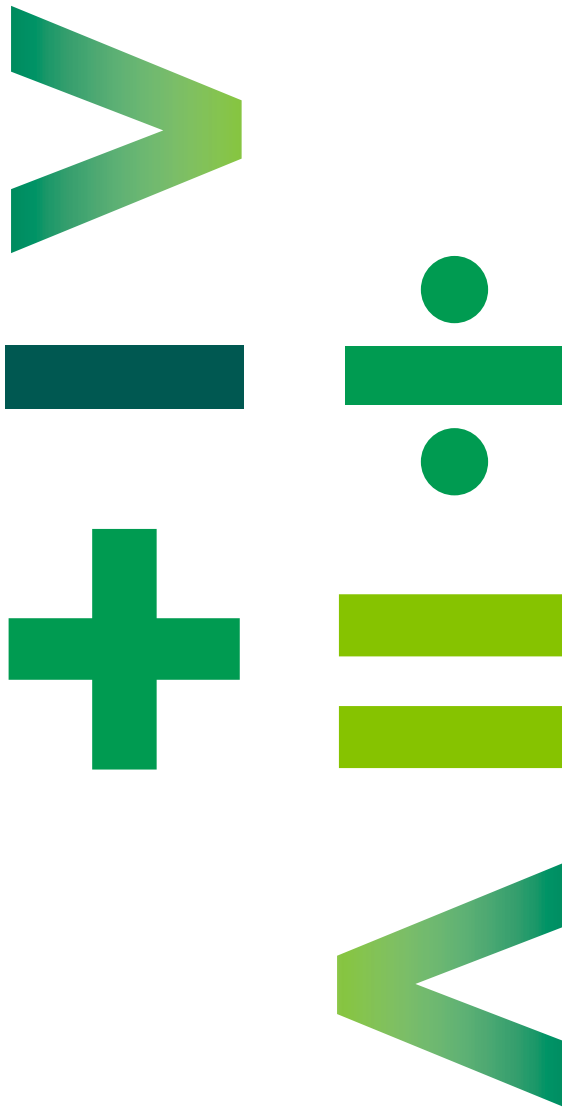
Math Matters Study

Education Leaders' and Parents' Views on K-12 Math Education

GALLUP®

Table of Contents



Acknowledgements

Gallup acknowledges the Gates Foundation for its sponsorship of this study. Their support enabled the research and analysis presented in this report.

We also recognize the contributions of the research team and survey participants who played a vital role in this study. Their insights and efforts have been essential in shaping the findings and conclusions shared in this report.

This report represents an effort to provide data-driven insights on math attitudes, made possible through this collaboration.

Introduction

Math skills are critical to young people's future success in everyday life and work, but many K-12 students are still struggling to learn the math they need for their future. Despite educators' enormous efforts,[1] recent math scores on the Nation's Report Card, which provides national results about students' performance, are still plateauing and national scores remain lower than their peak in 2013.[2] Other measures of U.S. math performance, such as scores on the Trends in International Math and Science Study (TIMSS) and Program for International Student Assessment (PISA), are also declining.[3,4] To address these challenges, many leaders in K-12 education are pursuing high-quality instructional materials, high-dosage tutoring and curriculum-aligned teacher training as evidence-based solutions that have a positive impact on students' success in math.[5,6] Research is still needed to understand the uptake of these interventions in schools, districts and communities.

Given the critical nature of math skills and national indicators that suggest American students are not advancing at a rate necessary to meet workforce needs and students' own aspirations, Gallup, with support from the Gates Foundation, conducted important research among Americans (including K-12 parents) and education leaders nationally to better understand the barriers that exist to advancing math education. Gallup surveyed 5,136 Americans (including 808 parents) and 1,471 education leaders from across the United States using the probability-based Gallup Panel and an online web survey. Results are weighted to be nationally representative for each population.

The Gallup Math Matters Study reveals that K-12 education leaders recognize the importance of high-quality instructional materials and other evidence-based interventions for improving math education in the U.S. However, leaders also report significant obstacles to greater use of these practices, such as staff hiring challenges and lack of alignment between professional learning and best practices. Parents of K-12 children echo these findings, suggesting a need for better knowledge of, and access to, evidence-based interventions.

