

Center for Public Education

A young girl with dark hair tied in a bun, wearing a light blue cardigan over an orange collared shirt and a tan backpack, stands in front of a chalkboard filled with math equations. She has her arms crossed and is smiling slightly at the camera.

**Defining
High-Quality Instructional
Materials for Math:
A School Board Priority**

AN **nsba** PUBLICATION

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Introduction

Math achievement is one of the strongest predictors of long-term student success — influencing graduation rates, college enrollment, career readiness, and future earnings. Yet too many students today lack access to rigorous, well-designed math instruction. Without a clear definition of what constitutes high-quality instructional materials (HQIM), it is hard for schools to deliver the level of math education that students need to compete in a global economy. Prioritizing the definition and adoption of HQIM is an essential first step for district and state leaders seeking to close learning gaps, raise achievement, and ensure that every student builds the math skills needed for life, college, and careers.

Math Skills Matter — On the Job and in Life

Early math skills provide a critical foundation for success in careers, college, and technical training. Research shows that 81% of students who fail a math class in sixth grade do not graduate from high school ([Balfanz et al., 2007](#)). According to the Federal Reserve Bank of Cleveland, the more math one takes in high school, the more one earns on average, and the more likely one is to have a job ([James, 2013](#)).

Findings from the [2025 Gallup study](#) send a clear message to public school leaders: Americans value math and want more of it in schools. The nationally representative survey, including 5,136 U.S. adults (808 parents) and 2,831 workplace managers, shows that:

- 95% of adults say math is important in their lives.
- 85% of managers want employees with stronger math skills.
- 62% of adults believe math should be a top priority in K-12 education.
- 43% of adults wish they had learned more math in school.

A main takeaway: Math education isn't just about test scores — it's about preparing students for life and work.

U.S. Falling Behind in Global Math Performance

The 2023 Trends in International Mathematics and Science Study (TIMSS) results sound an alarm: U.S. students are trailing their global peers in math. Only 13% of U.S. fourth graders reached the Advanced benchmark — far below the 49% in Singapore and 32% in Japan. Even more concerning, 17% of U.S. students scored below the Low benchmark — a rate much higher than Japan (1%), Norway, Sweden, and Denmark (5%), and Finland and Germany (6%).

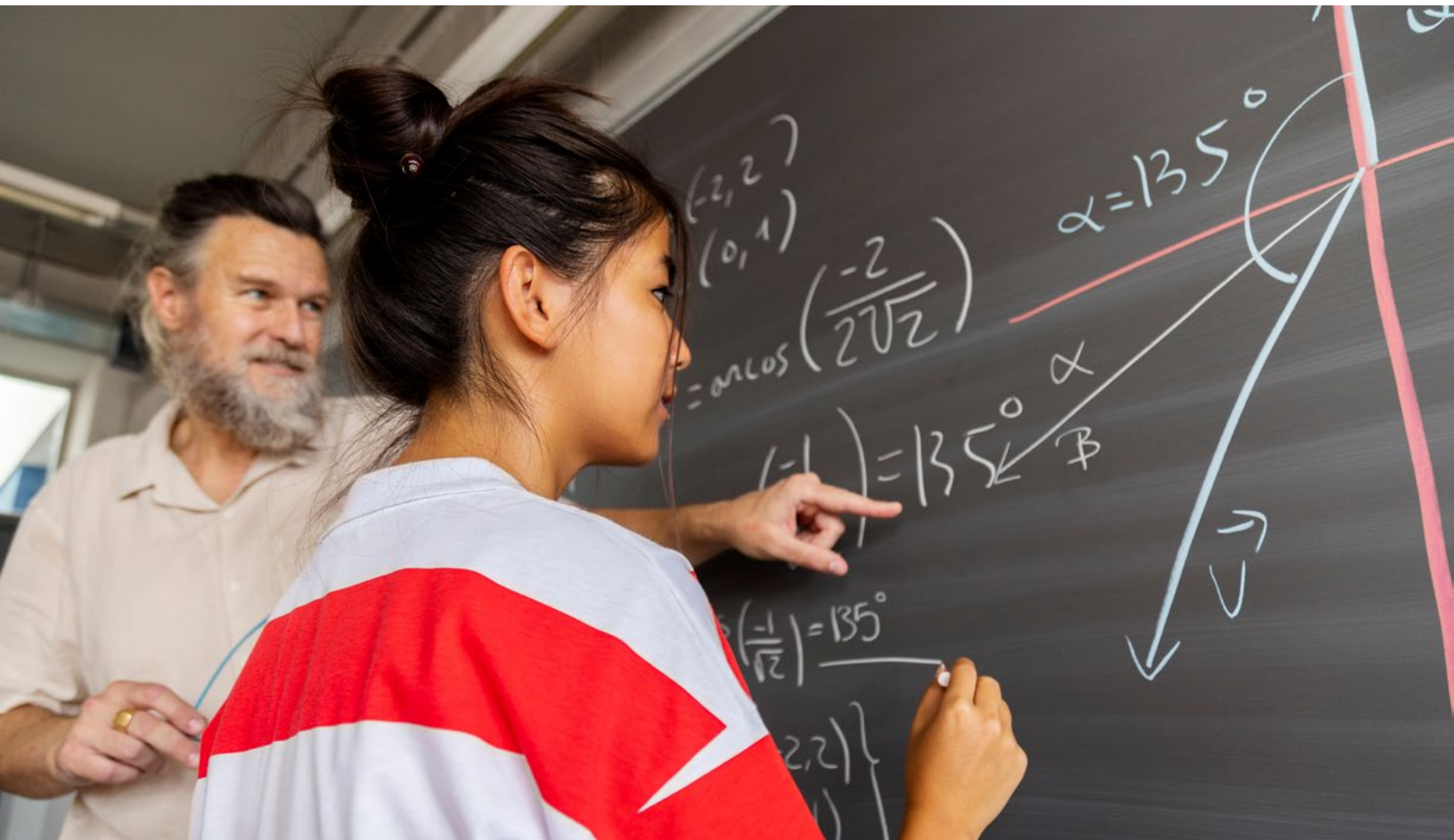
The data point to a pressing concern: Without targeted efforts to improve math instruction, U.S. students are likely to continue losing ground in global measures of academic performance and workforce readiness.

Instructional Quality: A Strategic Priority for School Leaders

Persistent challenges — including a shortage of effective math teachers, weak early childhood math foundations, low expectations, and a lack of rigorous instructional materials — continue to undermine student math achievement. To drive meaningful improvement, school leaders must prioritize strengthening instructional quality: the degree to which teaching and learning processes effectively help students achieve academic goals. Instructional quality rests on three critical dimensions: instructional time, instructional materials, and instructional expertise.

[Evidence](#) shows that countries that consistently perform above average on international math assessments spend an average of 60 minutes per day on instructional time. As of 2024, [Alabama](#) is the only state in the U.S. actively requiring this duration of math instruction, with [Maryland](#) recently passing a similar policy that will be implemented in 2026. According to Henderson ([2025](#)), “If every state required at least 60 minutes of math instruction a day, students would see stronger outcomes.”

Simply adding more instructional time is not enough. Research consistently shows that high-quality instructional materials (HQIM) strengthen teaching practices and lead to better student outcomes in both reading and math ([CCSSO, 2024](#)). Without HQIM, much instructional time is wasted: U.S. students currently spend more than 500 hours per year on assignments that are not aligned with grade-level expectations ([TNTF, 2018](#)). Moreover, access to effective instruction varies widely across school districts — with disadvantaged students often receiving the least access to high-quality materials and teaching ([IES, 2014](#)).



Focus of This Report: Defining High-Quality Instructional Materials for Math

There may be no single curriculum that works for every classroom, but one thing is clear: defining what HQIM looks like is a vital first step for school leaders aiming to drive stronger math outcomes. Without this clarity, it is impossible to set a shared vision or ensure students receive the rigorous instruction they deserve.

This report underscores the importance of defining high-quality instructional materials. A clear, evidence-based definition serves as the foundation for selecting and implementing curricula that close learning gaps and ensure all students have the opportunity to succeed in math. With a research-informed understanding of HQIM, district leaders can use it as both a strategic tool and a guiding framework to support planning, budgeting, and policies that strengthen educator professional development.

Approximately 80% of U.S. K–12 students — about 39.1 million — attend public schools in urban areas, defined as cities, suburbs, and towns. In many of these districts, the majority of students come from low-income households, and a significant portion are English language learners (CPE, 2024). To help school leaders recognize how HQIM definitions relate to student needs, the Center for Public Education (CPE) highlights promising practices from urban school districts in this report. A separate report will address the distinct challenges rural districts face in adopting HQIM.

