centered Schools

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In this final issue of AASA's *Journal of Scholarship and Practice*, a common thread emerges, and one that reflects the organization's mission: "AASA develops and supports school system leaders through the national exchange of ideas; access to professional learning, publications, and resources; and opportunities to champion initiatives to help transform the future of public education."

Each piece reflects an element of that mission in action, whether through innovative school design, amplifying superintendent voices, building collective efficacy through professional learning, or reimagining the cognitive frameworks that guide instruction.

Together, they illustrate a broader theme: ***public education systems are being reshaped by the need to move beyond rigid, traditional structures toward more responsive, human-centered models of leadership, instruction, and student support.***

Each of the four articles reflects a shift from one-size-fits-all approach towards frameworks that account for complexity, individual context, and lived experience.

In the first article, the superintendency study examines how district leaders in rural Western and Midwestern districts are navigating crises (teacher shortages, fiscal

strain, governance conflict) that traditional top-down leadership models weren't built to handle. The researchers argue for amplifying voices often left out of policy conversations.

The second article about SMART Skills™ makes an underlying tension explicit: longstanding cognitive frameworks like Bloom's Taxonomy, built for a different era, are being challenged by the demands of an AI-influenced, rapidly changing world.

The Magic City Acceptance Academy case shows, in article three, that this at the level of structural and cultural school design, rethinking spaces and disciplinary practices to serve students who don't fit the traditional mold.

The concluding article is a study of a literacy cohort led to conclusions suggesting that collaborative, job-embedded professional development - rather than one-off, top-down training - builds the kind of collective efficacy that sustains real instructional change.

Collectively, these works suggest that meaningful improvement in education increasingly depends on systems that are adaptive rather than compliance-driven, whether that means redesigning a school building around student wellness, restructuring how superintendents are heard and supported, rethinking how teachers grow professionally, or

reimagining the cognitive frameworks underlying curriculum and assessment. The common thread is a shift from rigid, hierarchical, one-size-fits-all models toward equity-minded, collaborative, and contextually responsive approaches to leading and teaching in schools, which is precisely the kind of transformation AASA aims to champion through the exchange of ideas and support of school system leaders nationwide.

What unites the work of school system leaders, and what should continue to drive the field forward, is the deliberate convergence of scholarship and practice. Effective leadership cannot rest on theory alone, nor on practice without reflection. It requires an ongoing, intentional dialogue between researchers and practitioners, between ideas tested in the field and frameworks refined through study. Sustaining this connection is essential to strengthening the professionalism and leadership capacity of school leaders

nationwide. As the challenges facing public education grow more complex, continued investment in the national exchange of ideas, in professional learning grounded in evidence, and in opportunities for leaders to champion and test new initiatives will be critical to equipping today's and tomorrow's school system leaders with the knowledge, skills, and confidence to transform the future of public education - the very mission at the heart of AASA's work.

(It has been an honor to serve as the editor of the JSP for the past ten years. I am thankful to the many scholars and practitioners from both K-12 and higher ed institutions who have contributed to the AASA mission by sharing their research or practice and by the many volunteer reviewers who participated in the peer review process. I also want to thank Barbara Dean, the extraordinary managing editor who put together each issue with technical expertise and patience.)

The Issues and Challenges of Rural Western and Midwestern Superintendents: During the 2024-2025 School Year

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Abstract

This qualitative study examines the current state of the superintendency by giving voice to school district superintendents across four states. Data were collected from publicly available superintendents in New Mexico, Wyoming, Oklahoma, and Kansas, using an open-ended questionnaire (n=137). The superintendents were provided with an incentive for participation through an UNM WeR1 grant. Second, a smaller group of superintendents volunteered to participate in semi-structured interviews to explore the themes identified by the larger group (n=18). The major findings from these superintendents included a teacher shortage of crisis proportions, an ongoing fiscal strain, and continued governance conflicts. A key uniqueness of this study lies in the voices of superintendents which are often unheard and unrepresented in the research.

Key Words

superintendent, teacher shortage, fiscal management, superintendent, school board relations, political actor, rural superintendent

Introduction

During 2020-2024, one of the authors of this article, William Holmes, as part of his work with Project ECHO and the AERA Research on the Superintendency 97, led and facilitated, along with other SIG Board Members, a series of superintendent “Fireside Chats.” During these “Fireside Chats,” superintendents and executive cabinet members, such as deputy superintendents, from across the country at the rural, suburban, and urban levels discussed current issues, challenges, and key ideas in their daily work with practitioners and scholars from across the United States.

Some of the topics discussed during these “Fireside Chats” included superintendent-board relations, equity and equity audits, the role of superintendents, the rural and urban superintendencies, the position of deputy superintendent, and the role of women in the superintendency.

As part of each “Fireside Chat,” a question was posed to participants about how researchers studying superintendents could assist those in the field. A consistent response was to better understand the issues and challenges superintendents faced in their day-to-day work and to provide support. Thus, the purpose of this qualitative study is to explore how superintendents in four states across the Western and Midwestern United States have experienced and responded to key challenges during the 2024–2025 academic year.

We addressed the following research questions: *Research Question:* What key professional issues and challenges have superintendents in the selected Western and Midwestern states experienced during the 2024–2025 academic year?

Conceptual Framework

In the evolving landscape of American public

education, rural districts comprise the largest type of school district in the country (Gutierrez & Terrones, 2023). As rural communities across America face shifts in demographics, economic changes, and cultural conservatism, the role of the rural superintendent has rapidly changed and become increasingly complex.

Rurality as contextual foundation

Rurality is a place-based concept that varies significantly across different geographical areas and is a social and cultural construct with unique challenges, strengths, and cultural richness (Eppley, 2009). As a fundamental context, rural school districts are often defined by geographic isolation, small student populations, limited financial and human resources, and strong community independence.

According to Gillham (2025), “Rural America is a loose aggregate of racially separate and unequal places, challenging stereotypes and caricatures that often represent one extreme or the other, which became evident when one considers its geographical variations, economic disparities, and demographic complexity,” (p. 34). For example, author Holmes (2023), who uses the concept of “Cowboy Epistemology” to describe the dominant worldview in rural Wyoming schools, where whiteness, cultural homophily, and political resistance hinder inclusive and socially just leadership and profoundly influence how education is delivered and leadership is enacted. Finally, according to Wargo et al. (2022, p. 62):

Rural school districts are often the key public institutions in their communities that serve many purposes well beyond what happens in the classroom for adults

and children alike. Rural school buildings are often used as polling stations, key disaster evacuation sites, sites for funerals, family reunions, weddings, and spaces for other community gatherings. Similarly, many rural districts are also the largest employers in their area, meaning there are unique economic factors for rural school districts that differ from those in more populated areas.

Thus, understanding rurality as a key contextual factor is critical for interpreting superintendent behavior, decision-making, and leadership.

The Multifaceted Role of the Rural Superintendent

Rural superintendents assume multiple roles simultaneously in ways that differ markedly from those of their suburban and urban counterparts. Frequently, they serve as “dual-role administrators,” occupying both the superintendent and principal positions, especially in smaller districts with limited staffing (Van Regenmorter et al., 2025). Regardless of size, rural superintendents wear multiple hats and assume multiple roles, including those of manager, communicator, planner, disciplinarian, and community liaison (Copeland, 2013).

Furthermore, rural superintendents must be highly visible and embedded in the community, which intensifies the push-pull of these multiple roles, as personal and professional boundaries often blur and commingle (Miller, 2017). Tekniepe (2015)

noted that rural superintendents engaged in political conflict with their school boards, operated under fiscal strain, and had difficulty recruiting staff and teachers, resulting in push factors that led to superintendents leaving their positions before their contracts were completed. Thus, given the multiple roles and demands they face and the lack of support structures available, rural superintendents must navigate a gauntlet of professional and community expectations with skill, communication, professionalism, and connectedness to peers whenever possible (Van Regenmorter et al., 2025; Copeland, 2013; Miller, 2017; Fusarelli, 2006; DeMatthews et al., 2025).

Methods

This study employed a basic qualitative design to explore the challenges faced by superintendents and their impact during the 2024-2025 academic year. An open-ended questionnaire was distributed to all publicly identified superintendents with email addresses listed on each state’s public education website across Kansas, Oklahoma, Wyoming, and New Mexico (N=137).

This served as our inclusion criteria. Participants were offered entry into a random drawing for Amazon gift cards (\$25-\$100) to increase response rates. Respondents represented predominantly rural districts (n=99), with enrollment primarily under 500 students (n=68). Most superintendents were in their first five years in role (n=96), male (n=94), aged 50-59 (n=56), held master's degrees (n=77), and had 21-30 years of total K-12 experience (n=71).

At the conclusion of the questionnaire, participants were invited to volunteer for follow-up interviews. Eighteen one-hour semi-structured interviews via Zoom were conducted: Kansas (n=9), Oklahoma (n=4), Wyoming (n=4), and New Mexico (n=1).

Interviews were transcribed and member-checked for accuracy. The data were analyzed manually using Saldana's (2016) in vivo and process coding methods. Thematic analysis identified four main findings. The study received IRB approval and was funded through a University of New Mexico WeR1 grant.

Findings

The purpose of this study is to explore how superintendents in selected Western and Midwestern states experienced and responded to challenges during the 2024–2025 academic year. The data collected from surveys and interviews revealed three major findings: 1) Teacher Shortage, 2) Fiscal Strain and Politicization, and 3) Governance Conflict and Cultural Tension.

Teacher shortage crisis

Across states and districts, superintendents identified the teacher shortage as a defining crisis that was consistent, persistent, and chronic. Data from the superintendent's open-ended questionnaire included the following comments. One superintendent stated that “In rural areas, it is hard to get highly qualified educators, especially those who are well-versed in their area,” is a significant issue. A second superintendent added:

Lack of a highly qualified licensed application pool. There has been a change over the past few years in how teachers feel they have a sense of entitlement. When I began my career, everyone just jumped in and did what was necessary without questioning why. In our current time, teachers question more and volunteer less.

A third superintendent noted, “Lack of highly trained and motivated staff tops my list.

This includes teachers, administrators, directors and business office staff. We are having to “fit” too many people into positions that require leadership.” Thus, from the perspective of rural superintendents, it is very difficult for them to attract highly qualified teachers and administrators to their schools and districts.

During follow-up interviews, superintendents elaborated on specific strategies and systemic challenges underlying this shortage. Oklahoma Superintendent #4 noted, “Year 1 to 3 attrition is steep, and we have as a district added supports (partner with local university, create family-like school and district culture) to keep teachers to Year 5.”

In contrast, Wyoming Superintendent #1 stated that they, “Hired industry experts (machinist, veterinarian, native Spanish speaker) because there were literally no applicants for some positions in art, music, Spanish, and the trades.” Wyoming Superintendent #2 indicated that, “Special education and specialist roles are particularly hard to fill; districts consider para-to-teacher pathways and housing for student teachers.” Finally, Kansas Superintendent #6 indicated, “[Grow Your Own] programs and early high school recruitment (sophomores/juniors) are strategies to fill the gap, alongside partnerships with Educate Kansas for recruitment videos that elevate district reputation, teacher value, and focus on school and district culture.”

