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Emerging Issues and Innovations in Public PK-12 Education: Implications for Strategic Planning

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Naff, D., Gwyn, L., Gatty, F., Willging, T., Farhana, M., Flynn, J., Justus-Smith, C., Samuel, J., Campbell, A., Cross, C., Nervil, J., & Schad, M. (2023). Emerging issues and innovations in public, PK-12 education: Implications for strategic planning. Richmond, VA: Metropolitan Educational Research Consortium.

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School of Education

EMERGING ISSUES AND INNOVATIONS IN PUBLIC PK-12 EDUCATION

IMPLICATIONS FOR STRATEGIC PLANNING

a MERC research report

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EMERGING ISSUES AND INNOVATIONS IN PUBLIC PK-12 EDUCATION: IMPLICATIONS FOR STRATEGIC PLANNING

David Naff, Lisa Gwyn, Fred Gatty, Tara Willging, Marzia Farhana, Jill Flynn, Cammie Justus-Smith, Jean Samuel, Alexander Campell, Ciana Cross, Jamie Nervil, and Michael Schad

December 2023

PK-12 school districts across the country routinely engage in strategic planning to help them set overarching focus or priority areas, establish aligned goals, and determine strategies for addressing them.[1] Strategic plans are not the same thing as a school board policy, but they do inform the direction of a school district and offer a public-facing accountability structure that articulates what the community perceives as the key priorities for their schools as well as the specific steps that will be taken in support of them.[2] The United States Department of Education does not impose a federal mandate for states and their associated school districts to have strategic plans,[3] but it does establish its national strategic plan.[4] Thus, oversight of school district strategic planning is largely up to individual states.

Code of Virginia § 22.1-253.13:6 states that the Virginia Board of Education shall adopt a statewide plan[5] that guides the direction of public education in the Commonwealth. Additionally, it states that "Each local school board shall adopt a division wide[6] comprehensive, unified, long-range plan based on data collection, an analysis of the data, and how the data will be utilized to improve classroom instruction and student achievement." At the state and division level, there is a clear expectation that such plans are developed with community input and include systematic collection and analysis of data that indicate progress toward articulated goals. There is also a requirement for state and local school boards to revisit their strategic plans every two years and adopt any necessary revisions, although most plans in Virginia have a five-year span. This suggests that effective strategic plans need to have enough premonition to account for the anticipated needs and priorities of a school division over an extended period while still being adaptive to

[1] DeMaria & Potts (2023)
[2] National School Board Association (2022)
[3] Graves (2023)
[4] The latest iteration focuses on promoting equity, diversifying the educator workforce, and ensuring postsecondary education access (among other priorities).
[5] The VBOE Comprehensive Plan is set to expire in 2023, with current priorities focused on providing a high quality and effective learning environment for students, increasing recruitment and retention of skilled educators, and successful implementation of the Profile of a Virginia Graduate.
[6] School districts are referred to as "divisions" in Virginia.

significant events and changes that have the potential to impact the students, families, and staff members that they serve.

The past five years have brought consequential changes to public education, perhaps most notably due to the impacts of the COVID-19 pandemic that led to rapid closures of schools for in-person instruction and inconsistent approaches to reopening them. The years that have followed have been marked by amplified challenges related to academic achievement, chronic absenteeism, bullying, and mental health, cybersecurity threats, and the rise of artificial intelligence (AI), among other issues. As many school divisions across Virginia engage in their next round of strategic planning, it will be necessary to establish priorities, goals, and strategies that address these emerging and enduring issues in a post-pandemic context and to be prepared to adapt to new challenges that surface within the five-year window that they are intended to guide. To support these efforts, this research and policy brief offers a summary of recent peer-reviewed research related to strategic planning in PK-12 settings, an analysis of school division strategic plans from across the Commonwealth and country, and a review of trends that reveal emerging issues in public education. It closes with key takeaways and recommendations to consider when divisions work to establish a new strategic plan in light of the evidence presented in this brief.

How do PK-12 school systems engage in strategic planning?

How are they developed, and what are the key elements?

An efficient strategic plan helps articulate the objectives and guiding principles of a school district.[7] Although a perfect strategic plan does not exist, the development of a good plan can have similar elements, such as a **mission and vision statement** for the school district, analysis of **relevant data**, a **clear framework**, and prioritized **strategies and actions**.[8] While strategic planning is often a core responsibility of school and district leadership, research and policy both advocate that developing a high-quality plan is best done in close partnership with the school community, as they know the school's strengths and weaknesses and how best to design a plan that focuses on improving relevant outcomes, academic and otherwise.[9] By engaging staff in the planning process, diverse viewpoints are heard, and the plan can be strengthened and enriched. Additionally, school strategic plans are developed with an emphasis on how they will be implemented, with roles and responsibilities assigned, and with a clear plan for progress monitoring.[10]

[7] Although districts are referred to as "divisions" in Virginia, we refer to them as "districts" throughout the rest of the report to reflect what is described in research literature and to be inclusive of US school districts in strategic plan analysis.
[8] DeMaria & Potts (2023)
[9] Carvalho et al. (2021)
[10] DeMaria & Potts (2023)

Effective strategic plans often include guidance for **pedagogy or instruction**, a positive **school climate**, and an articulated **method for tracking and assessing progress** in relation to articulated strategies, goals, and focus areas. [11] Since the COVID-19 pandemic, there has been a shift in thinking about strategic plans. While school districts initially engaged in shorter-term planning in response to the crisis at hand, they are now moving back towards long-term planning.[12] Supporting educators, emphasizing the social and emotional dynamics of education, and focusing on equity-minded strategies are some examples of this future-oriented strategic planning. [13] Whether thinking short- or long-term, strategic plans must provide a clear direction that supports inclusive and equitable education.[14]

How do they engage their stakeholders?

PK-12 school districts can engage a variety of stakeholders in the strategic planning process to **foster a comprehensive understanding of educational goals and garner support** for effective implementation.[15] Stakeholder engagement and trust-building are foundational to success within the strategic planning process. Forming a "coalition of the willing" who will join together to ensure effective implementation can be done through methods such as **public surveys, focus groups, and peer group meetings**.[16] Communication plays a crucial role in engaging stakeholders, with a well-articulated plan helping promote the vision and goals, while **keeping stakeholders informed of progress**.