This report is organized into five key sections:

- HQIM Definitions: What Does High-Quality Really Mean?
- Why Math: HQIM and Closing Achievement Gaps in Urban Schools
- The Challenge: Why School Leaders Struggle to Define and Align on HQIM
- Action Plan: Essential Questions District Leaders Should Ask
- Resources: School Leaders Can Use to Support HQIM



Urban — City, Suburb, and Town

The Census Bureau uses urban-rural classification to demarcate geographic areas. Urban areas represent densely developed territory, and encompass residential, commercial, and other nonresidential urban land uses. The boundaries of these urban footprints have been defined using measures based primarily on population counts and residential population density, but also through criteria that account for nonresidential urban land uses, such as commercial, industrial, transportation, and open space that are part of the urban landscape (NCES, 2019).

Either Urban or Rural

The National Center for Education Statistics (NCES) uses a locale classification, a general geographic indicator that describes the type of area where a school is located. The classifications rely on standard urban and rural designations defined by the U.S. Census Bureau. Although NCES classifies all territory in the U.S. into four types (i.e., Rural, Town, Suburban, and City), each type of locale is either urban or rural in its entirety. In other words, Town, Suburban, and City are all urban.

Urban Covers Urbanized Areas and Urban Clusters

Urban area boundaries are constructed from qualifying census tracts and census blocks. To qualify as an urban area, the territory must encompass at least 2,500 people, of which at least 1,500 reside outside institutional group quarters (Geverdt, 2019). Urban areas that contain 50,000 or more people are designated as Urbanized Areas (UAs); urban areas that contain at least 2,500 but fewer than 50,000 people are designated as Urban Clusters (UCs). The term “urban area” refers to both UAs and UCs.

It should be noted that the Census Bureau demarcates urban areas after each decennial census. Since the 1950 Census, the Census Bureau has reviewed and revised the urban criteria, as necessary, for each decennial census. Recently, the bureau updated the definition of urban areas. Now, each urban area must encompass at least 2,000 housing units or at least 5,000 people (2020 Census Urban Areas FAQs, 2022).



HQIM Definitions: What Does High-Quality Really Mean?

Instructional materials, also known as curricula, are the core materials that teachers use to deliver instruction (NCTQ, 2025). According to the National Council on Teacher Quality (NCTQ, 2025), “High-quality curricula are core materials that have been vetted by the state or a designated partner to ensure they align to state standards, support building content knowledge, promote rigorous, grade-level learning, and are grounded in up-to-date research.” Simply put, HQIMs refer to curricula that are aligned with college- and career-ready standards.

Some organizations explicitly define the qualities that make instructional materials “high-quality.” According to the [2024 report](#) from the Council of Chief State School Officers (CCSSO), “High-quality math materials provide daily opportunities for students to build conceptual understanding, develop procedural skills and fluency in grade-level math, and apply their knowledge to real-world problems.” [EdReports](#), an independent nonprofit, recognized as a leader in curriculum evaluation, defines HQIM in math using comprehensive criteria, such as focus and coherence, rigor and mathematical practices, and instructional supports and usability.

How States Define HQIM

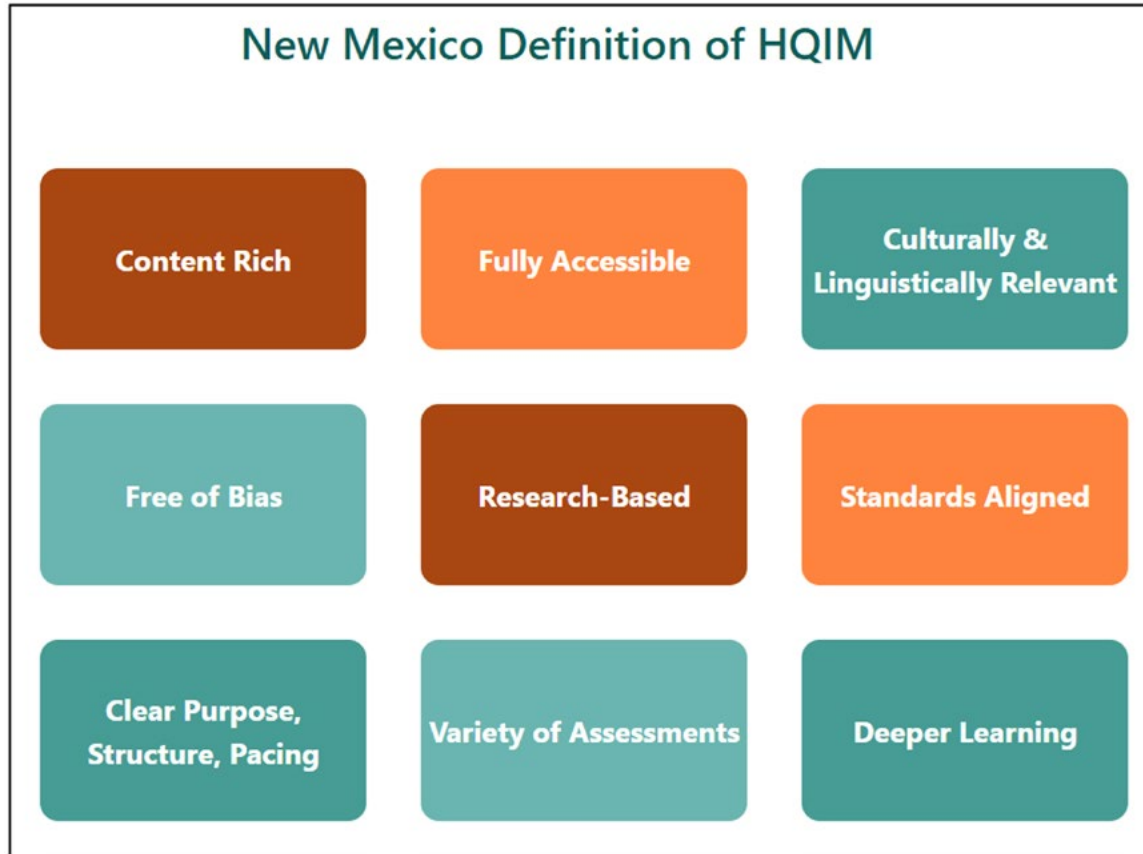
Many states have developed their own definitions of HQIM. For example, [Maryland](#) defines HQIM as “grade-level, standards-aligned materials designed to build knowledge for all students in a language-affirming and culturally responsive way.” In [Massachusetts](#), HQIMs are described as comprehensive, core teaching and learning resources that are aligned with grade-level standards, evidence-based, and intended to support culturally and linguistically responsive instruction for all learners.

States often share the following [common elements](#) of HQIM definitions:

- Alignment with academic standards and clear learning outcomes.
- Reflection of evidence-based practices.
- Content-richness.
- Cultural and linguistic relevance, free from bias.
- Provision of a full complement of teacher and student materials.

Several states have progressed beyond defining HQIM to requiring school districts to implement them and developing online tools to share related information. New Mexico (NM), for example, has not only established its own definition of HQIM (see Figure 1) but also launched a dashboard to support curriculum implementation by school districts and educators. According to the [dashboard](#), 63% of NM districts have purchased HQIM for all K–12 grade levels in math. To enhance transparency and accountability, the state publicly reports which districts have adopted specific HQIM and how many students have been impacted by their use.