Volatile and politicized funding crisis

Superintendents across all four states noted that funding issues, including funding shortages, are persistent and worsening. One area in which superintendents commented was operations. They noted that while they have not had an increase in funding with their budgets staying the same year after year, or even getting smaller, operation costs have increased in areas such as building materials, mental health supports, transportation, and staffing costs and

all of these impact their ability to maintain to meet student needs as well as to maintain a healthy fund balance.

Another area in which superintendents consistently reported was their inability to recruit and retain staff effectively. A Wyoming superintendent remarked, “We have lost ground in our ability to compete with other states over the last ten years.” An Oklahoma superintendent echoed this, remarking, “Maintaining a solid and consistent workforce while competing with neighboring districts for qualified employees is a huge issue.”

Wyoming Superintendent #2 noted that funding issues, as well as a shortage of funds, were politically created, which limited their ability to hire teachers, principals, and staff, as well as to provide housing for their employees. Oklahoma Superintendent # 2 piggybacked on this, saying that Oklahoma funding rules, along with tax-credit and school-voucher programs, diluted public education, affected student enrollment counts, and increased volatility.

Kansas Superintendent #4 expressed frustration with a state 70% funding rate for special education, noting that it is “hard sometimes to convince politicians of the needs of certain kids.” It is clear not only that there is less money, but that it is increasingly entangled with politics. Kansas superintendent #6 stated, “With the increasing political polarization, particularly over DEI and curriculum mandates, it creates uncertainty for us when we are trying to stay focused on kids.”

Thus, not only are superintendents having to do more with less—rob Peter to pay Paul—but they are doing so in unpredictable, politically charged environments, often leaving little to no time for instructional leadership, principal/teacher support, and student outcomes. As a result, superintendents are pulling money from other sources as noted by a

New Mexico superintendent who covered dual enrollment costs “straight out of district operations” and by being creative as noted by a Wyoming superintendent who stated they are “fund-braiding” [combining funds from BOCES/Title/IDEA for flexibility], working with co-ops, and taking on more advocacy to address funding shortfalls.

As a result of the ongoing, highly polarized financial environment superintendents find themselves in, superintendents across all four states consistently noted that they wanted and were actively seeking expert help with future fiscal planning. They consistently mentioned that they must do more with less and often lack sufficient funds to meet current needs, let alone aspirations. Oklahoma Superintendent # 1 stated, “I would ask those who have years of experience for guidance. They have lived through the lean years in education and know what helps.” Several superintendents noted that it is difficult to retain teachers when other districts can pay them more. One superintendent stated they have even sought out advice for “finding the funding to hire a FT Principal”.

Political interference and cultural tensions

The two central forms of political interference were superintendent-board relations and legislative actions that adversely affected schools and districts. During the initial open-ended questionnaire, superintendents commented about school board members and schools as follows:

In all honesty, two members of my board that never see anything that I do right and only see the things that I have not accomplished yet -along with comparing all situations to how things were 20, 30 ... years ago. It makes things very difficult. I

am contemplating moving districts and/or pursuing other avenues, maybe out of education entirely. I am eligible to retire after the 2024-25 school year. Many of my friends in the field are feeling the same way for their futures. I have never done my job in education for fame and accolades. I have also never felt less appreciated for what I do as an educator. I still love the game—not sure how much longer that I am going to stay in it. There is a sense of the great unknown swirling around education.

Working with board members is difficult. We have really good people, but they have to make educational decisions with no background or understanding in running a school district.

On the BOE side, finding people who are willing to commit to four years without an agenda is a problem. I am currently operating with three appointed members and could soon have two more elected members step down, putting me at five non-elected members.

It is comments like these from superintendents that highlight the current issue many superintendents across the country face in superintendent-board relations. Digging deeper, comments from superintendent interviews further highlighted the issue. Kansas Superintendent #9 noted, “The politics of the board override what’s best for kids. Some of our board members aren’t bad people—just knuckleheads. They don’t get the full picture of how decisions ripple through classrooms.”

Kansas Superintendent #2 commented, “The hardest part is when board members want to get into the weeds—curriculum, discipline, hiring. It’s hard to remind them that’s not their role.”

Oklahoma Superintendent #4 echoed this by saying, “Local boards feel empowered to micromanage superintendents more than ever before, driven by social-media outrage instead of actual policy.” Finally, New Mexico Superintendent #1 noted, “With every election, everything changes—priorities, tone, expectations. It’s exhausting to start over every two years. School board members have training, but no one makes them go. I have one board member who has been on the board for a long time and has never attended a training.”

On the positive side, Kansas Superintendent #2 noted, “They think I’m awesome because I communicate with them every week. The last superintendent only sent notes once a month.” As well as Wyoming Superintendent #1, who stated, “We use the Wyoming School Boards Association norms to remind everyone we’re a governance team, not a management team.”

And, finally, Wyoming Superintendent #3, who remarked, “Sometimes the board just needs to vent. My job is to listen, not react, so the district stays steady.” While there are overwhelmingly negative issues and comments regarding superintendent–board relations, there are also bright spots in this context that center on superintendent time, communication, and emotional labor.

Discussion, Implications, and Next Steps

Over time, and seemingly since the beginning of the 21st century, the role, position, and the work of the school district superintendent has been on a rocket-propelled evolution to the time of today, 2025-2026, where it is

one of extraordinary complexities given the dynamic contexts of political polarization, financial stress, social change, post-COVID recovery, and human capital shortages.

Teacher shortage and human resource constraints

Recruiting and retaining qualified teachers, administrators, and superintendents is the defining issue in 2025-2026 and may be the most critical issue in small and rural districts where geographic isolation, housing shortages, cultural expectations, and financial constraints on compensation combine to create a “silent staffing crisis” (Wood et al., 2013).

These issues also create fragile human resource pipelines, where the number of applicants for teaching and leadership positions has declined dramatically since the turn of the 21st century (Wood et al., 2013; DeMatthews et al., 2025). Jenkins (2007) found that community preferences and pressures to hire “local” reinforced local values, mindsets, and power structures that often limit changes to expand pedagogy and enrich the teaching staff with teachers of color.

Holmes (2023) noted similar findings regarding the rural ideologies within “cowboy epistemology,” such as whiteness and traditionalism, which create hostile and isolating environments for teachers of color and for teachers who advocate for a more inclusive and expansive global curriculum.

However, in districts that have experienced success, Frahm and Cianca (2021) noted that supportive leadership behaviors, such as support in building relationships and personal and community connections, reducing isolation, reducing job dissatisfaction, and being highly engaged and visible, were ways superintendents improve teacher retention, especially in rural districts.

Persistent fiscal pressures

Kowalski and Björk (2005) identified the role of superintendent as manager when superintendents work in the finance and budget space, while Copeland (2013) noted that rural superintendents wear many hats (roles), and that when working with finances and budgets, rural superintendents are wearing the hat and taking on the role of planner. Across districts, superintendents noted that persistent financial pressures are among the most chronic and destabilizing they face, and this is particularly significant in small and rural districts, where superintendents often operate without trained business managers (Abshier et al., 2011; Copeland, 2013; Miller, 2017).

Superintendents noted that they are constantly questioned about the cost of education and often asked and forced to do more with less (Abshier et al., 2011).

Governance conflicts and political strains

Superintendent-school board relations have historically been a major source of tension and conflict for superintendents (Glass & Franceschini, 2007), often consuming a substantial portion of their daily and weekly schedules. Dan Novey, a longtime superintendent in North Carolina, noted that he often spent 60% of his weekly schedule on interactions with school board members and on managing relations between the school board and the superintendent (D. Novey, June 25, 2015, personal communication).

Superintendents across all settings face challenges related to board governance, micromanagement, and internal politics from school boards (Fusarelli, 2006; Peters, 2020; Wargo et al., 2022). For example, Fusarelli noted, “Superintendents often face the challenge of balancing board interests with professional autonomy, regardless of district size or locale” (2006, p. 319).

Further contributing to issues between superintendents and school board members, Holmes (2021) observed that rural superintendents tend to prioritize communication with internal stakeholders—such as students, teachers, staff, and administrators—over external stakeholders, including school board members, parents, business and community members, and elected officials. This preference for internal over external partners, including school board members, often increases tensions between school boards and superintendents.

Finally, rural district school board-superintendent relations are often characterized by role ambiguity and political entanglement (Fusarelli, 2006; Wargo et al., 2022). These conflicts frequently arise from overlapping personal and professional relationships within close-knit and often isolated rural communities. “Governance, in a rural context, is not a clean break between policymaking and administration—it’s a blurry line colored by family ties, church affiliations, and local politics” (Wargo et al., 2022, p. 14).

Local politics, particularly in rural areas, can significantly influence superintendent-school board relations. Peters (2020) noted that superintendent turnover often results from board interference and shifting political expectations, especially in small districts where community identity and political ideology are closely linked.

In rural and small-town contexts, this can be attributed to the blurring of personal relationships and government leadership roles (Fusarelli, 2006) and is exacerbated by the local conditions in which superintendents live in a “fishbowl” under constant community scrutiny (Van Regenmorter et al., 2025).

Specifically, a superintendent’s decision to attend a basketball game or not can have

political ramifications. Further, Holmes (2023) noted that in some rural communities there is a strong preference to “grow your own” and to have a superintendent that is “just like them” that in some rural communities reinforces conditions of whiteness, conservatism, cultural homophily, and isolation which make it difficult for superintendents to pursue issues related to the success of all students. Finally, it appears that the stress of political pressures on superintendents impacts their well-being in all settings, including those that are less polarized as well as those that are highly polarized (Lefdal & De Jong, 2019).

Rural-specific challenges

The rural superintendent shares many things in common with suburban and urban superintendents, similar paperwork demands and reporting requirements, political tensions and issues, financial pressures and under-resourcing, but at the rural level, these issues and challenges are intensified by geographic isolation, the multiplicity of roles in the superintendent position, and, at times, local cultural rigidity found in rural contexts.

Van Regenmorter et al. (2025) noted that rural superintendents must fill multiple positions, such as special education director, facilities manager, and curriculum director, in addition to the superintendent, all on the same day. Copeland (2013) illustrated this by describing superintendents as wearing multiple hats on the same day without the specialized training and support needed to do so. Miller (2017) asserted that this increased workload, when combined with staffing shortages, frequently led superintendents to experience burnout, exhaustion, and decreased organizational performance.

Within many rural settings, local politics, community relations, and conservative cultural narratives create challenges for rural superintendents. Jenkins (2007) found that rural

superintendents are expected to conform to local community values, which are often resistant to hiring staff outside the community and to progressive ideas. Holmes (2023) noted that in rural areas where “Cowboy Epistemology” is the dominant cultural narrative—characterized by whiteness, self-reliance, and resistance to demographic changes – superintendents can face resistant and hostile environments for change, as these efforts may be perceived as a threat to local identity. Wargo et al. (2022) highlighted that school board members are often neighbors, family members, or employees/former students, and that this closeness can blur professional boundaries, increasing political friction between the superintendent and the school board, as well as between the school board and community members.

Given the research question of this study (In summary):

In the year 2024-2025, superintendents, and particularly rural superintendents, are dealing with a chronic, persistent, and growing teacher (and principal) shortage due to the rural factors of isolation, low salaries, and declining applicant pools (Frahm & Cianca, 2021; Wood et al., 2013; Van Regenmorter et al., 2025).