1 Hill, H. C. (2021, February 4). After 30 years of reforms to improve math instruction, reasons for hope and dismay. Brookings. https://www.brookings.edu/articles/after-30-years-of-reforms-to-improve-math-instruction-reasons-for-hope-and-dismay/

2 The Nation's Report Card. (2024). NAEP Report Card: Mathematics. https://www.nationsreportcard.gov/reports/mathematics/2024/g4_8/?grade=4

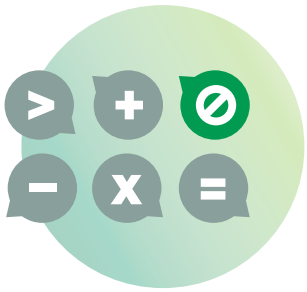
3 IEA TIMSS & PIRLS. (2023). TIMSS 2023 International Results in Mathematics and Science. Boston College Lynch School of Education and Human Development. https://timss2023.org/results/

4 National Center for Education Statistics. (2022). PISA 2022 Mathematics Literacy Results. Institute of Education Sciences. https://nces.ed.gov/surveys/pisa/pisa2022/#/mathematics/trends

5 Johns Hopkins School of Education. (2018, November). What we teach matters: How quality curriculum improves student outcomes. https://learningfirst.com/wp-content/uploads/2018/11/What-we-teach-matters-FINAL-for-publication-15-Nov.pdf

6 Robinson, C. D., Kraft, M. A., & Loeb, S. (2021, February). Accelerating Student Learning With High-Dosage Tutoring. EdResearch for Discovery. https://files.eric.ed.gov/fulltext/ED613847.pdf

Key Findings

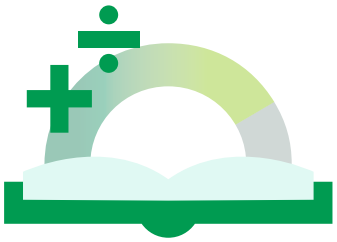


1 **1 in 6 parents**

never hear from their child's school about the goals for their child's math learning or what their child is learning in math class.

The lack of information is greater in high schools, as 27% of high school parents say they have never received information about their child's math learning or their math learning goals (24%).

Education leaders recognize the importance of defining quality in math curriculum...



2 **8 in 10**

education leaders (83%)

say that designation as HQIM is an important factor in selecting math curriculum.

...but defining what counts as HQIM can be challenging.

3 **1 in 4**

leaders say their school or district *has* an official definition of HQIM.

1 in 4

(26%) leaders *do not know* whether their school or district has an official definition.

There is no single definition of HQIM and individual organizations and states may have their own standards for curriculum quality.

4 **20%**

of education leaders

are very familiar with high-quality instructional materials (HQIM), a concept that defines quality in school curricula.

Thirty-seven percent of education leaders are not very or not at all familiar with HQIM.

Education leaders report significant obstacles to other best practices in math education.

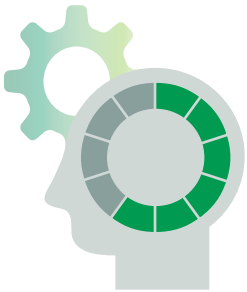
5 **About two-thirds (69%) of education leaders**

say that most or all of their math curriculum counts as HQIM

despite an overall lack of familiarity with HQIM and little definition alignment within schools.

6 **Just 6 in 10 education leaders**

say their school's math-related professional learning is aligned to their curriculum.



7 **Only 11% of leaders**

would rate their school or district's math-related professional learning as excellent, and 39% say it is fair or poor.

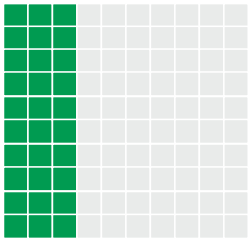
8 **3 in 10 parents (31%)**

say their K-12 child is enrolled in math tutoring.

Of those in tutoring, about two-thirds say it is in-person and less than half (42%) say their child's tutoring occurs more than once a week.