Figure 1. New Mexico Definition of HQIM



Source: [NM Materials Matter](#)

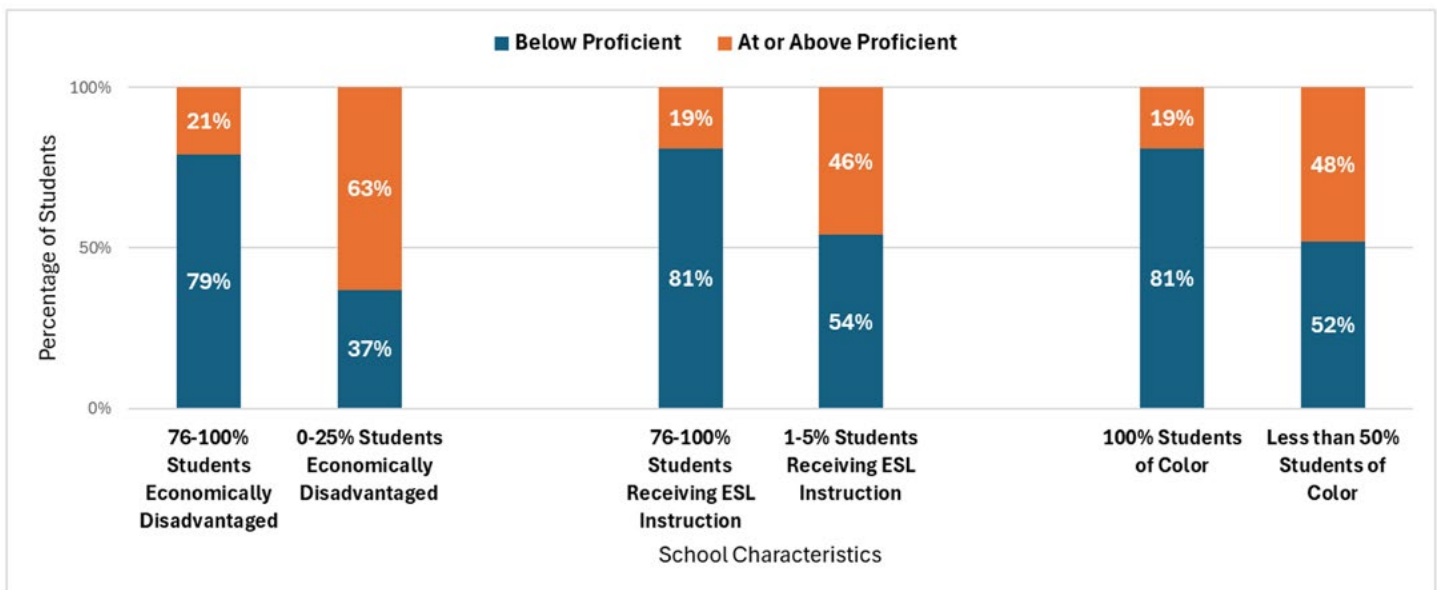
HQIM Definitions Should Reflect Cognitive Science Behind Learning Gaps

A strong definition of HQIM should reflect how students learn — and how learning can break down. In mathematics, many concepts build directly on prior knowledge. When students fall behind, learning gaps can quietly accumulate, making it increasingly difficult to catch up. Cognitive science shows that students have limited working memory, which can become overloaded by tasks that are too cognitively demanding ([Sweller et al., 1998](#)). Effective HQIM must be designed with these cognitive limits in mind, helping students to build knowledge in manageable steps while reinforcing foundational concepts.

Data clearly show a strong connection between mastery of foundational concepts and success with grade-level material ([Rose, 2024](#)). For instance, a student who struggles with decimals in elementary school may later find it difficult to grasp percentages in sixth grade and apply them in seventh. Teachers often face challenges addressing unfinished learning when instructional materials focus exclusively on grade-level content.

“Imagine a 6th-grade math teacher with high hopes for her students... But in a typical class of 25 students, she’s finding that as few as five can keep up with 6th-grade work” ([Rose, 2025](#)). Although comprehensive classroom-level data on the distribution of students performing at, above, or below grade level is limited, findings from the National Assessment of Educational Progress (NAEP) provide a useful proxy. As illustrated in Figure 2, in schools where 76% to 100% of students are economically disadvantaged, classified as English learners, or identified as non-White, a substantial proportion of fourth grade students demonstrate proficiency in mathematics below grade level. In such contexts, teachers may be required to deliver significant remediation — effectively addressing fourth-grade standards for up to 80% of the class — prior to engaging with fifth-grade content.

Figure 2. Math Performance of 4th Graders, by Selected School Characteristics: NAEP 2024



Source: [NDE Core Web](#)

Math is inherently cumulative — students may move on to the next grade, but the need for a strong foundation persists. A [2012 study](#) by ACT found that students who were below grade level in math by fourth grade had only a 46% chance of meeting grade-level expectations by eighth grade. Those behind in eighth grade had just a 19% chance of reaching expectations by twelfth grade. For the lowest-performing students, the outlook was even more stark: only 10% met eighth-grade expectations, and just 3% met expectations by 12th grade.

Some researchers are calling on policymakers and educators to rethink the definition of HQIM in math, pointing to “troubling evidence [that] emerged that disadvantaged students were not getting equitable access to high-quality teaching” ([Rose, 2024](#)). School leaders, when defining HQIM for math, should account for the persistent gaps caused by unfinished learning and limited access to effective instruction.

While alignment with state standards remains a core element of identifying HQIM, researchers stress that a robust definition must go further ([EdTrust, 2023](#)). In mathematics, HQIM should:

- Align with grade-level state standards and be both rigorous and evidence-based.
- Support all learners by providing daily opportunities to build conceptual understanding, develop procedural skills and fluency, and apply knowledge to real-world problems.
- Guide implementation with clear instructional supports and include high-quality assessments that measure both conceptual understanding and application.

In short, definitions of HQIM in mathematics must account not only for the academic content students are expected to master, but also for the cognitive processes and learning progressions through which mathematical understanding is developed.



Why Math: HQIM and Closing Achievement Gaps in Urban Schools

To prepare all students for college, careers, and civic life, school leaders should not only emphasize reading but also prioritize math achievement — particularly for students from historically underserved backgrounds. As the National Council on Teacher Quality (2025) notes, “A student who struggles in math early on may never catch up.” Math is a gateway subject: early mastery increases the likelihood of success in other academic areas and leads to higher overall educational attainment.

According to the U.S. Department of Education (IES, 2014), “on average, disadvantaged students received less effective teaching than other students, equivalent to about four weeks of learning for reading and two weeks for math, or about 2 to 4 percent of the student achievement gap between these groups.” These disparities highlight the urgent need for educators and policymakers to intensify efforts to help disadvantaged students meet or exceed grade-level expectations in math.

The [Nation’s Report Card](#) (NAEP) provides math performance data for 26 large urban school districts. As shown in Table 1, cities like Cleveland, Clark County (NV), and Detroit serve student populations where nearly all students are [economically disadvantaged](#). In most urban districts, more than half of the student population qualifies for free or reduced-price lunch.

Unfortunately, many of these districts must find ways to help most of their economically disadvantaged students reach at least the Basic level in fourth-grade math — and strive to increase the number of students achieving proficiency. Similarly, several urban districts — especially in Texas — serve high numbers of English language learners (ELL) (see Table 2). Nationally, 77% of eighth-grade ELL students fail to meet the Basic level in math, revealing a pressing need for targeted instructional support and better-aligned materials. Addressing these gaps begins with a clear understanding of instructional quality and equitable access to high-quality math materials.



Table 1. Percentage of Economically Disadvantaged Students in Large Urban School Districts, Percentage of Students Who Performed Below Basic by Economic Status, and Percentage of Students Who Performed at or Above Proficient by Economic Status, Math Grade 4: 2024

School District	Percentage of Economically Disadvantaged Students	Percentage of Students Performing Below Basic		Percentage of Students Performing at or Above Proficient	
		Economically Disadvantaged	Not economically disadvantaged	Economically Disadvantaged	Not economically disadvantaged
Cleveland	99	59	‡	9	‡
Clark County (NV)	98	30	‡	34	‡
Detroit	92	69	56	6	15
Fort Worth (TX)	88	38	15	21	50
Dallas	87	28	10	28	64
Houston	82	34	6	24	73
Los Angeles	81	42	9	20	59
Milwaukee	81	66	36	8	34
Philadelphia	79	52	33	15	35
Chicago	78	47	15	15	56
Baltimore City	77	58	44	9	25
New York City	74	41	11	24	60
Jefferson County (KY)	71	41	14	17	52
Atlanta	69	47	4	16	74
Boston	69	43	11	19	65
Denver	64	46	10	19	67
Albuquerque	64	52	19	14	47
San Diego	62	33	8	27	65
Miami-Dade	61	17	11	43	60
Duval County (FL)	55	28	18	26	48
Hillsborough County (FL)	55	28	12	27	54
Guilford County (NC)	55	33	15	28	55
Charlotte	53	29	19	29	58
Orange County (FL)	51	25	16	32	52
National	50	35	12	25	56
Austin	49	41	7	21	71
District of Columbia (DCPS)	42	56	17	12	57

Note: ‡ Reporting standards not met. Source: [NDE Core Web](#)

Table 2. Percentage of English Language Learner (ELL) Students in Large Urban School Districts, and Percentage of Students Who Performed Below Basic by ELL Status, Math Grade 8: 2024