Superintendents are currently being tasked with doing more with less across all facets of their work. This is no more apparent than in the financial arena, where rural superintendents must manage shrinking budgets amid rising costs, yet lack sufficient budgeting and financial training and experience to do so (Abshier et al., 2011).

Superintendents are facing in many parts of the country, and in many rural parts of the country, school boards of education that are focused on micromanagement, driven by political and social media agendas, and are out of touch with current educational trends and best practices, instead reliant upon what they

hear and see in the media as their guide for educational decision-making (Author 1, 2023; Peters, 2020; Tekniepe, 2015).

This is not the superintendency of just a few years ago, not the superintendency of the turn of the 21st century, and not the superintendency most current superintendents saw when they began their careers in education in the 1980s and 1990s. Looking forward, superintendents recommended the following action steps as potential solutions to address some of the challenges and issues; these should be considered implications for scholars and practitioners.

1. Policy: State funding formulas should be revised to account for rural realities, increasing flexibility and incentivizing teacher recruitment and retention.
2. Practice: Superintendent preparation programs must expand their focus to include stress management, time management, teacher recruitment, financial planning and management, political and policy engagement, board relations in the year 2025, and the unique expectations of rural leadership.
3. Leadership Development: Peer mentoring and professional networks should be institutionalized from the current informal practices to reduce professional isolation and improve superintendent well-being.
4. Community Engagement: Communities and boards should recognize superintendent credibility as both an educational and civic asset, central to retention and success.

While this study is confined to the thoughts, ideas, and experiences of the superintendents of four states located in the West and Midwest, the study has utility and generalizability to rural superintendents across the country due to commonalities in items

such as school size, rural superintendent role and position factors, the factors and contexts of rurality, and consistencies in superintendent standards. Future researchers should explore the following:

1. **Board-Superintendent Relations:** Investigate how intentional training and role clarification alter patterns of governance conflict between superintendents and school board members.
2. **Training and Development:** Evaluate the effectiveness of preservice superintendent programs as well as the ongoing professional development, induction, and mentoring of

superintendents with particular attention to fiscal, legal, and rural areas.

3. **Educator Shortage:** Researchers should explore the teacher, principal, and superintendent recruitment, hiring, retaining, and mobility issues and factors in rural settings.

This study demonstrates that issues, including staffing shortages, fiscal constraints, political volatility, governance conflicts, and rural isolation characterize the superintendent role in Western and Midwestern contexts. While these are long-standing issues, the current environment intensifies them through heightened politicization and community division.

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SMART Skills™: A Research-Informed Framework for Modern Cognition in District Leadership, Instruction, and Student Thinking

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Abstract

For more than a century, educational leadership has relied on hierarchical cognitive frameworks such as Bloom's Taxonomy and Webb's Depth of Knowledge to shape instruction, assessment, and accountability. While foundational, these models were designed for a linear, industrial-era conception of learning that no longer reflects the cognitive, technological, and societal realities facing today's students. This article introduces SMART Skills™, a post-Artificial Intelligence, non-linear cognitive framework grounded in creativity, cognitive complexity, real-world transfer, and ethical reasoning. Built through long-term research and superintendent practice, SMART Skills™ reframes learning as an adaptive process aligned to a human–AI world.

This paper advances three core contributions to the field: (1) it identifies the structural limitations of legacy taxonomies in measuring modern cognition; (2) it presents SMART Skills™ as a next-generation cognitive architecture built for complexity, originality, and transfer; and (3) it translates this framework into actionable guidance for district-wide leadership, curriculum design, evaluation systems, and future-ready schooling. Positioned at the intersection of theory and practice, this work offers superintendents and educational leaders a research-grounded pathway for moving beyond compliance-driven instruction toward a model of learning that supports human flourishing in an era of profound change.

Key Words

SMART Skills™, cognitive complexity, educational leadership, curriculum and instruction, teacher evaluation, human–AI co-intelligence, school system design, future-ready learning,
SMART Skills™: A Research-Informed Framework for Modern Cognition in District Leadership, Instruction, and Student Thinking

Introduction

Why Cognitive Frameworks Must Now Evolve

Educational leadership stands at a critical inflection point. While schools have long served as institutions for knowledge transmission, character formation, and civic preparation, the intellectual architecture guiding teaching and learning has remained largely unchanged for decades. Bloom's Taxonomy (1956) established a hierarchy of cognitive processes that brought order to instructional planning. Webb's Depth of Knowledge (1997) added rigor by emphasizing complexity of task and depth of reasoning. Together, these frameworks shaped generations of classrooms, assessments, and policies.

Yet the world these models were designed to serve no longer exists in its original form. Students now navigate environments defined by artificial intelligence, algorithmic systems, economic volatility, global interdependence, and accelerating ethical dilemmas. The demands placed upon learners extend far beyond recall, comprehension, or even procedural problem solving. Today's graduates must demonstrate originality, adaptability, strategic reasoning, collaborative intelligence, and the capacity to transfer knowledge across unpredictable contexts.

The challenge for superintendents and district leadership is no longer simply how to raise test scores within existing frameworks, but whether the frameworks themselves still match the nature of modern cognition. When educational systems rely on models that privilege linear progression, static hierarchies, and predetermined endpoints, they risk preparing students for stability in a world defined by volatility. This tension is no longer theoretical; it now plays out daily in classrooms attempting to reconcile legacy standards with emerging realities.

Within this context, SMART Skills™ framework emerges, not as a rejection of Bloom or Webb, but as an evolutionary advance built upon their intellectual foundations. Where earlier taxonomies provided order and rigor, SMART Skills™ introduces adaptability, non-linearity, and real-world cognition as central organizing principles. It reflects a shift from education as compliance toward education as cognitive empowerment.

For superintendents, this shift is not merely instructional, it is systemic. Cognitive frameworks shape how districts design curriculum, evaluate teaching, allocate resources, define readiness, and ultimately determine how students are prepared to participate in society. The question now confronting educational leaders is not whether change is coming, but whether existing models are sufficient to guide it.

The Structural Limits of Bloom and Webb in the AI & Complexity Era

For more than half a century, Bloom's Taxonomy (1956) and Webb's Depth of Knowledge (1997) have shaped how educators define rigor, sequence instruction, and evaluate student performance. These frameworks provided essential structure during eras when schooling was designed primarily for knowledge transmission, procedural mastery, and predictable workforce preparation (Sforza, 2014). Their contribution to curricular coherence and instructional clarity is undeniable. However, the persistent and often uncritical reliance on these models now presents a structural limitation in an era defined by cognitive complexity, artificial intelligence, and profound uncertainty.

Bloom's Taxonomy organizes thinking into a hierarchical progression, from recall to analysis to creation. While this hierarchy brought order to instructional planning, it

assumes that cognitive growth is linear, sequential, and universally paced. Modern learning, however, rarely follows such predictable pathways (Davis & Sumara, 2006). Students often move fluidly between synthesis, intuition, experimentation, and reflection, sometimes producing original insights before mastering every underlying procedural step. Innovative thinking frequently emerges not from structured ascent, but from lateral connections, intellectual risk-taking, and moments of productive failure. Bloom's hierarchy, by design, struggles to capture these non-linear realities.

Webb's Depth of Knowledge attempted to correct for oversimplification by emphasizing the cognitive demand of tasks rather than the verbs used to describe them. Although DOK strengthened discourse around rigor, it retained a task-centered orientation (Biggs & Collis, 1982). Educators still assess depth primarily through assignment complexity. In practice, this has often resulted in compliance-driven instructional design: educators align tasks to DOK levels, but the framework offers limited guidance on how students develop transferable reasoning, creative insight, and sustained cognitive complexity over time.

In both frameworks, knowledge remains the central currency. Even at the highest levels, cognition is defined primarily by what students can demonstrate within a contained academic task (Anderson & Krathwohl, 2001). What remains largely unmeasured is how learners intellectually navigate ambiguity, generate original problems, integrate multiple domains of knowledge, or apply ethical reasoning in complex, real-world contexts (Sforza, 2014). These intellectual capacities are no longer peripheral; they define success in modern civic, economic, and technological life.

The rapid emergence of artificial intelligence further exposes the limitations of legacy taxonomies. AI systems now replicate many functions once associated with lower- and mid-level cognitive tasks: retrieval, summarization, pattern recognition, and even procedural generation. When machines can perform much of what schools have historically prioritized, the central purpose of human learning must be re-examined. The question shifts from *what students know* to *how they think, how they adapt, and how they ethically apply intelligence in partnership with machines*. Bloom and Webb were never designed to operate within a human-AI cognitive ecosystem.

From a superintendent's perspective, these limitations are not abstract. They surface in strategic planning, evaluation systems, curriculum audits, and workforce alignment efforts. Districts are increasingly asked to demonstrate graduate readiness not only for college, but for careers that do not yet exist, for civic participation in polarized environments, and for ethical engagement with emerging technologies. Legacy frameworks offer insufficient precision for these demands. They help classify academic tasks, but they do not sufficiently illuminate modern cognitive readiness.

Moreover, both Bloom and Webb are structurally content-bound. They operate most effectively within traditional academic disciplines and standardized assessment systems. Yet learning now unfolds across interdisciplinary spaces, Science, Technology, Engineering, and Math (STEM) integrated with ethics, humanities intertwined with data science, and civic reasoning embedded within global digital cultures. Cognitive development in integrated environments is recursive, contextual, and adaptive, not hierarchical and fixed.

The limitations of legacy models do not diminish the historical importance of Bloom's Taxonomy or Webb's Depth of Knowledge. Rather, they signal the natural boundary of any framework born in a different era.

Just as earlier industrial models of schooling gave way to more constructivist approaches, today's educational leaders must confront the limits of taxonomies that prioritize sequence over synthesis, compliance over creativity, and task alignment over human adaptability.

The challenge before district leaders, therefore, is not whether Bloom and Webb are "wrong," but whether they are sufficient to guide the next generation of learning. If the central aims of education now include originality, strategic reasoning, ethical discernment, and real-world transfer in an AI-saturated society, then a different cognitive architecture is required, one that treats complexity not as an endpoint, but as the starting condition of learning.

It is precisely within this widening gap between legacy cognitive taxonomies and modern educational demands that SMART Skills™ framework takes shape, not as a refinement of existing models, but as an adaptive reconfiguration of what cognition means in contemporary schooling.

The Theoretical Foundations of SMART Skills™

SMART Skills™ framework is not a departure from established learning science, but an evolution of it, one that integrates decades of scholarship in cognitive complexity, creativity research, constructivist learning theory, and real-world transfer into a unified, modern architecture of thinking.

At its core, SMART Skills™ reframes cognition as dynamic, contextual, and ethically grounded, rather than hierarchical and stage-bound. Table 1 presents a comparison of Bloom's Taxonomy, Webb's Depth of Knowledge, and SMART Skills™ across key structural and cognitive dimensions.