District leaders also play a pivotal role in encouraging active participation and collaboration among staff when formulating strategic plans.[17] This involves creating a collaborative culture and professional learning groups to develop effective problem-solving skills as a whole community. Despite the critical role of school leaders, successful engagement requires **whole-school participation** in planning and implementing strategic plans.[18] Research emphasizes the role of these professional learning communities in enhancing data literacy among teachers and focusing on collaboration and iterative problem-solving, which can be used to engage stakeholders in the strategic planning and implementation process.[19]

Similarly, within the school improvement process, principals serve a critical role, but shared input is essential, shifting the leader's task from individual decision-making to developing collaborative practices that can harness school and district-wide wisdom.[20] The **importance of diversity within school improvement teams** contributes to higher-quality

[11] DeMatthews & Wang (2023)
[12] Edwards & Magill (2022)
[13] Edwards & Magill (2022)
[14] Mahardhika & Raharja (2023)
[15] DeMaria & Potts (2023)
[16] DeMaria & Potts (2023)
[17] Carvalho et al. (2021)
[18] Carvalho et al. (2021); DeMatthews & Wang (2023)
[19] Hegestedt et al. (2023)
[20] DeMatthews & Wang (2023)

decision-making.[21] Furthermore, teachers and leaders are encouraged to be transformational intellectuals, addressing real social concerns in meaningful ways.[22]

A stakeholder-driven strategic planning process can involve ten stages, including defining organizational purpose and values, identifying strengths and weaknesses, and creating action plans.[23] This process requires careful consideration of stakeholder selection, potential conflicts, and obstacles to implementation, emphasizing collaboration with school institutions, leaders, staff, and students.[24] **Ultimately, ownership and responsibility for the process should be shared with teachers, parents, and students, highlighting the importance of collaboration in the planning process**.[25]

How do they make decisions about what to include?

Deciding what to include in a school district strategic plan often includes multiple factors.

- It is important for school districts to begin with a **careful review of data related to their students' academic, social, emotional, and behavioral outcomes** to understand the current landscape of needs before establishing a strategic plan to help address them.[26]
- Strategic planning conversations often include a **reflection on the current strengths and weaknesses of the school district** as well as the opportunities and risks associated with different priorities and goals when establishing them.[27]
- **Conversations with stakeholders help to establish consensus ideas** about what is of importance to the community, helping to ensure that a strategic plan is not overly representative of the perspectives of individual administrators who help to create and implement it.[28]
- Local school districts may **consider the strategic plan and corresponding policies that exist at the state level** when creating their own. This speaks to the importance of state boards of education establishing clear strategic plans that offer a vision and model infrastructure while still allowing sufficient space for localized decision-making that fits each district and the communities that they serve.[29]
- **Current events can help drive decision-making about what to include in a strategic plan**. For example, the racial justice movement in the summer of 2020 after the murder of George Floyd led school districts to increasingly focus on creating environments where students from minoritized racial and ethnic backgrounds can feel a sense of security and belonging.[30]

[21] DeMatthews & Wang (2023)
[22] Edwards & Magill (2022)
[23] Mahardhika & Raharja (2023)
[24] Mahardhika & Raharja (2023)
[25] Prenger et al. (2022)
[26] DeMaria & Potts (2023)
[27] Mahardhika & Raharja (2023)
[28] DeMatthews & Wang (2023)
[29] Graves (2023)
[30] Edwards & Magill (2022)

What are typical topics or focus areas?

While strategic plans are individualized to meet the needs of each school, there are some common elements that schools include to support increased student achievement, create a climate of trust, and contribute to a shared mission. Typical areas of focus include:

- **equity and diversity policies** that improve work environments for teachers, especially those of color[31]
- plan components that assist in **creating a high-quality workforce**[32]
- **enhancements to current systems**, including updating the transparency and efficiency of data systems[33]
- **resource allocation** that includes planning and assessment guidelines, along with tools and plans for student accomplishment, resources to guide students' learning, and access to a rich and meaningful curriculum[34]
- an emphasis on **students' mental and physical health**[35]
- initiatives related to **professional development** opportunities for staff[36]
- changes related to **technology use** (particularly in a post-COVID context)[37]

While there is no one right way to create a strategic plan, schools usually concentrate on medium- to long-term objectives, set policies and guidelines, and define expectations and accountability. While the focus areas may differ from school to school, strategic planning is essential to bringing about constructive change.

How do they gather evidence about progress or impact related to their strategic plan?

School districts need to employ a variety of methods to monitor progress and gather evidence related to strategic plans.

- A well-defined **monitoring process** will include systems for data collection, regular reporting on implementation actions, and discussion about challenges or barriers.[38]
- **Data collection** can involve methods such as interviews, stakeholder surveys, document review, observations, and internal reviews of existing data.[39]
- The strategic planning process, when done in a way that coordinates expertise and resources over a long period, will need to involve **measurement and evaluation** to ensure that strategies are implemented that achieve the district's goals.[40]

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[31] Edwards & Magill (2022)
[32] DeMaria & Potts (2023)
[33] DeMaria & Potts (2023)
[34] Edwards & Magill (2022)
[35] DeMaria & Potts (2023)
[36] Koh et al., (2023)
[37] Edwards & Magill (2022)
[38] DeMaria & Potts (2023)
[39] Hegestedt et al. (2023); Mahardhika & Raharja (2023)
[40] Mahardhika & Raharja (2023)

- Innovations in schools are sustainable when they become routine within organizational practice, **seamlessly integrated into daily routines** without being perceived as new or additional.[41]
- Change in schools requires adaptability from designers and implementers to **ensure the sustainability of improvement initiatives.**[42]
- As with the strategic plan, **follow-up assessments of innovative system changes** are crucial in order to help evaluate and potentially maintain the improved teaching quality or evidence-based curriculum components. Practices across school sites can include working in teams, continuous professional development, the development of professional learning communities, adaptability, a culture that welcomes change, and data collection and feedback.[43]

In order to understand the progress and impact of strategic plans, and the innovative strategies they promote, developing routines, and evaluation plans is essential to respond to stakeholder feedback and improve processes.