9 **One-third of K-12 parents**

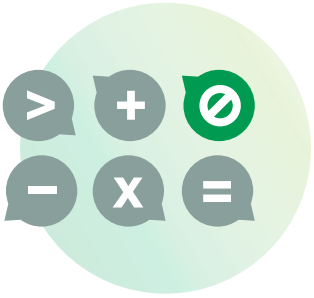
do not currently have their child in tutoring but say they would enroll if it were more available or accessible.



10 **48% of education leaders**

say finding well-qualified math teachers is very challenging.

Detailed Findings

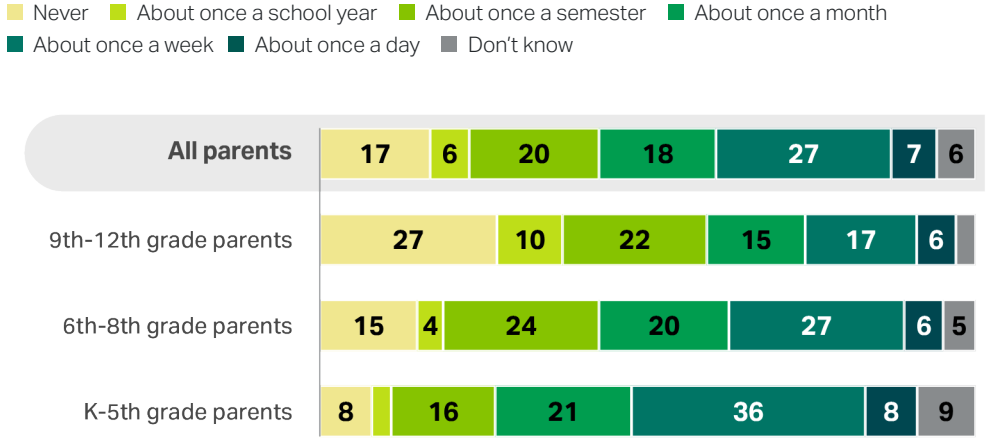


One in six parents never hear from their child's school about what their child is learning in math class

Parents and family members are key partners in the mission to improve students' math outcomes. However, about half receive regular communication about what their child is learning in school, and 43% receive infrequent communication, including 17% who say they receive no information at all.

CHART 1

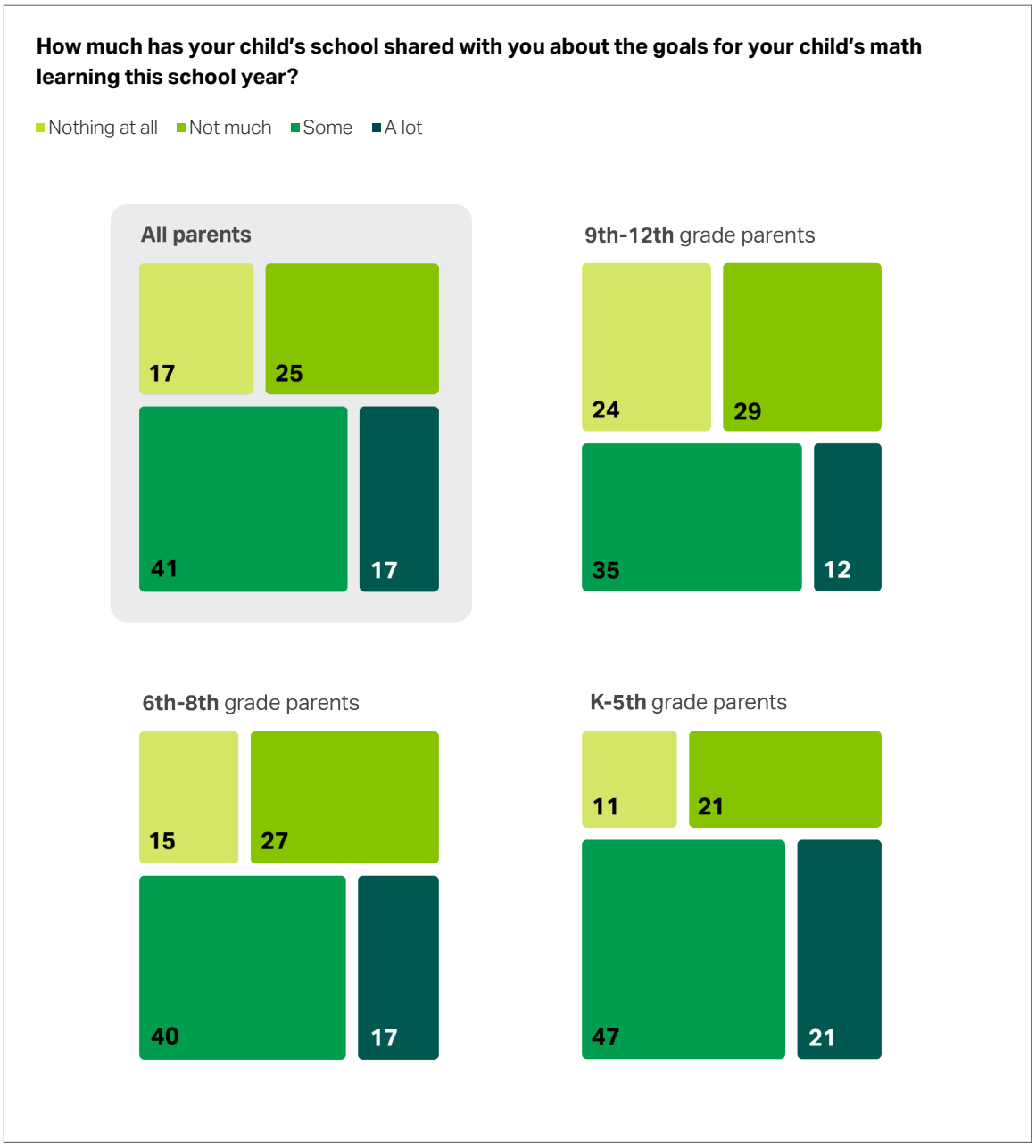
How often do you receive communication from your child's school about what they are learning in math class?