Table 1

Comparison of Bloom's Taxonomy, Webb's DOK, and SMART Skills™

Feature / Dimension	Bloom's Taxonomy (1956)	Webb's DOK (1997)	SMART Skills™ (2026)
Structure	Linear hierarchy (6 levels)	Hierarchical (4 levels)	Non-linear constellation of interconnected skills
Origin	Knowledge domains	Cognitive demand	Modern thinking dimensions & adaptability
Core Emphasis	Knowledge → Evaluation	Recall → Extended Thinking	Creativity, foresight, criticality, ethical reasoning
Flexibility	Rigid levels	Slightly flexible	Dynamic & fluid across tasks, contexts, and learners
Integration with AI/Tech	None	None	Designed for intelligent tool synergy
Relevance to Classrooms	Limited	Moderate	High — aligns with real-world & neurodiverse needs
Equity & Accessibility	Assumes uniform progression	More complex = better	All learners engage based on context & strength
Instructional Application	Lesson classification	Task design	Planning, coaching, & evaluation across systems
Impact on Student Identity	Passive recipients	Task-doers	Meaning-makers, collaborators, problem-finders
Future Alignment	Mid-20th century	Late 20th century	Future-driven — 21st century & beyond

Cognitive Complexity as a Foundational Construct

The intellectual roots of SMART Skills™ draw directly from research on cognitive rigor and complexity, including work that analyzed the comparative depth of state standards, national frameworks, and instructional expectations across disciplines.

This body of scholarship demonstrated a persistent misalignment between the stated goals of higher-order thinking and the operational demands placed on students in classrooms. Too often, systems claim to

prioritize complex reasoning while structurally rewarding procedural compliance and surface-level demonstration (Sforza et al., 2016; Sforza, 2014; Tienken, 2017).

SMART Skills™ addresses this gap by shifting the unit of analysis from *task difficulty* to *thinker behavior*, a shift grounded in prior analyses of cognitive complexity and instructional misalignment (Sforza et al., 2016; Sforza, 2014).

Rather than asking whether an assignment is “rigorous,” the framework asks whether the learner is engaging in behaviors

associated with complex cognition: synthesizing across domains, generating original problems, adapting strategies in real time, and exercising reflective judgment. In this sense, cognitive complexity becomes not an endpoint on a scale, but the living condition within which learning occurs (Sforza, 2014).

Non-Linear Learning and Constructivist Traditions

Where legacy taxonomies assume orderly progression, SMART Skills™ is grounded in the constructivist understanding that learning is inherently non-linear and emergent rather than sequential (Davis & Sumara, 2006; Bratianu & Vasilache, 2009; Chow et al., 2021). Learners construct meaning through iteration, error, experience, social negotiation, and contextual interaction (Dewey, 1938). Insight often precedes explanation. Creativity often precedes structure. Strategic thinking often emerges through uncertainty.

SMART Skills™ rejects the assumption that students must “climb” cognition in fixed steps. Instead, it recognizes that learners move fluidly among ideation, analysis, synthesis, communication, and reflection depending on task, context, and identity reflecting diverse cognitive pathways and forms of intelligence (Gardner, 1983; Davis & Sumara, 2006). This framing aligns with contemporary neuroscience and learning sciences, which emphasize plasticity, pattern recognition, and feedback-driven growth over rigid instructional sequencing.

Creativity, Originality, and Problem Finding

A defining theoretical pillar of SMART Skills™ is its elevation of creativity and problem finding as central, not peripheral, dimensions of intelligence. Traditional frameworks tend to locate creativity at the apex of cognition, implicitly treating it as rare, optional, or reserved for advanced learners.

SMART Skills™, by contrast, situates originality as a core operating condition of modern thinking (Csikszentmihalyi, 1996).

In complex systems, whether civic, economic, scientific, or technological, success, unlike in linear systems where it is defined by solving predefined problems, depends less on solving predefined problems and more on identifying *which problems matter*, framing them effectively, and iterating through imperfect solutions.

Problem finding, therefore, is not a soft skill; it is a strategic cognitive act. SMART Skills™ embeds this capacity directly into the architecture of learning (Sternberg, 1985; Torrance, 1974).

Real-World Transfer and Situated Cognition

SMART Skills™ is also grounded in theories of situated cognition and transfer, which hold that knowledge is inseparable from the contexts in which it is used. Too often, students demonstrate mastery in artificial academic settings but struggle to apply learning beyond the classroom. This transfer gap is one of the most enduring failures of traditional schooling (Dewey, 1938).

By positioning real-world application as a foundational rather than downstream expectation, SMART Skills™ reframes instruction around authenticity. Knowledge is not something students merely acquire, it is something they actively test, refine, challenge, and apply across evolving environments. This theoretical stance is essential in preparing learners for complexity beyond school walls.

Meta-Awareness, Self-Regulation, and Ethical Reasoning

Another distinctive feature of SMART Skills™ is its explicit inclusion of meta-awareness, or the ability to monitor and regulate one's own

thinking, and ethical reasoning as cognitive—not merely behavioral, dimensions of learning (Costa & Kallick, 2000).

Students must develop the capacity to think about their own thinking, regulate effort, evaluate bias, consider the human impact of their decisions and monitor their own thinking processes. In an era of AI-generated content, algorithmic influence, and accelerating social polarization, ethical discernment is no longer an add-on; it is a cognitive necessity.

SMART Skills™ treats self-regulation, reflection, and civic reasoning as intertwined with creativity, strategy, and communication. This integration reflects a modern understanding of intelligence as not only analytical, but moral, relational, and socially situated.

Equity, Access, and Cognitive Opportunity

Finally, the theoretical foundation of SMART Skills™ is inseparable from its equity implications. Historical cognitive taxonomies often functioned as sorting mechanisms, distinguishing who could access advanced thinking and who remained confined to procedural instruction.

SMART Skills™, by contrast, is grounded in the principle of universal cognitive potential. All learners, across ability levels, backgrounds, and identities, are capable of engaging in creativity, strategy, synthesis, and real-world reasoning when provided appropriate conditions.

This framing shifts the equity conversation from access to content toward access to complex thinking itself. It challenges systems that reserve higher-order cognition for select student populations and instead aligns with longstanding calls for more equitable and

democratic aims in public education (National Education Association, 1918).

From Theory to Framework

Taken together, these theoretical foundations, cognitive complexity, non-linear learning, creativity, situated cognition, meta-awareness, ethical reasoning, and equity, converge within the SMART Skills™ framework as an integrated model of modern intelligence.

Rather than fragmenting thinking into isolated domains, SMART Skills™ unifies them into a dynamic constellation that reflects how humans actually learn, adapt, and lead in the real world (Sforza, 2014).

It is this theoretical grounding that allows SMART Skills™ to function not merely as a descriptive taxonomy, but as a design framework for instruction, leadership, and systemic transformation, one capable of guiding the next era of public education.

The SMART Skills™ Framework—The Eleven Interwoven Dimensions of Modern Cognition

SMART Skills™ framework defines eleven interdependent dimensions of modern cognition that operate as a dynamic constellation rather than a hierarchy, extending prior critiques of standardized, linear curriculum models and advancing research on cognitive complexity and instructional design (Sforza et al., 2016; Sforza, 2014; Tienken, 2017; Tienken, 2021).

Unlike traditional taxonomies that sequence thinking in fixed stages, SMART Skills™ reflects how cognition actually functions in complex, real-world environments, fluid, recursive, contextual, and adaptive.

These skills do not replace academic content; they govern how content is engaged, applied, challenged, and transformed.

1. Creative Thinking

The capacity to generate original ideas, take intellectual risks, and explore novel possibilities. Creativity is treated not as an elite endpoint but as a core condition of learning in uncertain environments.

2. Critical Thinking

The disciplined evaluation of claims, evidence, logic, and assumptions across domains. This dimension supports analytical judgment while remaining integrated with creativity and ethics.

3. Strategic Thinking

The ability to plan purposefully, anticipate consequences, and adjust actions in complex systems. Strategic cognition governs decision-making under ambiguity.

4. Communication

Precision in expression across written, oral, visual, and digital modes. Communication is treated as a cognitive act, not merely a presentation skill.

5. Collaboration

Interdependence, perspective-taking, and shared problem-solving. SMART Skills™ positions collaboration as distributed intelligence, not a soft skill.

6. Problem Finding & Solving

The capacity to identify meaningful

problems, frame them effectively, and iterate through imperfect solutions. This skill reflects the realities of innovation and leadership.

7. Real-World Application

Transfer of knowledge across unpredictable, non-academic contexts. Authenticity is foundational, not supplemental.

8. Meta-Awareness

Self-regulation, reflection, and monitoring of one's own thinking. This dimension governs learner agency and cognitive independence.

9. Civic & Ethical Reasoning

Judgment rooted in fairness, responsibility, and awareness of social impact. Ethical reasoning is embedded within cognition itself.

10. Synthesis

Integration of multiple disciplines, viewpoints, and data sources into coherent understanding. Synthesis governs systems thinking.

11. Resilience & Adaptability

The ability to persist, recover, and evolve through challenge, feedback, and uncertainty. Adaptability defines readiness in volatile systems.

A Non-Hierarchical Cognitive Architecture

What distinguishes SMART Skills™ is not simply the inclusion of these dimensions, but their non-hierarchical structure. Learners do

not “progress” through SMART Skills™ in linear fashion, a departure from traditional hierarchical models of cognition (Bloom, 1956; Webb, 1997).

Instead, they activate multiple dimensions simultaneously depending on context, identity, task design, and social environment. A student may demonstrate advanced synthesis before procedural fluency, or strategic insight before formal analysis. This reflects the reality of authentic cognition, where thinking is situational rather than staged.

Why SMART Skills™ Outperform Legacy Frameworks

Unlike Bloom's and Webb's models, which primarily classify academic tasks, SMART Skills™ is behavior-centered and grounded in observed cognitive complexity (Bloom, 1956; Webb, 1997; Sforza et al., 2016). It describes what modern thinkers *do*, not just what assignments demand. It captures:

- Creativity and problem finding as foundational, not optional
- Real-world transfer as central, not downstream
- Ethical reasoning as cognitive, not behavioral
- Adaptability as a core readiness indicator, not a personality trait

In this way, SMART Skills™ shifts educational systems from measuring academic compliance to developing human capability.

From Classroom to District Systems

Because SMART Skills™ functions as a cognitive architecture rather than a content framework, it can be embedded across:

- Curriculum design
- Performance-based assessment
- Teacher coaching
- Leadership evaluation
- Graduate readiness profiles
- AI-governed instructional ecosystems

For superintendents, this means SMART Skills™ is not an instructional add-on—it is a system-level organizing framework for how thinking is developed, observed, and scaled across schools.

District-Wide Implications: Curriculum, Instruction, Evaluation, and Leadership

The true power of a cognitive framework is not measured by its elegance on paper, but by its capacity to reshape systems in practice.

For superintendents, SMART Skills™ function not as an instructional add-on, but as a district-level design architecture—one that realigns curriculum, professional learning, evaluation, and long-range strategic planning around modern cognition rather than legacy compliance.

Reframing curriculum: from coverage to cognitive design

Traditional curriculum models prioritize content pacing, scope, and sequence. SMART Skills™ reframes curriculum as cognitive experience design (Marzano, 2007; Tienken, 2017).

Instead of asking what content must be “covered,” district leaders ask what kinds of thinking behaviors students must repeatedly practice across grade levels and disciplines. This shift moves curriculum from a checklist of standards to a coordinated system for cultivating creativity, synthesis, ethical reasoning, and real-world transfer.

In practice, this translates into interdisciplinary performance tasks, real-world problem framing, and iterative design challenges embedded within traditional coursework. Academic rigor is preserved, but it is expressed through thinking complexity rather than volume of content.