School Districts	Percentage of ELL Students	Performing Below 8th Grade Math Basic	
		Percentage of ELL Students	Percentage of NOT ELL Students
Dallas	51	56	49
Fort Worth (TX)	45	73	55
Houston	41	64	42
Austin	31	68	31
Denver	27	89	37
Boston	25	87	40
Chicago	22	74	44
Albuquerque	21	87	50
Philadelphia	17	71	60
Milwaukee	17	79	68
Charlotte	17	77	34
Clark County (NV)	15	87	45
District of Columbia (DCPS)	15	79	55
Detroit	15	78	81
New York City	14	82	43
Jefferson County (KY)	14	86	53
Miami-Dade	14	83	40
Orange County (FL)	13	77	42
Guilford County (NC)	12	74	42
Baltimore City	11	85	69
Los Angeles	11	94	49
National	10	77	35
San Diego	10	95	33
Duval County (FL)	8	93	50
Hillsborough County (FL)	7	76	44

Source: [NDE Core Web](#)

Policy/Practice Box 1: How Miami-Dade County Public Schools Improved Math Achievement

High-Quality Instructional Materials: An Important Driver in Miami-Dade's Math Gains

The 2022–23 National Assessment of Educational Progress (NAEP) long-term trend data revealed a troubling reality: the average math score for 13-year-olds dropped by nine points compared to 2020, and by 14 points from a decade earlier — marking one of the sharpest declines in recent history. The losses were especially severe among lower-performing students. Yet amid this national downturn, Miami-Dade County Public Schools (M-DCPS) stood out: its fourth grade students posted significantly higher math scores than peers in other large urban districts.

What sets Miami-Dade apart?

The district's sustained improvement in math is closely tied to its commitment to adopting and effectively implementing HQIMs alongside strategic leadership, data-informed practices, and commitment to every student having equal access to HQIMs.

Key Factors Behind M-DCPS's Math Achievement:

- **Adoption of HQIM:** Central to M-DCPS's success is its early and consistent use of vetted, evidence-based math programs. These instructional materials are aligned to standards and designed to build conceptual understanding, procedural fluency, and real-world problem-solving skills.
- **Strong Foundations in Early Grades:** The [district](#) prioritizes early math instruction, ensuring that students develop essential foundational skills. HQIM supports this effort by scaffolding learning and reinforcing key concepts across grade levels.
- **Equal Access:** Recognizing persistent achievement gaps, M-DCPS ensures that all schools, including those serving the most disadvantaged students, have access to high-quality math curricula and additional instructional supports.
- **Data-Driven Instructional Planning:** [District](#) leaders use student performance data to guide instructional decisions, monitor progress, and ensure that materials and teaching strategies meet students' learning needs.
- **Professional Development on HQIM Use:** [M-DCPS](#) invests in ongoing training to ensure that teachers understand how to implement high-quality materials effectively. Teachers receive support to tailor instruction based on student data while staying faithful to the materials' design.
- **Innovative and Student-Centered Classrooms:** The district fosters environments that encourage collaboration and personalized learning, supported by instructional materials that promote inquiry, discourse, and active problem-solving.
- **Strategic Partnerships:** M-DCPS collaborates with organizations and institutions that bring additional resources, professional learning, and technical assistance aligned with its HQIM priorities.
- **Technology Integration:** Through its Digital Convergence initiative, [M-DCPS](#) provides students with digital access to instructional materials, enabling blended learning and greater flexibility in how and when students engage with content.

Miami-Dade's example illustrates how high-quality instructional materials — combined with strategic leadership and professional development — can help reverse learning losses and drive sustained gains in math achievement, even in the most challenging contexts.

The Challenge: Why School Leaders Struggle to Define and Align with HQIM

A growing body of research highlights the positive impact of HQIM on student achievement. In the literature, HQIM typically refers to materials explicitly recommended for adoption by K–12 school systems and for use by classroom teachers. These include resources aligned to academic standards as well as those that meet additional quality criteria based on individual state priorities. For instance, Delaware relies on EdReports reviews to identify HQIM, while New Mexico conducts its own evaluations to assess materials for quality and alignment with state standards ([RAND, 2022](#)).

In a randomized trial, middle school math teachers who used HQIM saw statistically significant gains in student performance compared with those who did not, with especially strong results among novice teachers ([Jackson and Makarin, 2018](#)). Similarly, a large-scale comparative study of four elementary math curricula found that one particular curriculum led to notable improvements in student achievement ([Agodini et al., 2010](#)). Research by Boser et al. ([2015](#)) further suggests that improving curriculum quality can be up to 40 times more cost-effective than reducing class sizes.

Research has also identified HQIM success stories at the district level. For instance, one year after adopting a new high-quality math curriculum, Duval County Public Schools in Florida reported “extraordinary improvement” in math achievement for grades 3, 4, and 5 in 2016 ([Steiner, 2016](#)). The superintendent noted that grade 3 scores increased by six percentage points — double the statewide gain of three points. In grade 4, Duval County saw a three-point increase, while the state average remained flat ([Steiner, 2024](#)).

Despite the well-established advantages of HQIM, many school districts have yet to take meaningful steps toward implementation. A widespread lack of awareness and understanding among district leaders regarding what constitutes HQIM continues to pose a significant barrier to adoption. For districts facing declining enrollment and limited budgets, the lack of strong state-level support often makes it difficult to prioritize HQIM adoption. Addressing these challenges is critical to ensuring all students have access to HQIM.



A Lack of Shared Understanding of HQIM Among School Leaders

Researchers note that “many students — particularly those in historically underserved communities — still do not have guaranteed access to high-quality math curricula” ([NCTQ, 2025](#)). Schools in these communities are more likely to rely on mediocre or low-quality materials, further widening existing educational inequities, according to a nonprofit organization that aims to transform America’s public education system — The New Teacher Project ([TNTP, 2018](#)). A reason for this disparity is the lack of a clear, shared understanding among school and district leaders of what constitutes high-quality instructional materials ([Schwartz, 2025](#)).

A [2024 Gallup survey](#) of nearly 1,500 principals and district leaders found that only one in four reported that their school or district has an official definition of HQIM, and nearly 4 in 10 said they were “not very” or “not at all familiar” with the term. When asked what resources they use to judge instructional materials, leaders cited a mix of sources: 83% referenced state guidelines, 58% relied on teacher feedback, 55% used district guidelines, and 54% turned to independent curriculum reviewers.

Findings from a small internal survey conducted by the National School Boards Association (NSBA), which included school board members (82%) and superintendents (12%), echo similar patterns. Only 28% of district leaders reported feeling very confident in determining whether a math curriculum is high quality, while 38% felt somewhat confident, and 30% had little or no confidence.

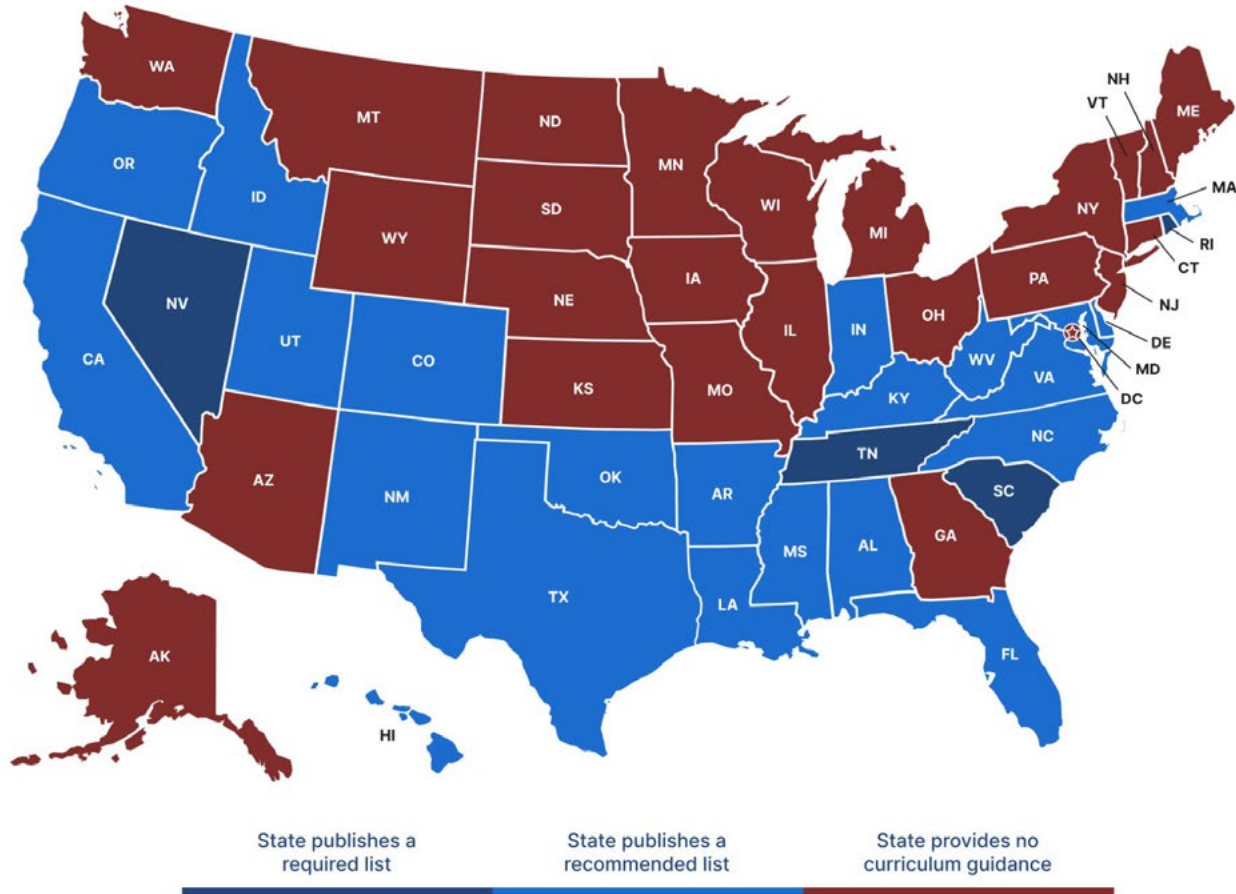
In contrast to the Gallup survey, the NSBA survey found that 90% of respondents viewed teacher feedback as one of the most helpful resources in evaluating curriculum quality. Other commonly cited sources included state guidelines (67%), independent curriculum reviewers such as EdReports (54%), and district guidelines (49%).