Note: Data labels less than 4% are not displayed.

Similarly, one in six parents say they have not received any information from their child's school about their math learning goals, and 25% say they have not received much. Knowledge of learning goals is lower among parents with children of high school age.

CHART 2



Just one in five education leaders are very familiar with HQIM

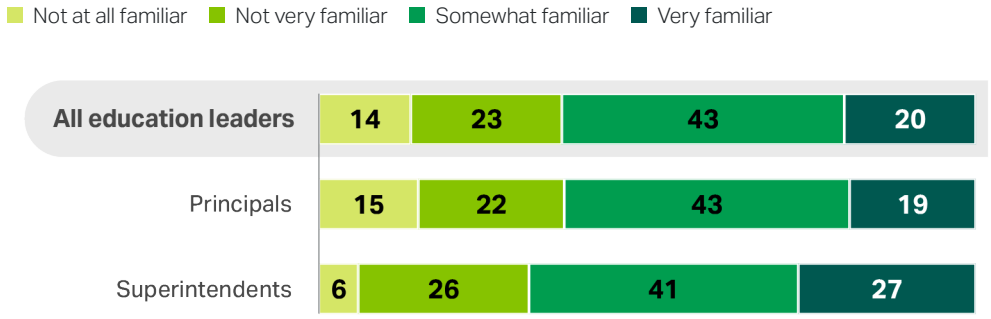
High-quality instructional materials refer to instructional resources such as curriculum guides, textbooks, digital tools and lesson plans that incorporate best practices in pedagogy.

While there is no single, uniform definition of HQIM, curricula that count as HQIM are aligned to standards, content-rich, evidence-based, inclusive and connected to research. Prior research shows that HQIM can make a difference for students, improving their learning and achievement.[7] Yet educators must be knowledgeable about HQIM, and the materials' implications for student learning, to leverage them effectively in schools and districts. Just one in five education leaders are very familiar with the concept of HQIM, and few leaders currently say their school or district has an official definition of HQIM (26% of principals and 22% of superintendents).

> Few leaders — 26% of principals and 22% of superintendents — currently say their school or district has an official definition of HQIM.