How do they articulate strategies for implementation?

Not all school stakeholders share the same knowledge of the strategic planning and implementation process, so the articulation of strategies is not always easy.[44] It is recommended, then, that school leaders start implementing small projects in their school plans that are easy to understand and show results quickly. This simpler way of analyzing and initiating parts of the plan can make it easier for all stakeholders to gain collective understanding before more detailed methods are introduced.[45] Common ways that strategies can be articulated include:

- highlighting the **shared definitions** of the core components[46] and **establishing parameters** that will be used to gauge how well the goals are being met[47]
- clearly communicating to personnel the **which strategies are of highest priority**[48] and explaining strategies in terms of **possible courses of action**[49]
- stressing collaboration, knowledge sharing, and trust[50]
- providing school instructional staff with a **thorough operational framework** during the planning, execution, and assessment phases to offer guidance and tactics for the ongoing execution of school improvement projects[51]

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[41] Prenger et al. (2022)
[42] Koh et al., (2023)
[43] Mahardhika & Raharja (2023)
[44] Edwards & Magill (2022)
[45] Carvalho et al. (2021)
[46] Prenger et al. (2022)
[47] Hegestedt et al. (2023)
[48] Prenger et al. (2022)
[49] Carvalho et al. (2021)
[50] Prenger et al. (2022)
[51] Koh et al., (2023)

A crucial step in the planning and implementation process is transitioning from planning to practice, which needs to be communicated effectively.[52] While school districts might identify relevant strategies differently, it is imperative that all members of the community share a common understanding of the core components. A clear articulation of the plan can support the alignment of school policy and program goals.[53]

How do they engage in strategic planning in times of crisis or rapid change?

During times of crisis or rapid change, school boards engage in strategic planning by adopting adaptive measures.

- The strategic plan should be considered a **living document**, allowing for course corrections in response to changing circumstances or emerging issues.[54]
- The board should follow an **inclusive and transparent process for updates**, distinguishing between the need for modifications and the need for a new strategic analysis of the district's needs.[55]
- Recognizing the newness of the workforce, systems should be designed to meet their needs in terms of curricular education and professional development, aligning with the evolving needs of students.[56]
- Emphasizing the importance of social and emotional well-being, systems of support should be designed with a **central focus on caring for both students and teachers**.[57]

A transformative period in the educational landscape prompts a need to reevaluate values, resources, and stakeholder adaptation, emphasizing the need to go beyond traditional policies in order to best support students, staff, and families.

[52] Eddy et al. (2021)
[53] Prenger et al. (2022)
[54] DeMaria & Potts (2023)
[55] DeMaria & Potts (2023)
[56] Edwards & Magill (2022)
[57] Edwards & Magill (2022)

What are the priorities, goals, and strategies in strategic plans across Virginia and the country?

To explore the content that is typically included in strategic plans, MERC researchers downloaded plans from 132 school divisions across Virginia as well as the top 25 largest school districts in the country. From that list, we focused on plans that expired in 2026 or later to focus on districts that had more recently updated their plans. This included a total of 68 school districts (61 in Virginia and seven[58] across the US).

US school districts represented in the analysis included: Los Angeles Unified School District (CA), Clark County School District (NV), Houston Independent School District (TX), Hillsborough County Public Schools (FL), Wake County Schools (NC), Prince George's County Public Schools (MD), and the School District of Philadelphia (PA). They averaged 244,780 students, 15,330 teachers, and 375 schools and primarily represented urban and suburban contexts.

Virginia school divisions represented in the analysis averaged 10,485 students, ranging from 178,000 (Fairfax County Public Schools) to 474 (Lexington City Public Schools). They also averaged 774 teachers and 16 schools across urban, rural, and suburban contexts.

From this list of school districts in Virginia and across the country, MERC researchers identified the overall focus or priority areas (the broadest aspect of the strategic plans) and the specific goals that align with those focus or priority areas. We then reviewed the strategies listed in the plans and identified those that researchers determined to be particularly prominent or innovative. Researchers developed a separate codebook to analyze each of these three components of the strategic plans and manually coded them in teams to determine themes that emerged. Additionally, researchers utilized the artificial intelligence (AI) large language model ChatGPT to determine themes and trends that those systems detected in the data for triangulating purposes.

Focus or Priority Area Themes

Focus or priority areas represent the broadest category by which district strategic plans are organized. There were typically fewer focus or priority areas than goals or strategies to address them. The following table depicts the coding frequencies for focus or priority areas based on the review of 61 VA and seven US school district strategic plans.

[58] Note that Fairfax County Public Schools in Virginia was one of the largest in the country, but because it was already represented in the Virginia dataset, it was removed from the US dataset.

Table 1. Focus or Priority Area Themes

Focus or Priority Area	%
Academics: Anything related to academic achievement or growth	100%
Staff: Recruiting, retaining, or training quality staff	69.1%
Relationships: Relationship building or outreach with families or communities	62.3%
Social, Physical, or Emotional Wellness: Creating safe and healthy environments	53.6%
Facilities or Operations: Resources, building maintenance, or transportation	44.9%
DEI: Promotion of diverse, equitable, and inclusive environments in schools	27.9%
Technology: Use or improvement of technology for instruction	23.5%
College, Career, and Life Readiness: Preparation for post-graduation	20.6%

Within school districts' focus or priority areas (the broadest aspect of the strategic plan), the most prominent category was related to academics, represented in 100% of school district plans. Language related to academics often focused on descriptors like "achievement," "student success," "learning," and "assessment." It was also represented by districts focusing on "accreditation." Relationship building, staff recruitment and retention, and safety or well-being were also prominently featured as broad categories within strategic plans. Diversity, equity, and inclusion (DEI) were represented in the focus areas of about one in four school districts. College, career, and life readiness were made an explicit focus area in only about one in five districts. AI analysis of focus areas indicated that the most common themes were related to academic achievement, equity and inclusivity, community and family engagement, professional development and talent management, operational efficiency, and continuous improvement.

Goal Themes

Within the broad focus or priority areas, strategic plans also identified specific goals by which they could measure progress. The following table depicts coding frequencies for goals within the 68 reviewed plans.