The NSBA survey also shows that half of district leaders are not involved in the selection of HQIM. Among those who are involved, roles vary: some provide input and recommendations, while others are consulted and help make final decisions. To effectively support teachers in implementing research-based, standards-aligned curricula for all students, district leaders need a clear and consistent understanding of what qualifies as HQIM. Establishing a well-defined standard for HQIM, particularly in math, should therefore be a top priority for school boards and district leadership.

A Need for Expanding State Commitment and Guidance

“State policymakers can lay a strong foundation for effective math instruction by ensuring teachers are well-prepared and well-supported” ([NCTQ, 2025](#)). One of the five key policy levers identified by the National Council on Teacher Quality is the requirement that districts adopt high-quality math curricula and support effective implementation. Despite this, only four states — Nevada, Rhode Island, South Carolina, and Tennessee — currently mandate the use of high-quality math instructional materials. Nearly half of all states — 24 in total — do not even provide guidance or recommendations on which curricula districts should adopt (Figure 3).

Figure 3. State Policies on Supporting HQIM for Math: 2025



Source: [NCTQ, 2025](#)

State support for district implementation of HQIMs should go beyond simply requiring adoption. It should also include clear guidance on selecting HQIM, dedicated funding to support the transition and implementation process, and transparent reporting on the curricula being used by districts. As shown in Table 3, only California and Massachusetts currently offer this full package of support.

Four states — California, Texas, Florida, and New York — account for the largest K–12 student populations in the United States. In 2023, urban school enrollment across these states totaled approximately 15.4 million students, representing about 31% of the nation’s total K–12 enrollment. California enrolled 5.7 million urban students, followed by Texas with 4.7 million, Florida with 2.7 million, and New York with 2.2 million.

All four states provide guidance on selecting HQIM and offer resources to support districts in transitioning to and implementing HQIM. Additionally, California and Florida require districts to post their math curricula on their websites publicly. However, none of these states currently collect or publish data on the specific curricula used by districts.

In 2022, RAND researchers published a [report](#) titled How States Are Creating Conditions for Use of High-Quality Instructional Materials in K–12 Classrooms. The study surveyed teachers in the 13 states participating in the High-Quality Instructional Materials and Professional Development (IMPD) Network, supported by the Council of Chief State School Officers (CCSSO). The researchers found that once states established formal definitions of HQIM and curated approved materials lists, their policies generally emphasized signaling and incentivizing HQIM adoption and use (Opfer et al., 2022).

For example, the Texas Education Agency (TEA) reviews instructional materials and provides tools and guidance on selecting HQIM via its website. As an incentive, districts can use ESSER set-aside funds to purchase print materials and professional development aligned with HQIM. However, despite these policies, Texas math teachers reported lower rates of HQIM adoption and use than their peers nationally. Only about one in four Texas teachers said their school or district had adopted a required or recommended standards-aligned math program, or that they personally used one regularly — significantly below national averages.

These findings suggest that improving HQIM implementation requires more than establishing policies or providing guidance. States must also collect and share data on curriculum use and invest in building district leaders' capacity to recognize and support high-quality materials.



Table 3. Overview of State Policies on HQIM Adoption for Math: 2025

State	Urban student	Does the state require districts to adopt and implement high-quality math curricula?	Does the state provide guidance on how to select high-quality math curricula?	Does the state allocate resources to help districts transition to and implement new curricula?	Does the state collect and publish data on the curricula districts are using?	Does the state require districts to post their math curricula on their websites?
Alabama	70%	Partially	Yes	Yes	No	No
Alaska	81%	No	No	No	Yes	No
Arizona	94%	No	No	No	No	No
Arkansas	68%	Partially	Yes	Yes	No	No
California	97%	Partially	Yes	Yes	Yes	Yes
Colorado	94%	Partially	Yes	No	No	No
Connecticut	88%	No	Yes	No	No	No
Delaware	86%	Partially	Yes	No	No	No
District of Columbia	100%	No	Yes	Yes	No	No
Florida	94%	Partially	Yes	Yes	No	Yes
Georgia	73%	No	Yes	Yes	No	Yes
Hawaii	NA	Partially	Yes	No	Yes	No
Idaho	74%	Partially	Yes	Yes	No	No
Illinois	91%	No	No	No	No	No
Indiana	76%	Partially	Yes	Yes	No	No
Iowa	67%	No	Yes	No	No	No
Kansas	76%	No	Yes	Yes	No	No
Kentucky	69%	Partially	Yes	Yes	No	No
Louisiana	86%	Partially	Yes	Yes	No	No
Maine	52%	No	Yes	No	No	No
Maryland	93%	Partially	Yes	No	Yes	No
Massachusetts	91%	Partially	Yes	Yes	Yes	No
Michigan	72%	No	No	No	No	No
Minnesota	81%	No	No	Yes	No	No
Mississippi	50%	Partially	Yes	Yes	No	No
Missouri	79%	No	No	No	No	No
Montana	67%	No	Yes	Yes	No	Yes
Nebraska	76%	No	Yes	No	Yes	No
Nevada	99%	Yes	Yes	No	No	No
New Hampshire	68%	No	No	No	No	No
New Jersey	94%	No	Yes	No	No	No
New Mexico	85%	Partially	Yes	Yes	*Yes	No

State	Urban student	Does the state require districts to adopt and implement high-quality math curricula?	Does the state provide guidance on how to select high-quality math curricula?	Does the state allocate resources to help districts transition to and implement new curricula?	Does the state collect and publish data on the curricula districts are using?	Does the state require districts to post their math curricula on their websites?
New York	88%	No	Yes	Yes	No	No
North Carolina	67%	Partially	Yes	Yes	No	No
North Dakota	64%	No	No	No	No	No
Ohio	77%	No	Yes	No	No	No
Oklahoma	71%	Partially	Yes	Yes	No	No
Oregon	90%	Partially	Yes	No	No	No
Pennsylvania	83%	No	No	No	No	No
Rhode Island	92%	Yes	Yes	No	Yes	No
South Carolina	83%	Yes	Yes	Yes	No	No
South Dakota	59%	No	Yes	No	No	No
Tennessee	71%	Yes	Yes	Yes	No	Yes
Texas	85%	Partially	Yes	Yes	No	No
Utah	96%	Partially	Yes	No	No	Yes
Vermont	46%	No	No	No	No	No
Virginia	82%	Partially	Yes	Yes	No	No
Washington	92%	No	Yes	No	No	No
West Virginia	63%	Partially	Yes	No	Yes	No
Wisconsin	80%	No	No	No	No	No
Wyoming	74%	No	No	Yes	No	No

Note: *New Mexico has a state website with data on HQIMs at the district level. Source: [NM Materials Matter - Districts](#); [State-Specific Recommendations - National Council on Teacher Quality](#); [Enrollment in public elementary and secondary schools, by region, state, and jurisdiction: Selected years, fall 1990 through fall 2023](#); [WRMReport2023_DIGITAL.pdf](#)



Policy/Practice Box 2: How States Prioritize HQIM to Improve Student Math Performance

State Spotlight: Advancing HQIMs

Louisiana

- Since 2012, Louisiana has implemented a robust review process to vet and promote High-Quality Instructional Materials.
- More than 95% of Louisiana schools use HQIM in math and English language arts.
- In 2023, Louisiana passed Act 260, requiring all fourth-eighth grade math teachers to complete a 50-hour numeracy course.