Instructional Practice: Teachers as Designers of Thinking

SMART Skills™ reposition teachers as cognitive designers of learning experiences, not simply deliverers of curriculum (Danielson, 2007; Costa & Kallick, 2000). Instruction is intentionally constructed to activate multiple SMART dimensions at once, creative ideation alongside critical analysis, collaboration alongside strategic planning, meta-awareness alongside real-world application. Classroom practice shifts from linear lesson execution to dynamic learning orchestration.

For district leaders, this alters the nature of instructional leadership itself. Walkthroughs, observations, and coaching conversations move beyond compliance indicators toward deeper questions:

- *Where is originality present?*
- *How are students transferring learning?*
- *What cognitive risks are being encouraged?*
- *How are students reflecting on their own thinking?*

Evaluation systems: From procedural fidelity to cognitive evidence

Perhaps the most disruptive implication of SMART Skills™ lies in evaluation. Traditional observation systems focus heavily on instructional moves, pacing, and task alignment. While these remain important, they often fail to capture whether complex thinking is actually occurring. SMART Skills™ introduces a cognition-first lens for observation and feedback, centering what students are thinking, producing, transferring, and regulating.

For superintendents, this enables a shift from evaluating instructional compliance to evaluating cognitive opportunity and impact. Teachers are coached not merely on strategies, but on how effectively their classrooms

cultivate adaptive intelligence. Leadership evaluation similarly evolves from operational management toward system-level cognitive design.

Graduate readiness and equity of cognitive access

At the district level, SMART Skills™ redefines graduate profiles. Readiness is no longer framed exclusively through credit accumulation, test scores, or procedural mastery. Instead, graduates are defined by their demonstrated capacity for creativity, strategic reasoning, collaboration, resilience, ethical judgment, and transfer.

This reframing has profound equity implications. Historically, advanced cognition has often been reserved, explicitly or implicitly, for select student populations. SMART Skills™ establishes complex thinking as a universal expectation, not a selective privilege.

Districts using this framework shift the equity conversation from access to courses toward access to cognitive complexity itself.

Strategic Planning and the Future of Public Education

At the superintendent level, SMART Skills™ offers a strategic throughline that aligns board goals, instructional vision, workforce readiness, and AI governance under a single cognitive philosophy. Rather than reacting piecemeal to technology, labor market shifts, or accountability mandates, districts operate from a coherent definition of what modern intelligence requires.

In this sense, SMART Skills™ functions as a future-facing governance framework as much as an instructional one. It allows districts to move beyond incremental reform and instead undertake intentional cognitive transformation, anchored in human capacity rather than technological acceleration alone.

Human–AI Co-Intelligence, Educational Governance, and the Future of Schooling

The emergence of artificial intelligence marks not simply a technological shift, but a civilizational transition in how intelligence itself is defined.

For the first time, machines can perform many of the procedural, analytical, and generative tasks that schools once treated as the upper bounds of cognition (Holmes et al., 2019). This reality forces educational leaders to confront a fundamental question: *if machines can now execute much of what education traditionally rewards, what is the irreducible role of human thinking?*

SMART Skills™ provides an answer rooted in human–AI co-intelligence rather than technological substitution. In this framing, AI becomes a cognitive amplifier, accelerating pattern recognition, access to information, and simulation, while human intelligence is defined by the capabilities machines cannot ethically or meaningfully replace: originality, ethical judgment, contextual understanding, strategic foresight, reflective awareness, and civic responsibility (Shneiderman, 2020).

The purpose of schooling shifts from producing task executors to cultivating adaptive decision-makers in complex systems. This shift carries profound implications for educational governance. Districts can no longer afford to treat AI as a peripheral instructional tool or a compliance concern.

It must be governed through a coherent cognitive philosophy that protects human agency while leveraging technological capacity.

SMART Skills™ offers such a governance anchor by explicitly centering ethical reasoning, meta-awareness, real-world transfer, and adaptability as non-negotiable human outcomes.

The future of schooling will not be determined by how quickly districts adopt new technologies, but by how intentionally they redefine human capability in a machine-rich world. When districts frame cognition as dynamic, creative, ethical, and transferable, education reclaims its moral and civic purpose. Schools prepare students not just for jobs, but to steward an uncertain world.

SMART Skills™ thus positions public education at the frontier of what may be the most important leadership challenge of this century: ensuring that as artificial intelligence accelerates, human intelligence deepens.

Conclusion

Public education stands at a defining crossroads. The question is no longer whether schools must change, but whether they will evolve their deepest cognitive assumptions to meet a world shaped by complexity, artificial intelligence, and accelerating uncertainty. SMART Skills™ offer a future-facing framework that preserves the rigor of legacy taxonomies while transcending their limitations through creativity, adaptability, ethical reasoning, and real-world transfer.

For superintendents and educational leaders, this is not a matter of innovation for its own sake, it is a matter of stewardship. The future of schooling will belong to systems that design for human thinking, not merely academic performance.

Author Biography

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Supporting Neurodiverse Learners through Ethical School Design: The Magic City Acceptance Academy as a Model for Inclusive Education

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Abstract

The Magic City Acceptance Academy (MCAA), a charter school in Homewood, Alabama, was founded in 2021 by Birmingham AIDS Outreach to support students—particularly LGBTQ+ youth—who have faced bullying or exclusion in traditional schools. Serving grades 6–12, MCAA provides a brave, inclusive, and affirming environment, with specialized support for neurodiverse students and those with social-emotional challenges. Key features include a sensory room, trauma-informed curricula, restorative justice practices, a therapy animal, and a Wellness Suite. The school's physical design promotes well-being with single-stall, gender-neutral restrooms and the absence of locker rooms. Despite legislative challenges, MCAA remains committed to equity, diversity, and student wellness, illustrating how universal design and inclusive practices foster belonging, safety, and academic success for all students.

Key Words

neurodiversity, social-emotional learning, inclusive spaces, trauma-informed curriculum, restorative justice disciplinary practices

Introduction

The Magic City Acceptance Academy (MCAA) is a charter school in Homewood, Alabama, a suburb of Birmingham, for students in grades 6 through 12. The school was founded by Birmingham AIDS Outreach (BAO) in 2021 in response to their growing concerns that students who identified as Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ+) were failing in school or dropping out due to bullying, harassment, or violence, which students often attributed to queer or other marginalized identities (Fifolt, Gurley, White, 2024b; Kosciw et al., 2022).

MCAA's original mission statement was to empower all learners to embrace education, achieve individual success, and take ownership of their future in a brave, LGBTQ-affirming learning environment (Fifolt, Gurley, White). Due to state and federal statutes, MCAA's Board of Directors elected to combine its mission and vision statements in 2025 to comply with evolving legislation. It now reads:

The Magic City Acceptance Academy will motivate and prepare students in grades six through twelve by providing an exceptional, innovative, and quality-driving education. MCAA's purpose is to engage students who have dropped out, are not thriving in traditional schools, or are enrolled in home-school programs. MCAA will provide a positive learning environment for all students to succeed. (Magic City Acceptance Academy, para. 1).

Despite wording changes, school personnel remain dedicated to providing students with the highest-quality education in an environment that is respectful, affirming, and diverse.

Previously, our research team demonstrated that students who identify as LGBTQ+ or *other* are frequently vulnerable to harassment in the public-school setting (Fifolt, Gurley, White, 2024a; Fifolt, Gurley, White, 2024b). We concluded that, despite protections by school policies, students who are singled out as different from their mainstream peers frequently face higher risk for peer victimization. In this context, the category of *other* includes individuals with unique learning needs.

In this Commentary, we revisit selected themes from our previous studies of MCAA to describe the innovative ways in which MCAA supports students with exceptionalities, including neurodiversity and social-emotional needs. As such, we depict MCAA's school environment as well as programs and policies as examples of best practices that could be replicated in other school settings. Finally, we demonstrate that strategies of a highly ethical school, like MCAA, benefit *all* students, not just those with unique identities or learning profile (Fifolt, Gurley, White, 2023b; Shapiro & Stefkovich, 2016).

Background

As a charter school in Alabama, MCAA is a public school and, therefore, part of the public education system in the state; it is open to all students who meet basic residency requirements for public school enrollment in Alabama. MCAA's charter status allows it to operate independently of certain state regulations to meet the needs of its students. In exchange for this flexibility, however, MCAA must meet a high level of accountability or risk losing its charter (Prothero, 2018). When MCAA opened in 2021, it registered 204 students. During the 2024-2025 academic year, MCAA enrolled more than 350 students. Despite the submission of a high-quality charter school application, including funding

commitments from BAO and a grant from New Schools for Alabama, MCAA faced significant challenges in securing a charter.

After multiple attempts, BAO retained an attorney and submitted a letter requesting an appeal to the Alabama State Charter School Commission decision to deny a charter based on BAO's allegations of discrimination by the Commission. To avoid a potential lawsuit, the Commission reconsidered BAO's application and, ultimately, approved its charter application. We provide a full account of the fraught charter application process in a case study published elsewhere (Fifolt, Gurley, White, 2024b).

In December 2020, MCAA founders immediately began work on renovating an old office building into an energizing space for students, faculty, staff, and administrators. However, even before the school opened, MCAA founders envisioned it to be different from traditional school settings.

Early in the planning process, school leaders convened two focus groups of LGBTQ+ youth and asked them to design their *ideal school*, including features that would either enhance or detract from their school experience. These students identified attributes from their previous schools that triggered their anxiety or diminished their opportunities for creativity and learning; and designers integrated their ideas into the blueprint for MCAA (Fifolt, Gurley, White, 2024a).

Innovative School Environment

Focus group participants noted that locker rooms and public restrooms in their previous schools made them feel anxious, as these were frequently areas in which bullying occurred (Fifolt, Gurley, White, 2024b). Previous authors have described locker rooms and public restrooms as *invisible* or *hidden spaces* that hold potential for peer-victimization (Kaufman

& Baams, 2022; Kosciw et al., 2022; Park et al., 2020). Similarly, such spaces may lead to anxiety and avoidance behavior among students with autism spectrum disorder (ASD) (Francis et al., 2022; Lu et al., 2022).

Lu and colleagues (2022) suggested that modifications to the school environment can lead to a more equitable and humane experience for students, especially those with exceptionalities. Guidance from the American Institute of Architects suggests that inclusive restroom spaces, including non-gendered single-user restrooms, can offer a more dignified approach to the traditional experience with better student health outcomes (Jacobs et al., 2024, para. 1).

In response to student concerns, MCAA added multiple, single stall, non-gender-specific restrooms to each of its three floors and eliminated locker rooms altogether. One of the designers observed that students in traditional schools rarely use showers in locker rooms, even when they are provided. School officials concluded that removing locker rooms would eliminate one unnecessary stressor for students. However, recognizing the unique challenges of their student population, MCAA added laundry facilities and a roll-in shower for individuals with physical disabilities and those who may be unhoused (Fifolt, Gurley, White, 2024b).

School officials observed that transitions between classes can also cause student distress and anxiety. Therefore, MCAA eliminated traditional hallway lockers by relying primarily on digital books. For students who are neurodivergent, particularly those with ASD who experience processing differences, noise, crowded spaces, locker combinations, and unstructured transitions can lead to increased levels of stress (McDougal, 2023; Sideropoulos et al., 2024). Likewise, MCAA

replaced the digital bell with a more calming chime to signal the transition between classes.