Table 2. Goal Themes

Goal	%
Academic Performance: Supporting achievement or growth across all subjects	100
Relationships: Communication and connection with families and the community	67.7%
Social, Physical, or Emotional Wellness: Creating safe and healthy environments	64.7%
Innovative Teaching: Promoting dynamic pedagogy (with or without technology)	58.8%
College, Career, and Life Readiness: Preparation for post-graduation	47.1%
DEI: Creating environments that promote diversity, equity, and inclusion	42.6%
Partnerships: With business, higher education, and community agencies	39.7%
Professional Development: Staff training	38.2%
Staff: Recruiting or retaining quality staff	36.8%
Technology: Incorporating technology into schools to meet student needs	33.8%
5Cs: Critical thinking, communication, collaboration, creativity, or citizenship[59]	25.0%

Similar to the broad focus or priority areas, 100% of districts included goals that directly addressed academic performance in some way. Many specifically referenced meeting Standards of Learning (SOL) score benchmarks in Virginia or maintaining accreditation for schools as related metrics. Districts were more likely to articulate specific goals related to social, physical, or emotional wellness (64.7% of districts) than they were to have them be one of their broader focus areas (53.6%). While recruiting, retaining, and training high-quality staff was a broad focus area in 69.1% of districts, only 36.8% articulated specific goals related to recruitment or retention (only one had a goal related to diversifying its workforce), and only 38.2% articulated goals related to staff training, suggesting a potential disconnect. DEI was more likely to be represented in specific goals (42.6% of districts) than broad focus areas (27.9%). AI analysis once again showed that the top goals articulated within the district strategic plans focused on academic achievement and excellence, equity and inclusion, safe and supportive school environments, community partnerships and engagement, organizational effectiveness, and technology expansion.

[59] Part of the Profile of a Virginia Graduate from the Virginia Department of Education

Strategy Themes

In order to address their articulated goals, school districts also indicated specific strategies that can help them make progress. Strategic plans often included dozens of strategies, and MERC researchers conducted an initial review to identify the ones that were most prominent or innovative. The following table depicts examples of some of the most common types of strategies articulated in the analyzed strategic plans.

Table 3. Strategy Themes

Strategy	Examples
Community Partnerships	Expand partnerships with community service boards for mental health support Leverage partnerships with local foundations to access grant opportunities for staff
Stakeholder Communication or Outreach	Track interactions with families, both in person and electronically Enhance and streamline all district webpages and social media channels with targeted outreach towards underserved communities
Curriculum Development, Adoption, or Redesign	Provide rich early childhood education experiences for all students Train all faculty and staff on the Response to Intervention (RTI) model to meet student academic needs Ensure curriculum is relevant to the diverse experiences of students in the classroom
Promoting College and Career Readiness	Require all students to participate in a work-based learning or internship opportunity Evaluate postsecondary outcomes of graduates to develop course pathways Interview recent graduates about their perceptions of college and career readiness
Social and Emotional Learning	Embed the “Five C’s” into curriculum Implement positive behavior strategies,

	including community celebrations of students and staff
Research, Data, or Evidence-Based Decision Making	Provide research-based reading instruction Ensure that all professional development has been evaluated for evidence of effectiveness
Faculty and Staff Recruitment	Leverage university partnerships for recruitment of teachers and offering pathways to advancement for interested staff Recruit highly-qualified staff from veterans, retirees, and career switchers who reflect the demographics of the community
Assessment Strategies	Use performative assessment to promote a growth mindset in students Leverage existing assessments to identify students in need of tutoring and offer targeted supports
DEI	Specific outreach and support for multilingual students and their families Active inclusion of student voice in development of policies and practices Leverage district DEI committees to provide professional development to staff
Technology	Installation of solar panels on school buildings Provide virtual learning opportunities with students and families
School Safety and Wellness	Partner with local police departments to provide drug education and use prevention Use of restorative practices and other alternative discipline strategies Use of automated devices to detect and prevent vaping in bathrooms

In addition to reinforcing the prominence of the aforementioned strategies in district strategic plans, ChatGPT noted that many districts described the use of SMART goals,[60] emphasized the two-way nature of communication with families, advocated providing multiple pathways for advanced coursework opportunities for all students, and prioritized recruitment of a diverse pool of potential faculty and staff by partnering with local universities. ChatGPT also noted that districts emphasized strategies promoting the mental health of their students and staff. Promoting the expansion of Career and Technical Education (CTE) was also noted as a prominent strategy, particularly in relation to college and career readiness.

What trends in public PK-12 education should school districts consider in their strategic plans?

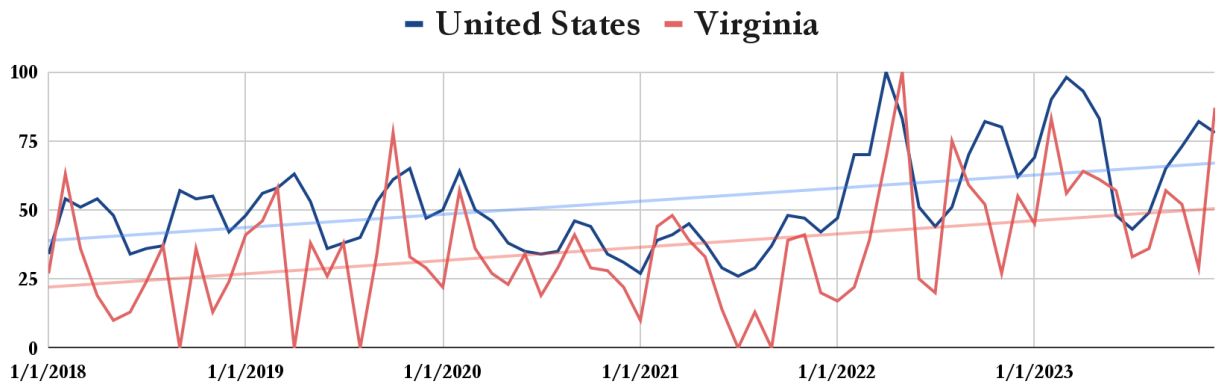
Reviewing emerging trends in PK-12 education over the past five years helps illuminate what educational institutions are grappling with, presenting opportunities for stakeholders to ensure high-quality decision-making while addressing important concerns locally, statewide, and nationally. Analyzing Google Trends throughout the United States and Virginia highlighted key issues including mental health support for students, school safety, teacher and other staff shortages, cybersecurity threats and artificial intelligence, diversity, equity, and inclusion, social-emotional learning, college and career readiness, and learning loss. Each of these topics has shaped the educational landscape over the last five years and will likely continue to do so in the future.