CHART 3

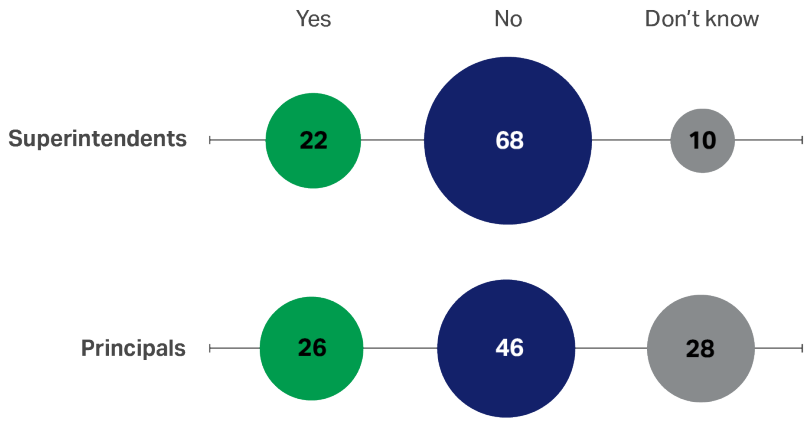
How familiar are you with the concept of High-Quality Instructional Materials (HQIM)?



7 Johns Hopkins School of Education. (2018, November). What we teach matters: How quality curriculum improves student outcomes. https://learningfirst.com/wp-content/uploads/2018/11/What-we-teach-matters-FINAL-for-publication-15-Nov.pdf

CHART 4

Does your building or district have an official definition of High-Quality Instructional Materials (HQIM)?



Familiarity with HQIM is higher among principals at elementary schools compared with those at middle and high schools. Among both superintendents and principals, leaders in schools and districts in lower-income areas are more likely to be familiar with HQIM than those in higher-income areas.

CHART 5

How familiar are you with the concept of High-Quality Instructional Materials (HQIM)?