Kentucky

- The Kentucky Numeracy Counts Act, passed in 2024, represents a comprehensive statewide investment in math education.
- Funded 40 districts with \$70,000 grants to purchase high-quality instructional materials or HQIM-aligned professional learning.
- The state is partnering with statewide organizations to fund math teacher academies to give teachers access to research-based best practices.

Alabama

- Alabama passed a comprehensive Numeracy Act in 2022. The act explicitly tasks coaches with improving Tier 1 instruction, collaborating with school administrators to build and implement a strategic plan to improve student achievement, facilitating schoolwide professional learning, and supporting implementation of HQIM in math.
- Since 2023, the state has been working to place at least one math coach in every K-5 public school.
- The state developed ongoing partnerships with statewide organizations to train every math coach.

Rhode Island

- For each core subject — math, English language arts, and science and technology — Rhode Island law requires state leaders to identify at least five high-quality curricula that align with state academic standards; curriculum frameworks; and the Rhode Island Comprehensive Assessment System (RICAS), the state's student assessment.
- Districts are required to adopt and implement one of the state-approved curricula.
- However, to provide flexibility, the state allows districts to apply for a waiver if at least 75% of students meet state assessment expectations and no student subgroups require targeted assistance.

Source: [NCTQ, 2025](#)

The Role of School Boards in Defining High-Quality Math Instructional Materials

As stewards of educational quality, school board members play a critical role in advancing student achievement in math. While they may not be directly involved in selecting HQIMs, they often provide input, offer recommendations, and are consulted throughout the process. As the [Oregon Department of Education](#) notes, “In all cases, the local school board must approve the materials [HQIM] before teachers can use them in the classroom.”

By advocating for clear definitions, strategic investments, and informed decision-making, school board members can help ensure that all students meet grade-level expectations in math and make steady progress toward proficiency. Achieving this goal requires a careful review of curriculum quality, sustained policy support — such as high-quality professional development for teachers — and strong communication strategies that build trust and buy-in among parents, educators, and the wider community.

Texas: Leveraging Research to Support School Boards in Vetting HQIM

In Texas, school districts are not required to adopt state-recommended HQIM. However, the state offers financial incentives to encourage districts to adopt these approved materials. Ultimately, local school boards are responsible for voting on whether to adopt new curricula.

According to [Houston Public Media](#) (2025), three board members from Spring Independent School District (ISD) voted against adopting a state-recommended math curriculum, despite its designation as HQIM by the state. One board member expressed concern that the curriculum had not been independently evaluated by a third-party organization such as EdReports, which reviews K–12 instructional materials. Another board member opposed the adoption because no public evaluations of the curriculum were available at the time. The report noted that the district has since obtained additional data on the curriculum and plans to revisit the decision at a future board meeting.

This case highlights the critical need for accessible, research-based evaluations of instructional materials to support informed decision-making by school boards.



New York City: Education Leaders Strive to Foster a Love for Math Through HQIM

New York City has the largest public school system in the nation. In the 2022-2023 school year, the New York City public school district ([NYC Public Schools](#)) had a K-12 enrollment of 937,118 students. To address persistently low math achievement — particularly among Black and Hispanic students, two-thirds of whom are not performing at grade level on state assessments — district officials launched an [initiative](#) to improve instruction using an HQIM as the standard curriculum for all schools. The goal is to ensure that all students have consistent access to grade-level content.

Research shows that many people experience a genuine fear of math ([Beilock and Maloney, 2015](#)). Not only do they become nervous when engaging in math tasks, they also avoid math and math-related professions, severely limiting their future career and earning opportunities (Hembree, 1990; Chipman, Krantz, & Silver, 1992). One reason district leaders adopt HQIM for math is to foster a love of math — not fear — through a strong, engaging curriculum ([Banerji, 2024](#)). Education leaders in the city believe that expanding high-quality, evidence-based instructional materials and strategies will support all students to build critical and foundational math skills and make an impact that will last a lifetime.

Although a clear definition and framework for HQIM is essential, adopting new materials often requires additional considerations and changes in both policy and classroom practice. Research shows that teachers who had used their required or recommended materials for less than a year were more likely to find them too challenging for students ([Doan and Shapiro, 2023](#)). In contrast, teachers who received professional learning that helped them adapt the materials to meet student needs were less likely to view them as overly difficult. To address this, the district's HQIM investment included professional development and training to build teacher confidence and support effective curriculum implementation ([UFT, 2025](#)).

By Fall 2024, [420 high schools and 93 middle schools](#) were already teaching with the new math curriculum — covering nearly half a million students across New York City. Rolling out high-quality math instruction on such a scale is no small task. Research shows that great math teaching requires a careful balance: helping students grasp concepts deeply while also building procedural fluency ([Sawchuk, 2023](#)). To make that possible, district leaders gave teachers flexibility — adjusting pacing, skipping certain assessments when needed, and tapping into extra resources to reach diverse learners. They also expanded professional learning, ensuring educators had the tools and confidence to bring the curriculum to life in their classrooms ([Schwartz, 2025](#)).

The New York City example is promising, as district leaders emphasize that high-quality instructional materials should reduce math anxiety, accommodate diverse learning needs and styles, and connect math instruction to real-world applications.

A Policy Framework for Vetting HQIM

School districts play a critical role in promoting HQIM. According to a [national teacher survey](#) on HQIM adoption, teachers were unlikely to use HQIM unless their district had formally adopted the materials. To successfully adopt HQIM, school boards need a clear policy framework. Such a framework provides the structure necessary to guide decision-making, promote transparency, and evaluate materials against established quality standards.

A policy framework is a structured set of principles, guidelines, and procedures that support consistent decision-making and implementation within a specific policy area. When applied to HQIM, a policy framework provides school boards with a clear structure to guide the adoption process and ensure alignment with district goals. Specifically, it helps school boards understand:

- Why HQIM is needed for math instruction (the rationale, supported by data and evidence).
- What the adoption aims to achieve (goals and intended outcomes).
- Who is responsible for vetting materials (roles and responsibilities of key stakeholders).
- How to assess curriculum quality (e.g., using EdReports reviews and alignment to state standards).
- How to engage educators, families, and community members in the selection process.
- What steps to follow when piloting and adopting new materials.
- How to monitor implementation, measure impact, and ensure equitable access for all students.

This framework supports transparent, evidence-based decision-making and ensures alignment with long-term student learning goals in curriculum adoption. The [Peninsula School District](#) in Washington provides an example, as it is conducting a comprehensive review of its current School Board–adopted math curriculum across all grade levels. The district’s approach illustrates several key components of a policy framework.

- **Why:** To ensure students receive a rigorous, standards-aligned math curriculum grounded in evidence-based instructional practices.
- **What:** To select instructional materials that align with the Washington State Mathematics Standards and promote equitable access to high-quality learning experiences for all students.
- **How:** The Teaching and Learning Department works closely with classroom teachers, school principals, special education staff, and multilingual support teams to thoroughly evaluate the existing curriculum. The process also includes opportunities for input from families and community members, ensuring that a broad range of perspectives informs the decision.
- **Curriculum Adoption Process:** (1) Conduct research; (2) Screen materials using a rubric; (3) Pilot selected curricula in classrooms; (4) Review and decide through a representative committee; (5) Present recommendations to the Instructional Materials Committee; (6) Final adoption by the School Board.

HQIM Evaluation Tools

School board members are often asked to approve curriculum adoption through a formal agenda item. To make an informed decision, it is essential that board members review the proposed curriculum well in advance of the vote. Because the review process can take several weeks, board members are encouraged to request additional time if needed. One option is to “[table](#)” the agenda item — postponing the vote to allow for a more thorough evaluation of the materials.

School board members should play an active role in the vetting process for HQIM. This includes engaging with teachers and district curriculum selection teams, reviewing research, collecting parent feedback, contacting other districts that have adopted the vetted HQIM, and asking informed questions. In addition, board members should become familiar with commonly used HQIM evaluation tools to better understand how materials are assessed and selected.