Mental Health Supports

The growing awareness of mental health support needs in PK-12 education has implications for policy and practice, including strategic planning. The following figure depicts Google search trends related to mental health support for students in the US over the past five years.[61] Note that within the following figures, 0 represents there being no search interest while 100 represents the highest search interest over the displayed time period.

[60] Simple, Measurable, Attainable, Relevant, and Time-Bound
[61] Searches encompassed January 1, 2018 through December 4, 2023

Figure 1. Google Trends Related to Mental Health in PK-12 Schools (2018-2023)

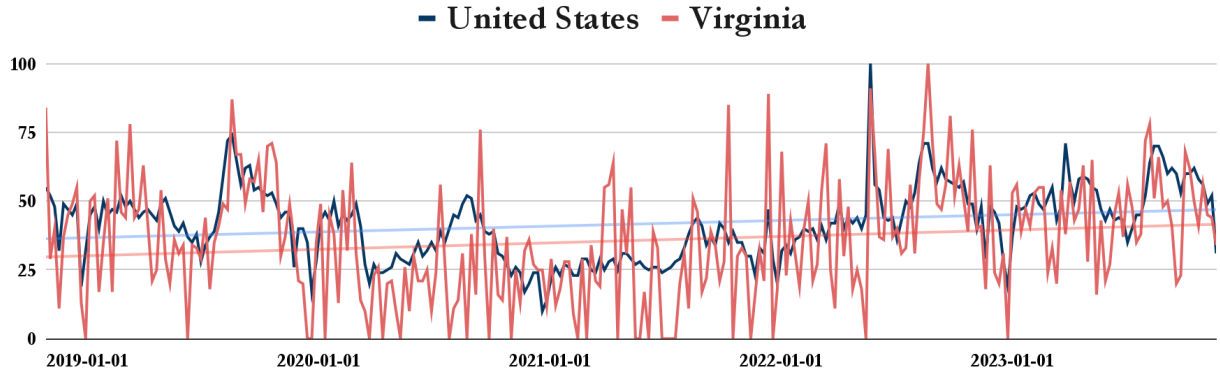


This figure indicates an upward trajectory in the number of term searches related to mental health in schools over the past five years. Virginia was tied with Kentucky as the ninth most likely state to demonstrate search interest in mental health support in schools.

School Safety

In response to concerns related to school safety, including the rise in frequency of school shootings, PK-12 institutions have implemented more comprehensive security measures, including emergency response training, threat assessment protocols, and collaborations with law enforcement. The following figure depicts Google search trends related to school safety over the past five years.

Figure 2. Google Trends Related to PK-12 School Safety (2018-2023)

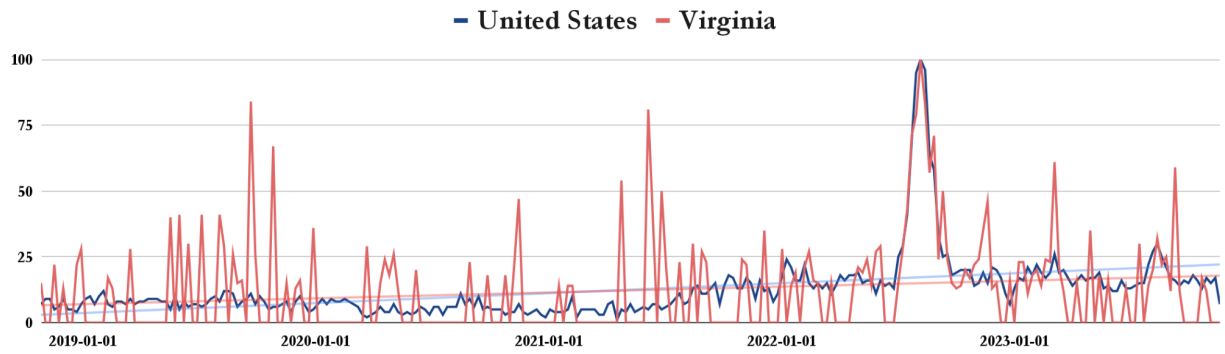


According to this chart, search interest related to school safety has slightly increased over time for the US as well as in Virginia. Within the US, Virginia had the seventh highest search interest related to this topic, and within Virginia, the metro Richmond region was second only to the region around Washington DC in terms of search interest.

Teacher and Staff Shortages

Teacher and staff shortages are a persistent issue in PK-12 education, fueled by issues of recruitment as well as retention. This has led school systems to utilize a variety of methods for bolstering their workforce, including strategies for building a more diverse staff. The following figure depicts Google search trends related to teacher and staff shortages in PK-12 schools over the past five years.

Figure 3. Google Trends Related to PK-12 Teacher and Staff Shortages (2018-2023)

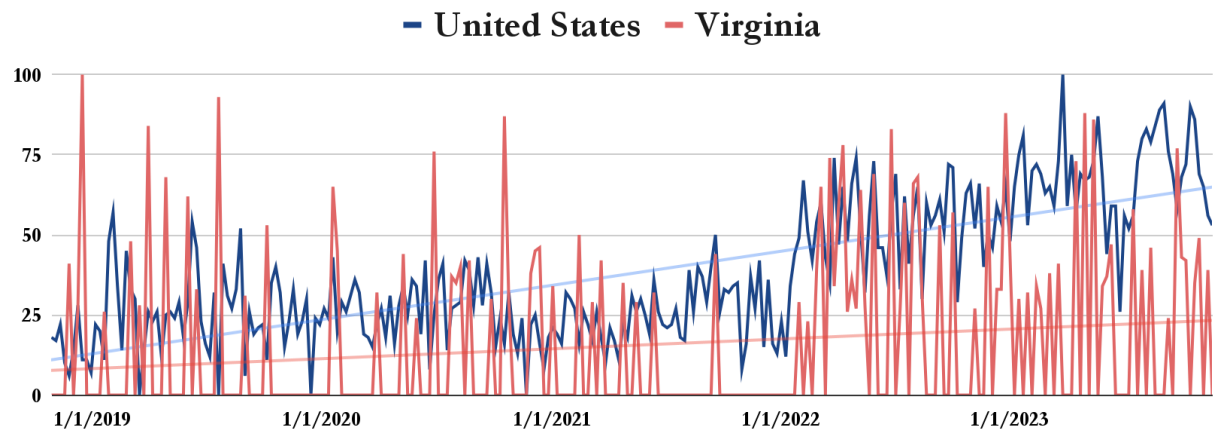


While there has been a slight increase in interest over time (consistent with the persistent nature of this issue), there was a sharp increase in search interest towards the end of 2022 and the beginning of 2023 in both the US and Virginia. Within the US, **Virginia showed the highest interest in this topic.**