Sensory room

One of the most distinctive and restorative spaces at MCAA is the sensory room, a small, sound-insulated room for students to reset. Once again, focus group participants were outspoken about the need for an inclusive space for students who may feel overwhelmed or overstimulated. The room includes soft lighting with a repeating color light panel, textual contrast, a water feature, and manipulatives to help students calm their breathing (Fifolt, Gurley, White, 2024a).

In a recent systematic review, Yi and Heidari Maten (2025) observed that a sensory room, or multi-sensory environment (MSE), benefits students by reducing agitation, aggression, self-injury, arousal, and stereotype behaviors while decreasing distress, anxiety, and depression.

A systematic review of qualitative and mixed methods studies of adolescents and adults with ASD revealed that adaptations to social and sensory contexts were crucial in supporting students in secondary school environments. One key finding was the use of sensory spaces which “provided a respite during the school day in which autistic students found comfort and an opportunity to recuperate” (McKinlay and colleagues 2025, p. 572).

Therapy animals

We further observed that positive sensory experiences were associated with therapy animals in schools (McKinlay et al., 2025). Therapy animals and school pets provide a range of benefits to students including reduced anxiety and stress, improved social skills, sensory support, and emotional regulation (Rehn et al., 2023). MCAA has one service dog, Fire Lily, who was trained to support

individuals with disabilities (Roverchase Foundation, 2025). However, MCAA also welcomes multiple other dogs, typically between six and eight each day, in administrative offices and classrooms that belong to teachers, administrators, and staff.

In a previous study, one MCAA student described Lemon, the school counselor’s dog, as a calming influence for her when she and the counselor talked (Fifolt, Gurley, Evans, 2026).

Inclusive programs and policies

As part of the public school system, MCAA must meet all state mandates regarding curriculum and assessment standards for secondary students in Alabama. However, MCAA’s charter provides school leaders with a higher level of autonomy in decision-making regarding curriculum, student discipline, and budgets. For example, MCAA elected to implement trauma-informed curriculum and restorative justice practices for student discipline, differentiating it from many traditional school settings (Gurley, White, Fifolt, 2024c).

Trauma-informed curriculum

A trauma-informed curriculum recognizes that adverse childhood experiences (ACEs) can undermine a child’s sense of safety, stability, and bonding with others. As such, trauma-informed schools “seek to increase awareness of trauma exposure and trauma symptoms, build supportive school and classroom communities, teach children social-emotional skills, and counteract biases and harsh disciplinary practices that can re-traumatize and cause further harm to students” (Herrenkohl et al., 2021, p. 7).

According to Fang and colleagues (2022), neurodiverse students, including those with ASD, are at greater risk of experiencing interpersonal trauma as compared to their typically developing peers. In a research

synthesis, Kalisch and colleagues observed that interpersonal trauma can “profoundly impact the mental health of neurodiverse children, as characterized by the onset of depressive symptomology, self-injurious behavior, and post-traumatic sequelae including intrusive thoughts, distressing memories, and sleep disturbance” (Kalisch et al., 2024, p. 733).

Craig (2017) noted that a trauma-informed curriculum focuses on self-efficacy, emotional awareness, affect regulation, and prevention while also providing students with access to mental health supports. Further, it allows students to explore their own strengths and identities and develop meaningful, positive relationships with adults and peers.

In a previous study, we identified multiple protective and promotive factors from the Youth Thrive framework that MCAA demonstrates through its strengths-based, trauma-informed curriculum and support, namely youth resilience, school connections, knowledge of adolescent development, concrete support in times of need, and cognitive and social competence (Gurley, Fifolt, White, 2023a; Harper Browne et al., 2015).

Restorative justice

Likewise, MCAA has implemented restorative justice principles to guide its student discipline practices. Unlike traditional disciplinary structures that rely on punitive actions, including suspension and expulsion, restorative justice focuses on mediation and agreement through which students are challenged to understand how their actions may affect others and why they may have taken those actions (Payne & Welch, 2018). This approach emphasizes the re-establishment of community within the classroom and school-wide settings as quickly and responsibly as possible.

As we previously observed, a trauma-informed approach in the classroom requires an environment in which students feel safe, both physically and psychologically (Fifolt, Gurley, White, 2024a). In this case, safety is based on a predictable classroom environment where students feel respected, validated, and heard. In this way, restorative justice and trauma-informed discipline recognizes the role of trauma in behavioral situations and identifies restorative solutions to promote healthier behaviors in the future (Gurley, White, Fifolt, 2024c; Pickens & Tschopp, 2017).

Related empirical literature suggests that restorative justice practices contribute to reducing exclusionary discipline, enhance communication and relationships, and foster inclusive school cultures that accommodate diverse learning needs (Darling-Hammond, 2023; Lodi et al., 2022).

Restorative justice and trauma-informed practices focus on understanding the underlying causes and antecedents of students’ behaviors, teaching social-emotional skills, and promoting accountability through restorative conversations. These activities may be especially helpful to neurodivergent learners as conversations prioritize empathy and mutual understanding (Darling-Hammond, 2023; Hulvershorn & Mulholland, 2018).

Social and emotional support

MCAA faculty and staff are dedicated to supporting the social-emotional growth of their students. Furthermore, MCAA administrators are committed to hiring and retaining several full-time staff members whose sole purpose is to address, support, and strengthen student mental health and personal wellness (Fifolt, Gurley, Evans, 2026). These staff positions include two full-time social workers and a full-time mental health professional, who is also a

certified social worker. For MCAA, this represents a student-to-wellness staff ratio of approximately 1:116.

The School Social Work Association of America (SSWAA) recommends a ratio of one school social worker per 250 students (School Social Work Association of American, 2024). In its 2024 report, the SSWAA reported that no state meets this benchmark recommendation, with some states reporting significant disparities relative to the recommendation, including California (1:6,132), Texas (1:13,604), and Alabama (1:8,615) (School Social Work Association of America, 2024).

In addition to these full-time mental health professionals on staff, MCAA also employs two full-time academic counselors, Exceptional Education staff members, and a full-time nurse. Furthermore, MCAA partners with the JBS (Jefferson-Blount-St. Clair Counties) Mental Health Authority which, in Fall 2024, assigned a full-time mental health therapist, located full-time at MCAA. MCAA students and their families also have full access to the Magic City Wellness Center, a full-time medical and mental health clinic which is separate from MCAA but also operated by BAO.

Wellness suite

In several of our previous studies, MCAA students, faculty, and staff described the importance of the Wellness Suite in providing mental health support for students (Gurley, Fifolt, White, 2023a; Gurley, Fifolt, White2023b; Fifolt, Gurley, Evans2026). In addition to receiving counseling and support services from social workers, students who are experiencing stress or just having a challenging day can go to the Wellness Suite to simply pet one of the dogs or to meet personal needs (e.g., deodorant, other hygiene products) (Fifolt, Gurley, Evans, 2026). In a previous article, Kevin (pseudonym), an MCAA senior,

suggested that MCAA has “put student wellbeing in the top position where I think it belongs... Students are functioning better in environments that support them and accept them” (Gurley, Fifolt, White, 2023, p. 9). Similarly, reflecting on teachers’ responsiveness to student needs, Kevin noted that when a student needs a break from the classroom environment or just a moment to collect their thoughts or emotions, teachers allow students to “step out, go to the library, or go down to the Wellness Suite (or Sensory Room). “They understand, they let us go.” (Gurley, Fifolt, White, 2023b, pp. 10-11).

Researchers have suggested that school-based mental health interventions in secondary schools are effective at reducing anxiety and depression, especially when they are part of a comprehensive approach to student wellness (Guest et al., 2024; Zhang et al., 2023).

This may be particularly important for students with learning differences since youth with developmental disabilities, including ASD and intellectual disability, are at greater risk than their neurotypical peers of developing depression and suicidality (Cook et al., 2024; Pezzimenti et al., 2019).

Considering the escalating mental health crisis in the United States (Burnette et al., 2023), establishing protective and promotive factors like student-teacher relationships, school connectedness, and sense of community, can play a significant role in ensuring student wellness and life satisfaction (Cavioni et al., 2021).

MCAA has created a culture that fosters positive mental health by empowering students to ask for and receive the help they need. Further, MCAA normalizes students’ use of noise-cancelling headphones, comfortable clothing, fidgets, and other tools to help them manage sensory overload, reduce anxiety, and

create a more comfortable and predictable environment.

Conclusion

MCAA offers a model for inclusive, ethical education that prioritizes student wellness, dignity, and safety. Through intentional design choices, trauma-informed curricula, restorative discipline, and comprehensive mental health services, MCAA has created a school culture that is responsive to student needs without sacrificing academic rigor. These strategies are not only beneficial to LGBTQ+ youth and students with exceptionalities but also the broader student population by creating a more humane, affirming, and accessible learning environment.

Rather than treating diversity and inclusion as add-ons or special accommodations, MCAA embeds these values into the fabric of its school operations. As our observations demonstrated, the school's commitment to universal design, both physical and pedagogical, promotes school connectedness, emotional regulation, and academic engagement (AlRawi & AlKahtani, 2022; Khurana, 2022; Scheffler et al., 2019).

In doing so, MCAA challenges outdated models that equate equity with lowered

expectations or tradeoffs in academic quality. Instead, it shows that schools can be both rigorous and responsive, both structured and compassionate.

As K-12 schools across the United States grapple with mounting mental health challenges, persistent educational inequities, and the urgent need for inclusive practices, MCAA stands out as a beacon of what is possible when education systems are grounded in ethics and evidence.

Its approach is not merely aspirational, but also replicable. The strategies and practices implemented at MCAA provide a roadmap for school leaders, educators, policymakers, and mental health professionals seeking to transform schools into environments where all students feel safe, supported, and capable of success.

In short, MCAA is not just a haven for LGBTQ+ youth or neurodivergent students, it is a demonstration of what education can look like when human dignity is placed at the center of school design. By fostering an ecosystem where inclusion is the norm and not the exception, MCAA models the kind of school every student deserves.

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Statements and Declarations

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Declaration of Conflicting Interest

Prior to 2023, the authors had no conflict of interest to declare. However, the first author currently has a child who attends the Magic City Acceptance Academy, and she has a formal diagnosis of autism spectrum disorder.

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Rejuvenating Teacher Satisfaction: Collective Efficacy and Instructional Transformation

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Abstract

This mixed-methods study investigated how a district exclusive cohort-based graduate reading program cultivated collective efficacy and, in turn, shaped teachers' self-efficacy, instructional practices, and professional renewal. Twenty-four K–5 teachers completed a yearlong, job-embedded certification program intentionally aligned with district literacy priorities. Quantitative survey data showed increases in teachers' literacy knowledge, leadership confidence, and commitment to evidence-based instruction. Qualitative analyses of focus groups, reflections, and open-ended responses revealed seven themes, including strengthened professional identity, transformation of literacy practice, deeper theoretical understanding, and increased collective efficacy. Teachers also reported improvements in student engagement and literacy growth. Findings illustrate how district–university partnerships and cohort structures can cultivate collaborative learning, foster coherent instructional practices, and support sustainable systemwide improvement.