- [EdReports](#) offers evidence-rich, comprehensive information about a program’s alignment to the standards and other indicators of quality.
- What Works Clearinghouse ([WWC](#)) or What Works in Math provides reports that show which tools increase math achievement by grade. WWC also offers practice guides that show effective practices for topics such as fractions and [teaching strategies](#) for improving algebra knowledge in middle and high school students.
- [Curricular Resources Annotated Reviews](#) from the Louisiana Department of Education offer a free, publicly available rating system for instructional materials. These online reviews help determine the degree to which materials align with state content standards, supporting school systems in making informed curriculum decisions. Each local school system is encouraged to evaluate whether the use of these resources aligns with the specific educational needs of its students.

Cost is often cited as a barrier to adopting HQIM, particularly given that about 80% of [per-pupil spending](#) is allocated to instruction — including teacher salaries, materials, and tutoring. However, research shows that HQIM typically costs no more than lower-quality alternatives, and many high-quality resources are available at no cost online. That said, districts may incur additional expenses related to printing and professional development ([Partelow and Shapiro, 2018](#)).

The primary goal of vetting HQIM is to ensure a strong return on investment: that every student receives effective math instruction, advances confidently through grade levels, and develops lasting mathematical proficiency. The experiences of Texas and New York City illustrate the complexities boards face in reviewing materials and navigating instructional debates. These examples point to the need for clear definitions, evidence-based support, and deeper board knowledge of effective math learning practices.

Questions for School Boards to Support HQIM

School boards play a role in shaping HQIM by working closely with superintendents, principals, and district curriculum experts. Drawing on the comprehensive findings of the National Mathematics Advisory Panel, the latest HQIM research, and state-level definitions, the Center for Public Education recommends that school boards lead discussions in the following 10 key areas to strengthen the selection and use of high-quality instructional materials:

1. **Alignment to Standards:** Do the materials align with rigorous, grade-level math standards, ensuring content is appropriate and builds on prior knowledge?
2. **Conceptual Understanding:** Does the curriculum promote deep understanding of mathematical concepts — not just rote procedures — using clear explanations, visual models, and real-world applications?
3. **Coherence:** Does the curriculum support instructional coherence by ensuring that materials, assessments, and professional learning align with the district's broader instructional strategy and goals?
4. **Engagement and Relevance:** Do the materials feature engaging, culturally responsive, and relevant tasks that motivate students and connect math to their daily lives?
5. **Differentiation:** Does the curriculum provide scaffolds for struggling learners and enrichment opportunities for advanced students, meeting diverse learning needs?
6. **Practice and Application:** Do the materials include varied and purposeful practices such as fluency exercises, problem-solving tasks, and opportunities to apply concepts in new contexts?
7. **Assessment Tools:** Does the curriculum offer both formative and summative assessments to monitor progress, provide feedback, and inform instruction?
8. **Teacher Support:** Do the resources provide clear guidance for teachers, including lesson plans, instructional strategies, and access to professional development?
9. **Evidence-Based Design:** Are the materials grounded in research on how students learn math?
10. **Accessibility:** Are the materials designed for all learners, with features such as clear fonts, multilingual support, and compatibility with assistive technologies?



Policy/Practice Box 3: How Los Angeles Unified School District Improves Math Instruction

LAUSD's Math Gains: A Case for Strategic Investment in HQIM

"California needs high-quality instructional materials to support teachers, boost math learning" ([Andres-Salgarino, 2025](#)). The Los Angeles Unified School District (LAUSD) began addressing this need nearly a decade ago. Between 2015 and 2024, the district saw meaningful gains in math performance on the Nation's Report Card. For instance, the percentage of Hispanic fourth grade students scoring at or above proficiency rose from 14% to 18%, while national figures for this group remained largely unchanged. Among English language learners, the percentage scoring at or above the Basic level increased from 30% to 36%.

In [2015](#), the district used grant funding to partner with the Partnership for Los Angeles Schools — an independent nonprofit focusing on accelerating achievement for Black and Latino students — and launched an initiative to introduce HQIM into its schools. Since then, the district has implemented a revised math curriculum across 223 secondary schools.

Since 2020, LAUSD has invested more than \$73 million to transform math instruction. This investment has supported a range of professional learning opportunities to ensure effective implementation of the high-quality math curriculum. The district's support includes instructional coaching, teacher professional development, and collaborative learning sessions for school leaders and regional directors.

In 2023, the district's gains in math proficiency have outpaced the statewide average, with especially strong results among high-need student populations. "In recent years, the coordinated investments in improving math instructional practice have shown significant gains for Los Angeles students," LAUSD Superintendent [Alberto M. Carvalho](#) said. "We are proud of our meaningful collaboration with our educators, the Division of Instruction and the Partnership for Los Angeles Schools, and look forward to the incredible results that we will achieve with our district's significant investments in materials and interventions."

In 2024, the district received a \$16.8 million five-year grant to improve math instruction and student outcomes through the implementation of high-quality instructional materials and professional learning systems.

Resources for School Boards to Consider Defining HQIM

1. [EdReports](#) is an independent nonprofit committed to ensuring all students have access to high-quality instructional materials. The organization publishes free reviews of K–12 instructional materials, using an educator-led approach to evaluate materials based on the quality of their design: how well they structure evidence-based teaching and learning to support college and career-readiness.

2. The Council of Chief State School Officers (CCSSO) collaborated with some states and launched the High-Quality Instructional Materials and Professional Development (IMPD) Network in 2017. The goal of the IMPD Network is to ensure that every student, every day, has access to meaningful, affirming, and grade-level instruction.

- [2023 IMPD Network Impact Report](#): This guide highlights the significant progress states in the Network have made in increasing the number of districts using HQIM and the number of students who now have access to these resources. It also showcases some of the innovative policies driving better outcomes.
- [CCSSO's new report](#), *A Nation of Problem-Solvers: How State Leaders Can Help Every Student Achieve in Math*, supports state chiefs seeking effective strategies to enhance mathematics outcomes for all students.
- [CCSSO's online resource guide](#) analyzes the current research and best practices in mathematics and provides six concrete recommendations for state leaders to take action based on their state context, offering a pathway to meaningful and lasting improvements in math education for all students.

3. [Foundations for Success: The Final Report of the National Mathematics Advisory Panel](#) (U.S. Department of Education, 2008). This report lays out many concrete steps that can be taken now toward significantly improved mathematics education. The six recommendations for making improvements include:

1. The mathematics curriculum in Grades PreK-8 should be streamlined and should emphasize a well-defined set of the most critical topics in the early grades.
2. Use should be made of what is clearly known from rigorous research about how children learn, especially by recognizing (a) the advantages for children in having a strong start, (b) the mutually reinforcing benefits of conceptual understanding, procedural fluency, and automatic (i.e., quick and effortless) recall of facts, and (c) that effort, not just inherent talent, counts in mathematical achievement.
3. Citizens and their educational leadership should recognize mathematically knowledgeable classroom teachers as having a central role in mathematics education and should encourage rigorously evaluated initiatives for attracting and appropriately preparing prospective teachers, and for evaluating and retaining effective teachers.
4. Instructional practice should be informed by high-quality research, when available, and by the best professional judgment and experience of accomplished classroom teachers.
5. National Assessment of Educational Progress (NAEP) and state assessments should be improved in quality and should carry increased emphasis on the most critical knowledge and skills leading to Algebra.
6. The nation must continue to build capacity for more rigorous research in education so that it can inform policy and practice more effectively.

4. The following resources are available to help school districts improve math achievement among English language learner (ELL) students.

- [Defining High-Quality Instructional Materials for Mathematics: Centering the Assets and Needs of Multilingual Learner and English Learner Students \(2023\)](#)
- [Multilingual Learner Curriculum Adoption Toolkit](#), by English Learners Success Forum (ELSF)
- [An Urgent Need for Transformation: Culturally Responsive and Sustaining Math and Science Education Towards Thriving Futures \(2024\)](#)

5. The following table includes HQIM definitions from 19 states.

State	Term	Definition
Arkansas	HQIM	HQIM are curriculum materials aligned with state academic standards that include evidence-based strategies, inclusive practices, and embedded teacher support. High-quality materials consider the needs and experiences of diverse learners that are actively literate, critical thinkers, and engaged in the community.
Delaware	HQIM	HQIM are comprehensive materials that are aligned with the adopted Delaware content standards. They are written with clear purpose, effective lesson structure, and pacing to provide equitable access to the course- or grade-level content, when used in accordance with their intended design.
Louisiana	HQIM	HQIM is defined as strong, engaging resources and approaches that align with state standards, are endorsed by educators, and are centered on equity and adaptability for all learners. These materials are explicitly focused on the use of approved resources and do not include additional or supplemental materials. They are also aligned with specific grade levels and supported by training for teachers and families.
Maryland	HQIM	HQIM are grade-level and standards-aligned instructional materials that are used to build knowledge for all students in a language affirming and culturally responsive way.