School Cybersecurity Threats and Artificial Intelligence

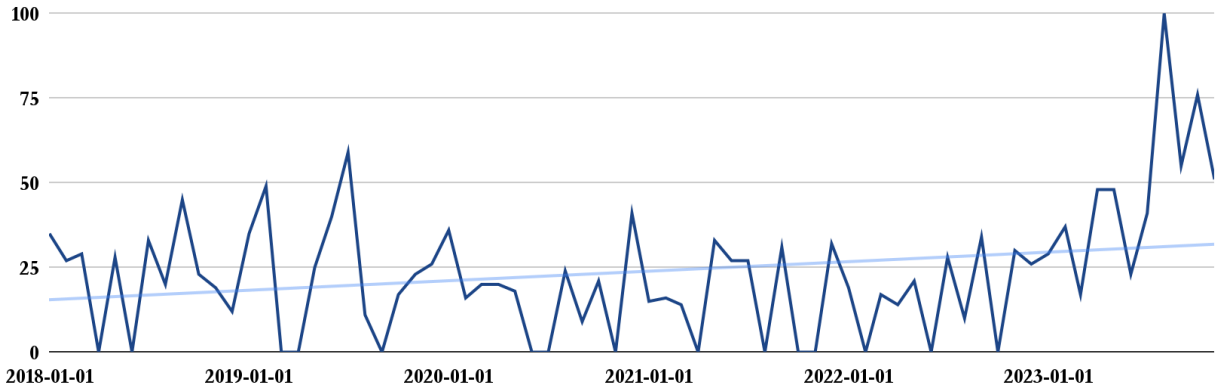
As education becomes more reliant on technology, schools are increasingly vulnerable to cybersecurity threats. Data breaches, ransomware attacks, and other digital threats underscore the need for robust cybersecurity measures. Schools must invest in training, infrastructure, and policies to safeguard sensitive information and maintain the integrity of educational processes. At the same time, AI technologies have taken significant leaps, with considerable implications for PK-12 schools. The following figure depicts Google search trends related to cybersecurity threats in PK-12 schools over the past five years.

Figure 4. Google Trends Related to Cybersecurity Threats in PK-12 Schools (2018-2023)



This chart indicates a sharp increase in search interest towards the beginning of 2022 that has sustained through 2023. Within the US, **Virginia once again showed the highest search interest in this topic.** The following figure depicts a similar trend analysis related to AI in public schools.

Figure 5. Google Trends Related to Artificial Intelligence (AI) in PK-12 Schools (2018-2023)

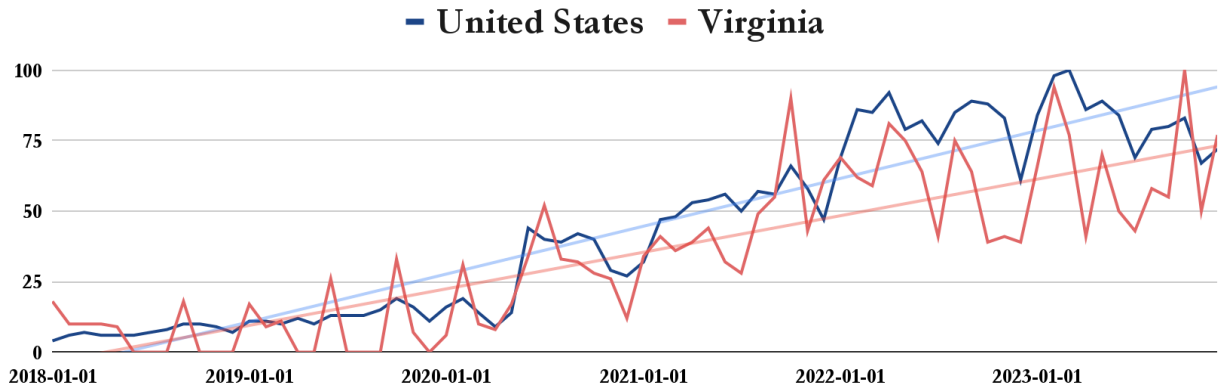


There is a clear and precipitous jump in search interest in 2023, which is also shortly after the prominent new AI technology ChatGPT was released. Trend data at the state level was not available to indicate the relative interest within Virginia compared to other states.

Diversity, Equity, and Inclusion

The topics of diversity, equity, and inclusion have been prominent in educational discourse in recent years. The following figure depicts the relative interest of these terms in Google searches over the past five years.