Key Words

collective efficacy, cohort models, professional development, job-embedded self-efficacy, student outcomes

Introduction

For decades, faculty in Kutztown University's Master of Education in Reading Program, with Reading Specialist certification, has prepared thousands of educators across Pennsylvania. The program has continually evolved in response to shifting participant needs, changing accreditation expectations, and emerging literacy research. Coursework has been aligned with International Literacy Association standards, transitioned to online delivery, and strengthened with research-based literacy practices and feedback from partner districts.

Yet the traditional structure, where candidates enroll individually represent widely varied school contexts and participate at different times, has made it difficult to cultivate collective efficacy. Although teacher self-efficacy can be achieved through traditional coursework, the most powerful impact comes when collective efficacy is promoted through a district wide cohort of aspiring literacy leaders.

This gap became increasingly visible as graduates reported implementing new practices in relative isolation, with limited opportunities for collaboration, feedback, or sustained professional dialogue. Their diverse school settings, from urban to suburban, public to private, made it difficult to maintain instructional momentum or engage in collaborative problem-solving. A new opportunity emerged when leaders from a nearby urban district requested support in preparing a cohort of Reading Specialists who could strengthen literacy instruction across all elementary and middle schools.

This invitation created the conditions to reconceptualize the certification program as a district-embedded cohort intentionally designed to cultivate collective efficacy, shared learning, and coherent instructional improvement.

The literature suggests that such an approach is well warranted. Teacher learning is most powerful when professional development moves beyond transmission-oriented workshops and courses toward job-embedded models that integrate theory, real-time application, and systematic inquiry. Drawing on Cochran-Smith and Lytle's (1999) framework of knowledge for, in, and of practice, Yendol-Hoppey and Dana (2020, 2023) emphasize that meaningful growth occurs when coursework, fieldwork, and reflection take place in context, allowing teachers to blend outside knowledge (research-based pedagogy, university expertise) with inside knowledge (local curricula, instructional routines, district assessments).

Although most PD models emphasize "knowledge for practice," instructional improvement is most robust when teachers can apply, investigate, and refine practices in the context of their everyday classroom work.

This conceptual grounding aligns with research on collective efficacy. Bandura's theoretical work, along with empirical studies by Goddard, Hoy, and Hoy (2000), demonstrates that when educators work toward common goals, engage in shared professional learning, and support one another's practice, student achievement improves. As Goddard et al. noted, schools with high collective efficacy encourage teachers to "act purposefully to enhance student learning" (p. 501).

Additional research affirms that strong teacher collaboration is associated with improved student outcomes (Goddard, Goddard, & Moran, 2007). Guided by this evidence, university faculty and district leaders redesigned the certification program as a cohesive, job-embedded model that integrated coursework, collaboration, and administrative

involvement to build collective efficacy and strengthen literacy practice across the district.

Given the documented link between collective efficacy, teacher motivation, and student learning, this study examined how a district-embedded, cohort-structured certification program shaped teachers' beliefs, instructional practices, and professional renewal. Specifically, we investigated whether participation in a collaborative cohort strengthened collective efficacy and whether increased efficacy supported changes in literacy instruction aligned with the science of reading, responsive teaching, and systemwide instructional coherence.

Using a mixed-methods design, we analyzed survey data, focus group transcripts, written reflections, and archival artifacts to understand how this cohort model influenced teacher learning in a district characterized by wide achievement gaps.

Methodology

Research design

This study employed a mixed-methods design to examine the effects of a district-based graduate reading certification program on teacher efficacy, instructional practice, and professional motivation.

Quantitative data provided descriptive evidence of changes in teachers' literacy-related beliefs and self-perceived competence, while qualitative data offered deeper insight into how teachers experienced collaborative learning, applied evidence-based strategies, and engaged with district literacy priorities. Integrating both forms of data allowed for a nuanced understanding of how the cohort model supported teacher learning and contributed to shifts in instructional practice.

Program context and design

Prior to implementation, university faculty

collaborated with district and school-based administrators to develop an instructional model aligned with district literacy goals, instructional routines, and available resources.

The partnership ensured coherence between coursework and district priorities, while ongoing communication with central office leaders supported consistent implementation.

The redesigned certification program consisted of seven sequential courses delivered over the academic year. Courses were adapted to the district context, enabling teachers to apply theory to practice through structured collaboration, lesson development, and peer problem-solving. District curriculum materials, assessment tools, and instructional resources were embedded into coursework, reinforcing coherence between university instruction and classroom practice.

To reduce barriers to participation, coursework was offered on-site immediately after school or in online formats. Additionally, district professional development days were allocated for course delivery.

These scheduling decisions minimized additional workload beyond the school day and increased accessibility for teachers with family or personal obligations.

Throughout the program, faculty conducted classroom learning walks to observe implementation of literacy practices, provide coaching, and strengthen connections between coursework and teaching.

A midpoint reflection session invited teachers to share successes, identify challenges, and provide feedback on the program. This reflective structure served as a formative checkpoint, deepening learning and enhancing instructional alignment across the cohort.

Participants

The study included 24 teachers representing 15 school buildings—13 elementary schools and 2 middle schools—in a diverse urban district. Participants included three kindergarten teachers, eight first-grade teachers, four second-grade teachers, two third-grade teachers, three fourth-grade teachers, three fifth-grade teachers, and one K–4 resource teacher. All participants completed the full district-embedded certification program, and no attrition occurred. All teachers provided informed consent for participation in the study.

Data collection

Multiple data sources were used to understand the program's impact:

- Pre- and post-program surveys and open-ended responses capturing teacher perceptions of literacy knowledge, leadership confidence, collaboration, and instructional priorities;
- Mid-program discussions documenting formative reflections on learning and implementation; and
- A post-program focus group gathering summative impressions of the cohort experience.

The multi-source dataset supported triangulation and strengthened the study's trustworthiness.

Results

Quantitative findings

Across the eight survey domains, post-program mean scores were equal to or higher than pre-program scores, indicating positive shifts in teachers' literacy-related beliefs, instructional

priorities, and sense of leadership. Teachers reported stronger alignment between their beliefs about professional development and their instructional practices (Pre: $M = 3.00$, $SD = 0.50$; Post: $M = 3.42$, $SD = 0.64$), greater confidence in their roles as literacy leaders, and increased understanding of evidence-based literacy instruction.

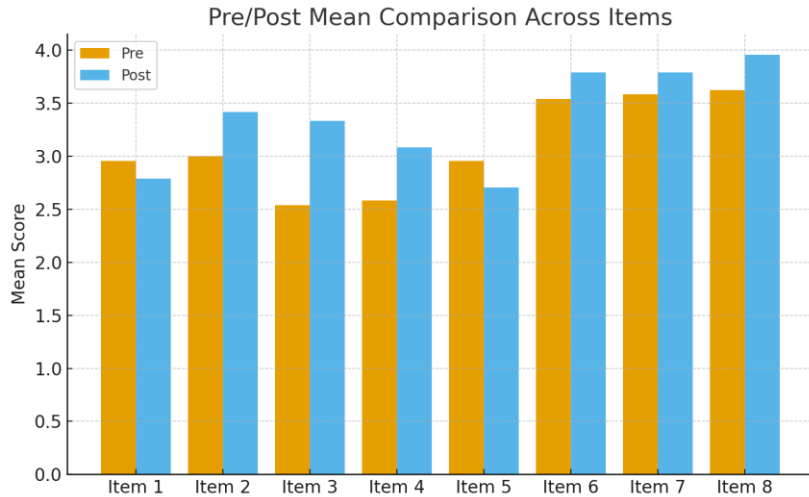
Teachers also endorsed the heightened importance of integrating independent reading and writing into daily instruction. For example, beliefs regarding the importance of writing instruction increased from $M = 3.63$ ($SD = 0.63$) to $M = 3.96$ ($SD = 0.20$).

Because individual respondents could not be matched across administrations, inferential statistical tests were not possible; however, descriptive trends show consistent upward movement across most domains. These findings correspond with research showing that district-embedded professional development strengthens teacher self-efficacy, instructional coherence, and implementation of evidence-based practices (Desimone & Garet, 2015; Darling-Hammond et al., 2017).

Notably, one item—perceived importance of allocating extended time for standardized test preparation—decreased slightly post-program. This shift may reflect teachers' recalibrated instructional priorities, favoring research-aligned literacy practices over test-driven approaches, consistent with Afflerbach's (2022) caution against overemphasizing test preparation at the expense of comprehensive literacy development.

Table 1

Pre/Post Mean Comparison Across Items



Overall, the quantitative findings suggest that the cohort model contributed to meaningful shifts in teacher confidence, knowledge, and literacy-related beliefs.

Qualitative findings

Focus group transcripts, open-ended survey responses and the focus group discussion were analyzed using thematic analysis (Braun & Clarke, 2006). The research team, consisting of two coders, engaged in repeated readings of the transcripts to gain familiarity with the data (Creswell & Poth, 2018). Initial open codes were generated inductively, with *in vivo* codes drawn directly from participants' language (Saldaña, 2021). Each coder independently identified *in vivo* codes before meeting to reach consensus.

Next, the coders worked independently to cluster these codes into broader categories through second-cycle axial coding (Strauss & Corbin, 1998). Afterward, they met again to

compare results and finalize consensus on the categories. From these categories, the researchers developed overarching themes that represented both shared and divergent experiences of teachers participating in the district-based cohort model.

To enhance trustworthiness, two participants were invited to conduct member checking. They were given access to the *in vivo* codes, category groupings, and emergent themes, and asked to review and indicate agreement with the analysis. Both participants confirmed 100% agreement with the identified groupings and themes.

Once initial themes were developed within each dataset, the researchers engaged in a cross-data comparison process. Codes and categories from both sources were reviewed side by side to identify areas of convergence, complementarity, and divergence. Themes that overlapped conceptually were merged into

unified categories, while those unique to a particular source were retained as subthemes. Through iterative discussion, a shared thematic framework was finalized, representing integrated insights across both data sources. This process allowed the survey data to provide confirmatory evidence and breadth, while the focus group data deepened understanding through illustrative examples and elaboration.

The final themes therefore reflect a synthesis of patterns evident across both forms of qualitative evidence.

Thematic analysis across all qualitative datasets yielded seven integrated themes that represent teachers' collective experiences in the district-based literacy cohort. Open-ended survey responses provided broad confirmation of recurring patterns, while focus group data offered elaboration and depth. Together, these themes illustrate how contextualized professional learning promoted instructional renewal, collaboration, and sustained impact on teaching and learning.

Integrated themes

Seven themes emerged from the analysis, illustrating how contextualized professional learning promoted instructional renewal, collaboration, and sustained impact on teaching and learning.

Theme 1: Professional Renewal and Reignited Passion for Teaching

Teachers described the cohort experience as a professional "reset" that revived their commitment to teaching. Participants noted feeling reenergized, supported, and intellectually challenged. Survey responses highlighted motivations for joining, such as professional growth and graduate credentialing, while focus groups expanded this into emotional and intellectual rejuvenation.

The program fostered both pragmatic and affective renewal among educators. As one participant described, "It was almost like we were student teaching all over again—trying new techniques, sharing ideas, supporting one another." This finding is consistent with prior research indicating that teachers' sense of belonging within a professional community sustains motivation and commitment to instructional improvement (Goddard, Hoy, & Hoy, 2004).

Theme 2: Transformation of Instructional Literacy Practices

Participants reported substantial changes in classroom literacy instruction. They adopted explicit, evidence-based strategies; integrated reading, writing, and oral language; and applied new frameworks such as the ISA lesson template. Teachers described greater intentionality, coherence, and instructional precision, aligning with survey descriptions of "meaningful instruction" as integrated, student-centered literacy experiences.