State	Term	Definition
Michigan	HQIM	HQIM must be closely aligned with Michigan’s academic standards, ensuring students are taught the essential knowledge and skills for their grade level. Evidence-Based Practices: HQIM reflect evidence-based practices that have been shown through research to be effective in supporting student learning. Support for All Learners: They provide support for all students, including those with disabilities, emergent bilinguals, and gifted and talented students, ensuring all learners can access rigorous, grade-level content. Teacher and Student Materials: HQIM provides a comprehensive set of resources for both teachers and students — including lesson plans, workbooks, and assessments — to support effective instruction and learning. Rigorously Reviewed: Michigan encourages the use of materials that have been rigorously reviewed by third-party organizations like EdReports, which evaluate materials based on their alignment to standards and usability. Supports Literacy Achievement: MDE emphasizes the importance of HQIM that are aligned with the science of reading, particularly in early literacy, to improve student outcomes.
Mississippi	HQIM	HQIM is defined as materials that are aligned with the Mississippi College- and Career-Readiness Standards, are externally validated, are comprehensive, and include knowledge-building complex texts, problems, and assessments. HQIM can help identify students’ strengths and areas for improvement. It creates a sequential plan designed to prepare students for college and the workforce. This approach is beneficial for teachers and is accessible to students with diverse learning needs.
Nebraska	HQIM	HQIM creates coherence, offers consistency across all learning environments, and supports student voice and social-emotional health. The predictable structure of coherent, consistent instructional materials and content is foundational for teachers and students alike. High-quality instructional materials also reflect students’ cultures, languages, and lived experiences and help them build deep content knowledge.

State	Term	Definition
New Mexico	HQIM	HQIM is content-rich, fully accessible, culturally and linguistically relevant, free from bias, research-based, and aligned with New Mexico's state standards. They are written with clear purpose, effective lesson structure, and pacing to provide flexibility for teachers to best support learning for all students, encouraging inquiry and curiosity. HQIMs provide a variety of relevant assessments to support and guide teachers with professional tools to evaluate student comprehension of the content and provide a deeper understanding of the standards. HQIMs also provide support to identify the linguistic and cultural lenses that students use to make meaning in the content area.
Ohio	HQIM	HQIM supports educators with: - Standards-aligned instructional content. - A coherent scope and sequence for grade-level lessons and unit plans. - Evidence-based instructional strategies and embedded formative assessments that support data-driven instruction. - Educative materials that provide implementation support for educators to ensure all students' learning needs are met.
Oregon	HQIM	HQIM meets research-aligned criteria for that content area, developed by content specialists and educators.
Tennessee	HQIM	HQIM is defined as strong, engaging resources and approaches that align with state academic standards, are endorsed by educators, and are centered on equity and adaptability for all learners. These materials should also be supported by training for teachers and families and should be aligned with a state's academic standards, with embedded assessments to monitor progress.
Texas	HQIM	HQIM refers to materials aligned to academic standards, are content-rich with clear learning outcomes, reflect evidence-based practices, and provide a full suite of teacher and student materials.

State	Term	Definition
Vermont	HQIM or Mathematics Proficiency-based learning	The Proficiency-Based Graduation Learning Hierarchies support equity by providing a cohesive and coordinated vision of student-centered learning across Vermont schools. The hierarchies serve as a foundation for the implementation of standards adopted by the Vermont State Board of Education, Local Comprehensive Assessment Systems, flexible pathways, and personalized learning plans. While the Priority Performance Indicators (PPIs) list only content standard clusters, the mathematics practice standards outlined in the CCSS-M (Common Core State Standards for Mathematics) are equally important. The practice standards are: • Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics; use appropriate tools strategically. • Attend to precision. • Look for and make use of structure. • Look for and express regularity in repeated reasoning. A mathematically literate person is proficient in the areas outlined in the content-based PPIs and is also skilled in the habits and ways of working outlined in the practice standards.
Kentucky	High-quality instructional resources	High-Quality Instructional Resources (HQIRs) are defined as materials that are: • Aligned with the Kentucky Academic Standards (KAS). • Research-based and/or externally validated. • Comprehensive to include engaging texts (books, multimedia, etc.), tasks, and assessments. • Based on fostering vibrant student learning experiences. • Culturally relevant, free from bias. • Accessible for all students.
Indiana	High-quality curricular materials	At least 85% of lessons provide a balance of opportunities for students to build conceptual understanding, procedural fluency, and real-world application skills. There is intentional sequencing of conceptual understanding using visual models and/or concrete examples throughout the lessons and units.

State	Term	Definition
Massachusetts	HQIM or High-quality curricular materials	High-quality curricular materials exhibit a coherent sequence of lessons that target learning of grade-appropriate skills and knowledge through instructional strategies that are well supported by research and other characteristics such as engaging content and inclusive design. High-quality instructional materials have an increased positive impact on student learning when paired with curriculum-specific, ongoing professional learning.
New York	High-quality curriculum	A high-quality curriculum fosters both conceptual understanding and procedural fluency while consistently incorporating mathematical practices. To support student learning across these domains, instructional materials must be used skillfully. Teachers need to know how to adapt materials without compromising learning opportunities and ensure the content includes appropriate scaffolds and framing to promote cultural relevance and equity.
Rhode Island	High-quality curriculum materials	High-quality curriculum materials are aligned with rigorous college- and career-ready standards. Since 2017, Rhode Island has continued to partner with EdReports, a nationally recognized, independent nonprofit organization that provides expert reviews of instructional materials.
Florida	High-quality math instruction	The Five Components of Evidence-Based, High-Quality B.E.S.T. Math Instruction Florida's B.E.S.T. Standards — Benchmarks for Excellent Student Thinking — are the state's academic standards for English Language Arts (ELA) and Mathematics, developed to replace the Common Core. These standards emphasize clarity, foundational skills, and high expectations for all learners. High-quality math instruction aligned with the B.E.S.T. Standards includes five key components: 1. Horizontal and Vertical Alignment — Ensures coherence across grade levels and consistency within each grade. 2. Balanced Instruction — Integrates inquiry-based learning with direct instruction to support deep understanding. 3. Student-Centered Instruction — Engages students actively in the learning process and promotes ownership of learning. 4. Assessment — Uses formative and summative assessments to inform instruction and measure progress. 5. Tiered Instruction — Differentiates support to meet the diverse needs of all students.

Conclusion

Defining high-quality instructional materials in math is more than a technical exercise — it is a strategic imperative for improving student outcomes, especially in urban districts where achievement gaps persist. As this report demonstrates, a clear, research-informed definition of HQIM equips school and district leaders to make more effective decisions about curriculum selection, resource allocation, and educator support. When leaders establish a shared vision rooted in evidence, they lay the groundwork for ensuring that all students — regardless of background — receive rigorous, grade-level math instruction. Looking ahead, school boards and district teams can use the insights and recommended action steps in this report as a starting point for promoting math achievement through the adoption of high-quality instructional materials.



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About CPE

The National School Boards Association (NSBA) believes that accurate, objective information is essential to building support for public schools and creating effective programs to prepare all students for success. As NSBA's research branch, the Center for Public Education (CPE) provides objective and timely information about public education and its importance to the well-being of our nation. Launched in 2006, CPE emerged from discussions between NSBA and its member state school boards associations about how to inform the public about the successes and challenges of public education. To serve a wide range of audiences, including parents, teachers, and school leaders, CPE offers research, data, and analysis on current education issues and explores ways to improve student achievement and engage support for public schools.

About NSBA

Founded in 1940, the National School Boards Association (NSBA) is a nonprofit organization representing state associations of school boards and the Board of Education of the U.S. Virgin Islands. Through its member state associations that represent locally elected school board officials serving millions of public school students, NSBA advocates for equity and excellence in public education through school board leadership. We believe that public education is a civil right necessary to the dignity and freedom of the American people and that each child, regardless of their disability, ethnicity, socioeconomic status, or citizenship, deserves equitable access to an education that maximizes their individual potential.

For more information, visit nsba.org.