Figure 6. Google Trends Related to Diversity, Equity, and Inclusion (DEI) in PK-12 Schools (2018-2023)

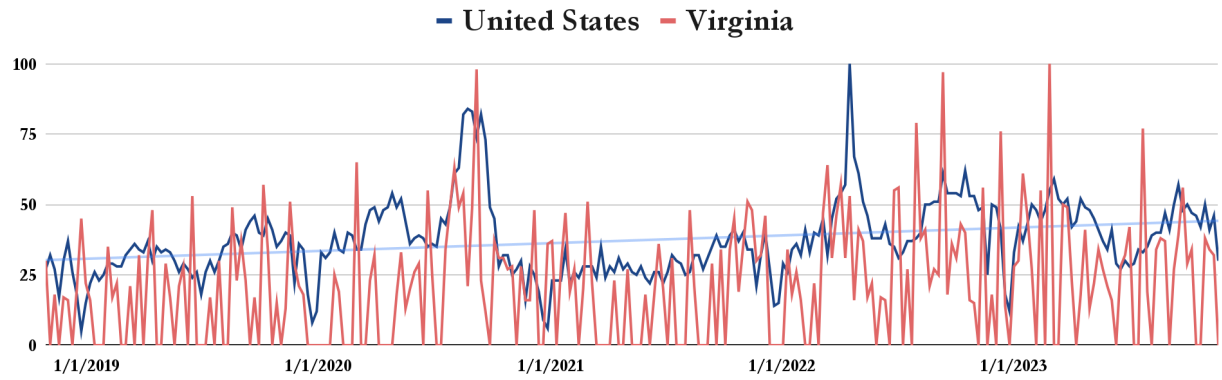


This chart depicts a sharp increase over time in searches for the terms "diversity, equity, and inclusion." Virginia trends tended to primarily follow US trends over this time period. Within the US, Virginia ranked 9th in terms of search interest, and within Virginia, the metropolitan Richmond region ranked 2nd.

Social and Emotional Learning

Beyond the traditional emphasis on academic achievement, educators, policymakers, and researchers increasingly acknowledge the importance of social and emotional learning (SEL). Within Virginia, there are clear standards outlined related to SEL in schools, including a list of core competencies that follow the framework established by the Collaborative for Academic, Social, and Emotional Learning (CASEL). The following figure depicts Google search trends over the past five years related to SEL in schools.

Figure 7. Google Trends Related to Social and Emotional Learning in PK-12 Schools (2018-2023)

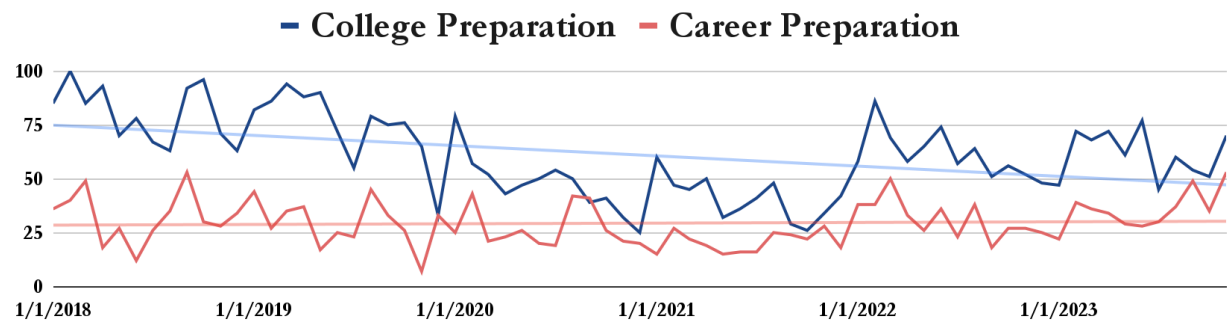


This chart indicates that search interest in SEL in schools has fluctuated over time, with recent spikes in interest in Virginia. Within the US, Virginia had the 33rd highest interest in this topic over the past five years.

College and Career Preparation

In recent years, there have been questions about how Americans view the value of a college education for themselves or their children. Yet, earning postsecondary credentials tends to consistently predict higher earnings over time. The following chart depicts Google search trends related to college preparation and career development over the past five years, within the context of searches related to jobs or education.

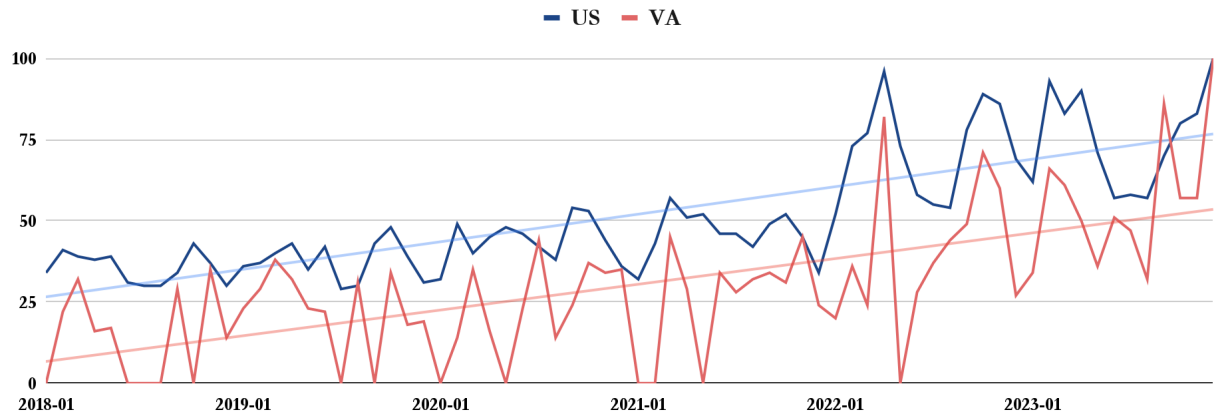
Figure 8. Google Trends Related to College and Career Preparation (2018-2023)



This chart indicates that search interest related to college and career preparation has decreased somewhat over the past five years, but it appears to be increasing over the past two years. Career preparation consistently receives less search interest than college preparation over that time frame. Within the US, Virginia ranked 14th in terms of interest related to these two terms.