Theme 3: Deepened Theoretical Understanding and Commitment to the Science of Reading

The program strengthened teachers' theoretical understanding of literacy development, including phonological awareness, phonics, fluency, comprehension, and writing. Participants emphasized gaining clarity in the "why" behind instruction and reported renewed adherence to the science of reading (Graham & Harris, 2020; Duke, Ward, & Pearson, 2021). Survey responses framed literacy as both foundational and equitable, while focus groups illustrated how this understanding translated into practice.

Theme 4: Collective Professional Learning and Supportive Cohort Community

Cross-school collaboration reduced

professional isolation and strengthened teachers' sense of belonging. Participants valued working toward shared goals and learning alongside peers facing similar challenges.

The cohort served as a community of practice that enhanced problem-solving, encouraged risk-taking, and fostered trust (Lave & Wenger, 1991). Focus group narratives vividly described the emotional and instructional benefits of this networked community.

Theme 5: Leadership Development and Collective Efficacy

Teachers increasingly saw themselves as literacy leaders capable of influencing schoolwide practice. They supported colleagues, shared expertise, and felt empowered to advocate for effective instruction. Surveys suggested that teachers wanted to enhance their impact, and focus group data provided evidence of leadership, mentoring, and initiative-taking. These experiences reflect Bandura's (1997) concept of collective efficacy, in which shared action strengthens professional agency.

Theme 6: Student Engagement and Literacy Growth

Teachers attributed observable student gains to their professional learning. Students demonstrated increased writing stamina, stronger reading comprehension, and deeper engagement with literacy activities. Survey data referenced assessment use and engagement as evidence of meaningful instruction, while focus group narratives supplied rich examples of improved student outcomes and joy in literacy learning. Although formal student data were not available, teachers' accounts suggested that instructional shifts contributed to meaningful improvements in student achievement.

Theme 7: Conditions Necessary for Sustaining Change

Participants identified structural supports—principal involvement, protected collaboration time, and alignment with district initiatives—as essential for maintaining progress. Teachers emphasized that administrative visibility and engagement would further strengthen program outcomes. This emphasis on leadership mirrors research indicating that school administrators play a critical role in sustaining teacher learning and reform implementation (Leithwood et al., 2020).

Triangulation and Integrated Summary of Findings

When considered together, the four data sources provide converging evidence that the cohort-based model functioned as both a professional learning community and a catalyst for educational renewal.

Quantitative improvements in teachers' confidence and literacy knowledge were mirrored in qualitative accounts of motivation, collaboration, and instructional transformation. Through shared learning experiences, teachers developed a collective sense of efficacy that fueled professional enthusiasm and translated into improved instructional practices and student literacy growth. In essence, the cohort model demonstrated that when teacher learning is situated within a collaborative, research-informed, contextually relevant framework, it cultivates the collective capacity necessary to sustain meaningful instructional change.

Taken together, the open-ended survey responses, reflection data, and focus group findings illustrate that the graduate reading certification program strengthened teachers' sense of professional efficacy and deepened their knowledge of research-based practices.

For example, when reflecting on a research-based lesson format introduced in the program, one teacher shared: “The ISA lesson plan template was the best thing that I learned. This is being dramatic, but the best thing that has ever happened to me because it gave me something to follow for those kids that was explicit and direct and meaningful to them.” This sense of clarity and structure was echoed by another teacher, who explained: “This is the very first year that I felt like I had a really good, clear picture of how to effectively teach my kids to become writers.”

These comments mirror the quantitative gains in teachers’ confidence and highlight their increased ability to implement and reflect on research-based literacy strategies. Teachers described more deliberate use of instructional frameworks and expressed greater confidence in their roles as literacy leaders.

At the same time, some beliefs and practices—such as a commitment to independent reading and writing—remained consistently high throughout the program, suggesting these values were strongly held prior to participation. The combination of stable commitments and emerging growth indicates that the program reinforced existing strengths while also fostering new areas of professional development.

Teachers also linked their professional growth to noticeable improvements in student outcomes. Although quantitative student data were unavailable (due to district restrictions), qualitative reflections suggested that instructional shifts contributed to measurable learning gains.

As one teacher noted: “Their accuracy and their retell growth was amazing.” Another observed: “We saw the same thing, a lot of growth in writing.” Perhaps most strikingly, a teacher recounted: “So my principal

commented when she looked at that data, ‘Wow, you could see there’s a lot of growth going on.’”

Together, these reflections suggest that the program not only shaped teachers’ professional practice but also contributed to meaningful improvements in student achievement, as recognized by both teachers and school leaders.

Findings across quantitative and qualitative data sources collectively illustrate that the district-based cohort model fostered a powerful cycle of teacher learning, collective efficacy, and professional renewal.

Integration of survey data, open-ended responses, midpoint reflections, and focus group transcripts revealed a consistent trajectory: as teachers deepened their understanding of evidence-based literacy practices and engaged collaboratively with colleagues, their professional confidence and motivation increased, leading to measurable growth in both instructional quality and student literacy engagement.

This finding suggests districts would benefit more from engaging teachers in cohort-based advanced credentialing programs than isolated programming, which seldom fosters the collaborative culture and distributed leadership structures that drive lasting instructional improvement across schools.

Discussion

If collective bargaining agreements require districts to reimburse teachers for graduate coursework, then districts have a unique opportunity to maximize the return on this investment. Rather than leaving teachers to select random courses that may not align with district priorities or classroom realities, school leaders can intentionally support participation

in opportunities that bring educators together in shared learning.

By organizing district-based cohorts, teachers not only benefit from financial reimbursement but also from the collaborative power of working alongside colleagues, administrators, and instructional specialists who understand the specific context in which they teach. This structure allows immediate application of theory to practice, ongoing reflection, and continuous refinement of instructional strategies supported and institutionalized within the district.

Ultimately, district-based graduate programs can transform professional learning from an individual obligation into a collective endeavor that strengthens teacher practice, fosters professional efficacy, and advances district goals.

When coursework is purposefully aligned with district initiatives—such as literacy improvement or the science of reading—teachers are better equipped to implement evidence-based practices, administrators are better positioned to support and monitor change, and students benefit from more coherent and consistent instruction.

In short, if districts are already investing in teacher graduate education, structuring these opportunities collaboratively and contextually ensures the investment yields the highest possible impact: empowered teachers, aligned practices, and improved student outcomes.

The findings of this study highlight how a district-based cohort model of graduate coursework influenced teachers' professional relationships, instructional practices, and beliefs about literacy. Consistent with prior research on teacher professional learning, the cohort model fostered collaboration, renewed professional identity, and supported student-

centered literacy practices (Cochran-Smith & Lytle, 1999; Dana & Yendol-Hoppey, 2020, 2023; Desimone, 2009).

First, teachers emphasized the significance of professional networks that developed across schools. This finding affirms Lave and Wenger's (1991) theory of communities of practice, which suggests that shared learning enhances professional identity and collective efficacy.

The cohort allowed teachers to transcend structural isolation across the district, reinforcing the importance of collaboration in sustaining instructional improvement.

Second, the cohort experience reignited instructional passion and reflective practice, particularly among veteran teachers. This reflects Lieberman and Mace's (2010) findings and aligns with scholarship demonstrating that collaborative, inquiry-oriented professional learning strengthens teacher identity, motivation, and efficacy (Cochran-Smith & Lytle, 1999; Dana & Yendol-Hoppey, 2020, 2023; Goddard, Hoy, & Hoy, 2000).

Teachers described the program as a professional "reset," positioning them to take risks, innovate, and lead within their schools. As a result, teachers felt revitalized, retooled, and supported—an increase in self-efficacy correlated with teacher retention and professional value.

Third, the incorporation of district materials and authentic literacy practices contributed to enhanced student engagement and growth. The emphasis on writing, academic journals, and authentic reading tasks aligns with research on effective literacy instruction (Graham & Perin, 2007; Duke, Ward, & Pearson, 2021). Teachers' accounts suggest that when coursework is theoretically grounded and practically relevant, it produces

meaningful change in classroom practice and student learning.

Finally, teachers noted the value of district alignment and administrative involvement. While coursework was designed to connect with district resources, participants suggested that principal engagement would further strengthen program impact. This recommendation reflects prior research indicating that school leadership plays a critical role in sustaining teacher learning and reform implementation (Leithwood et al., 2020).

Limitations

Several limitations should be considered when interpreting these findings.

First, the data relied heavily on teacher self-report through surveys, reflections, and focus groups. These perceptions may have been influenced by self-report bias, with participants potentially overstating growth or aligning reflections with perceived program expectations. Without additional data sources such as systematic classroom observations or standardized student outcomes, these perceptions cannot be independently verified.

Second, the study lacked a comparison group of teachers who completed a traditional, non-district-based certification program. The absence of a control group limits the ability to attribute observed changes in teacher beliefs and practices solely to the cohort model. Future research using quasi-experimental or mixed-methods designs could strengthen causal inferences.

Third, the researchers served dual roles as course instructors and program evaluators. Although steps were taken to ensure analytic rigor and consensus coding, this dual role may have introduced bias in interpretation. Participants may also have felt pressure to provide favorable feedback given the power

dynamics inherent in instructor–student relationships.

Fourth, the inability to match pre- and post-survey responses restricted the quantitative analysis to descriptive statistics. More robust analytic techniques will be possible in future work if unique identifiers are used to link responses across time.

Finally, the findings may not be generalizable beyond the district context in which the study occurred. Voluntary participation raises the possibility of selection bias, as teachers who joined the cohort may have been more motivated or professionally engaged than their peers.

Additionally, some positive effects may reflect a Hawthorne effect, wherein participants' awareness of being studied influenced their behavior or attitudes.

Conclusion

The district-based cohort model extended beyond individual teacher learning to foster shared professional identity, collective efficacy, and improved instructional coherence across schools. By situating graduate coursework within the district context, the program strengthened relationships, supported evidence-based literacy practices, and contributed to perceived improvements in student literacy development.

Findings from this study demonstrate that the district-based cohort model uniquely engaged all three forms of teacher knowledge: **for, in, and of practice**, resulting in changes to instructional decision-making, professional identity, and cross-school collaboration.

Coursework provided a coherent foundation of research-based knowledge *for* practice. In addition, job-embedded tasks, learning walks, and real-time application

supported the construction of knowledge *in* practice. Collaborative reflection sessions and inquiry-oriented discussions further enabled teachers to generate knowledge *of* practice, extending learning beyond individual classrooms to influence school- and district-level coherence.

By intentionally braiding together outside knowledge from university partners and inside knowledge grounded in district context, the cohort created a professional learning environment that few traditional PD structures achieve.

These findings underscore the potential of embedded cohort models to strengthen instructional practice, build professional

networks, and contribute to lasting systemwide improvement.

For districts seeking to maximize the impact of required coursework reimbursement, collaborative cohort models offer a powerful pathway. When coursework aligns with district goals, provides authentic and applicable learning experiences, and is supported by administrative engagement, the result is a professional learning community capable of sustaining meaningful instructional change.

The findings suggest that strategically designed district–university partnerships can build system-wide capacity and support long-term improvement in literacy teaching and learning.

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