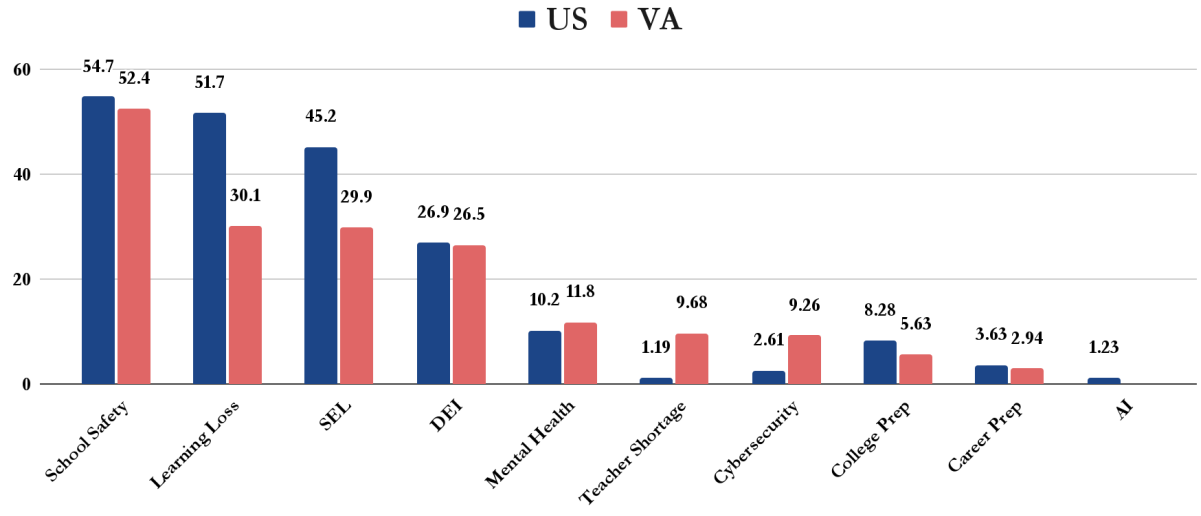
Figure 9. Google Trends Related to Learning Loss (2018-2023)

Learning Loss



There was a sharp upward trend in search interest related to learning loss. Within the US, Virginia had the fifth highest search interest related to this topic over that timespan. The following chart depicts the average weekly search interest for each of these topics in the US and Virginia over the past five years.[62]

Figure 10. Average Weekly Google Search Interest in US and Virginia (2018-2023)



[62] All of these topics are related to education, even if it is not included in the chart label. Artificial intelligence (AI) only includes US data.

School safety, and learning loss were the two most prominently searched terms in the US and Virginia, although in the Commonwealth, SEL and DEI were nearly tied for second most popular. Cybersecurity in schools was more prominently searched for than the implications of AI in education.

What are the key takeaways for school districts to consider when engaging in strategic planning?

Based on the insights that emerged from the research literature, strategic plan review, and analysis of Google trends over the past five years, these are key takeaways that school districts should consider about emerging issues and innovations in public PK-12 education when engaging in strategic planning.

1 ACADEMIC ACHIEVEMENT

School districts across the country and Virginia tend to make academic achievement their top priority in strategic planning, as evidenced by this being represented as a broad focus area and specific goal in 100% of the analyzed districts. Additionally, learning loss has precipitously risen in search interest over the past five years. In this way, academic achievement represents not only an enduring issue, but also an emerging one, particularly in the wake of the COVID-19 pandemic. Based on our review, and even when considering the additional issues raised through our analyses, **school districts should continue to make academic achievement outcomes a top priority in their strategic planning**. However, they should remain mindful of the demonstrated connections between academic outcomes and the social and emotional wellbeing of students, working on both of these in conjunction.

2 CLARIFYING APPROACH TO STAFFING

There were some disparities between how school districts prioritized the recruitment and retention of quality staff (2nd most common focus area), and how often they articulated specific goals or strategies intended to address this issue (professional development and staff recruitment and retention were the eighth and ninth most common goals, respectively). Virginia showed the highest search interest related to teacher shortages in the country over the past five years according to Google trends, and it had five times the weekly search interest as the national average. Given the apparent priority of this issue in Virginia, as well as the documented challenges with teacher attrition since the onset of COVID-19, school districts should **sharply articulate the specific goals and strategies that they plan to take to address teacher and staff shortages**. When doing so, they should also **prioritize the recruitment of a workforce that is demographically representative of the students and families that it serves**, including partnering with local universities to build pipelines to employment.

3 PRIORITIZE STUDENT AND STAFF WELLNESS

In formulating strategic plans, **districts should conceptualize a framework that prioritizes the overall wellness of both students and staff**. This necessitates a collaborative process that involves stakeholders in all stages of the strategic planning process. Wellness was a focus area in roughly half of the analyzed school districts, and it was even more commonly represented in the articulated goals. While this suggests that wellness has already been on the radar of school districts, increasing interest in mental health in schools in addition to evidence of the mental health impacts of COVID-19 on PK-12 students and educators, **school districts should ensure that mental health is represented prominently in their strategic plans.** This could also support related priorities like academic achievement and teacher and staff recruitment and retention.

4 STAKEHOLDER ENGAGEMENT THROUGH DATA

Research suggests that two key elements of effective strategic planning include soliciting input from their students, families, staff, and community stakeholders as well as active collection and reflection on relevant data to monitor progress. Considering requirements in the VA state code for school districts to review their strategic plans biennially, **school districts should make data-driven decision making central to their strategic planning efforts by systematically collecting relevant data and presenting it to their stakeholders in accessible ways**. Much of this data may already exist in the form of student outcomes and staff hiring and retention, but this data does not always reflect the perceptions and beliefs of all stakeholder groups. By routinely soliciting this input in the form of surveys, focus groups, and other primary data collection methods, school districts can actively reflect on the needs and ideas of the communities they serve and make adjustments to their strategies accordingly. AI analysis revealed that organizational effectiveness and continuous improvement were prominent themes in the focus areas and goal structures of school districts across Virginia and the country, and creating a culture around actively reflecting on relevant data in partnership with the community could prove effective in accomplishing these priorities.

5 ATTENDING TO CYBERSECURITY AND AI

Technology was a focus area in about a quarter of analyzed school districts and was a goal in about a third of them. Google trends indicated that cybersecurity threats in public schools are of growing interest, with Virginia demonstrating the highest overall interest in this topic across the country. Search interest in artificial intelligence sharply increased in the last year, and in comparison with the other search topics it ranked last in average search interest over the past five years (although this is likely to change). However, **given the growing challenges related to both of these topics, it is important that school districts explicitly address them in their strategic plans.** Manual as well as AI analysis of strategic plans confirmed that none of them addressed AI in their focus areas or goal structures, and only four (Gloucester, Goochland, Prince George's, Smyth, and Tazewell County Public Schools) addressed cybersecurity explicitly. Both AI and cybersecurity are likely to become increasingly prominent considerations in public, PK-12 education, and districts need to account for them accordingly in their plans.

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