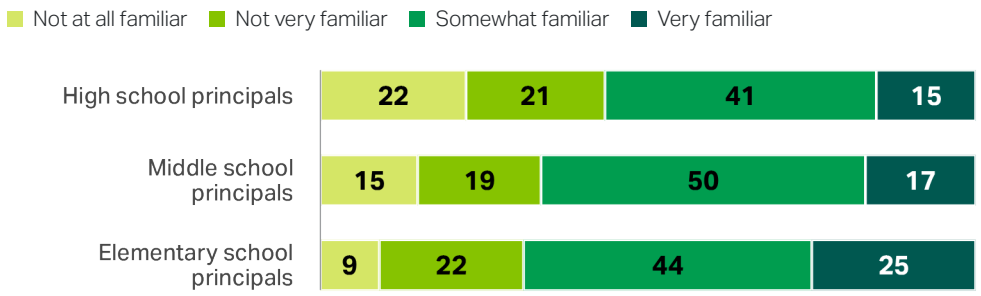
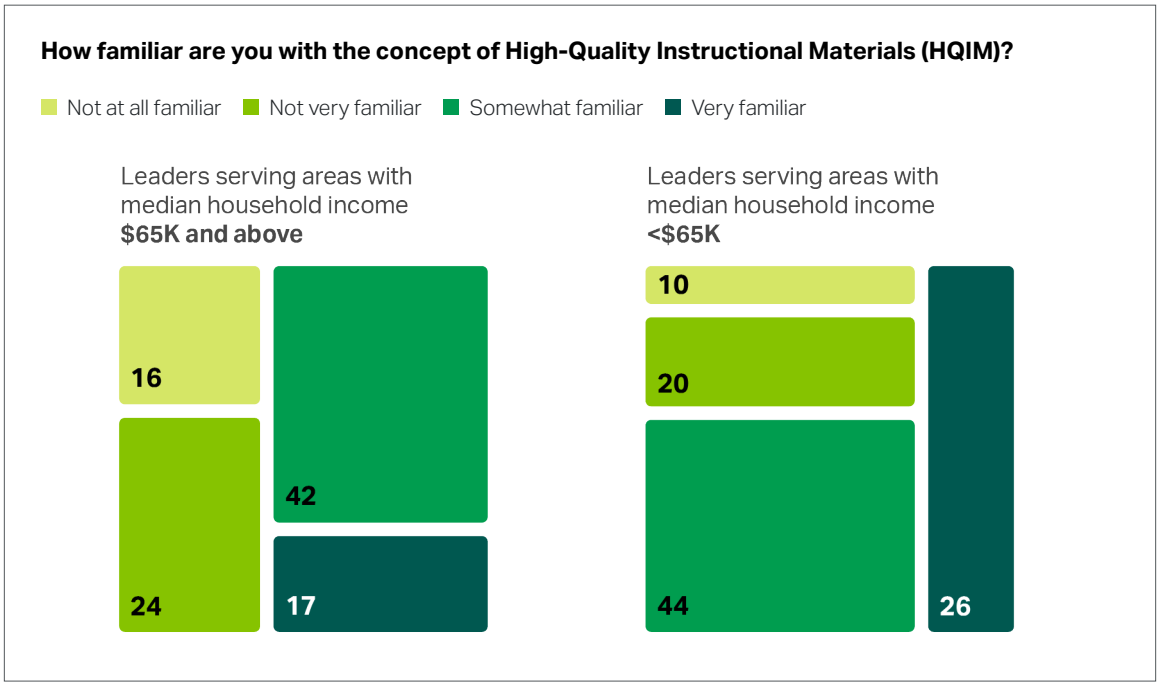
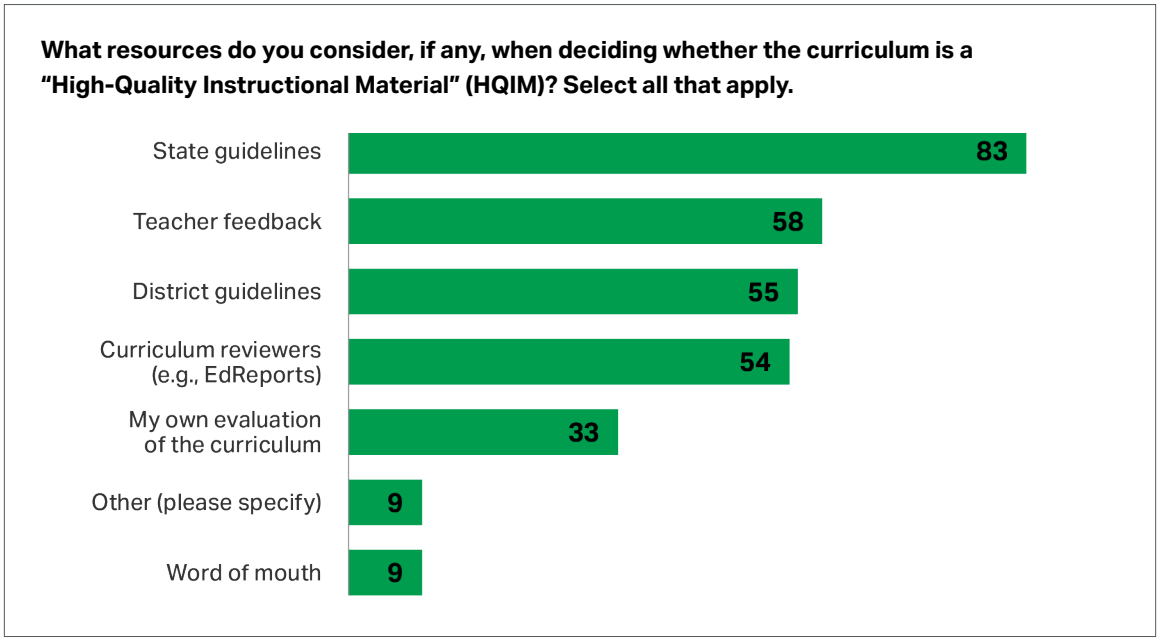


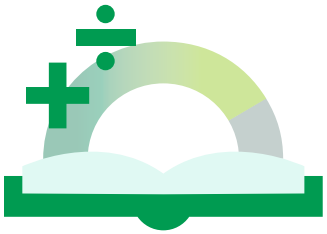
CHART 6



For education leaders with at least some familiarity with HQIM, state guidelines are most often used to determine whether a curriculum qualifies. Education leaders say they also commonly rely upon teacher feedback, district guidelines and curriculum reviews (i.e., EdReports) to determine whether a curriculum counts as HQIM.

CHART 7



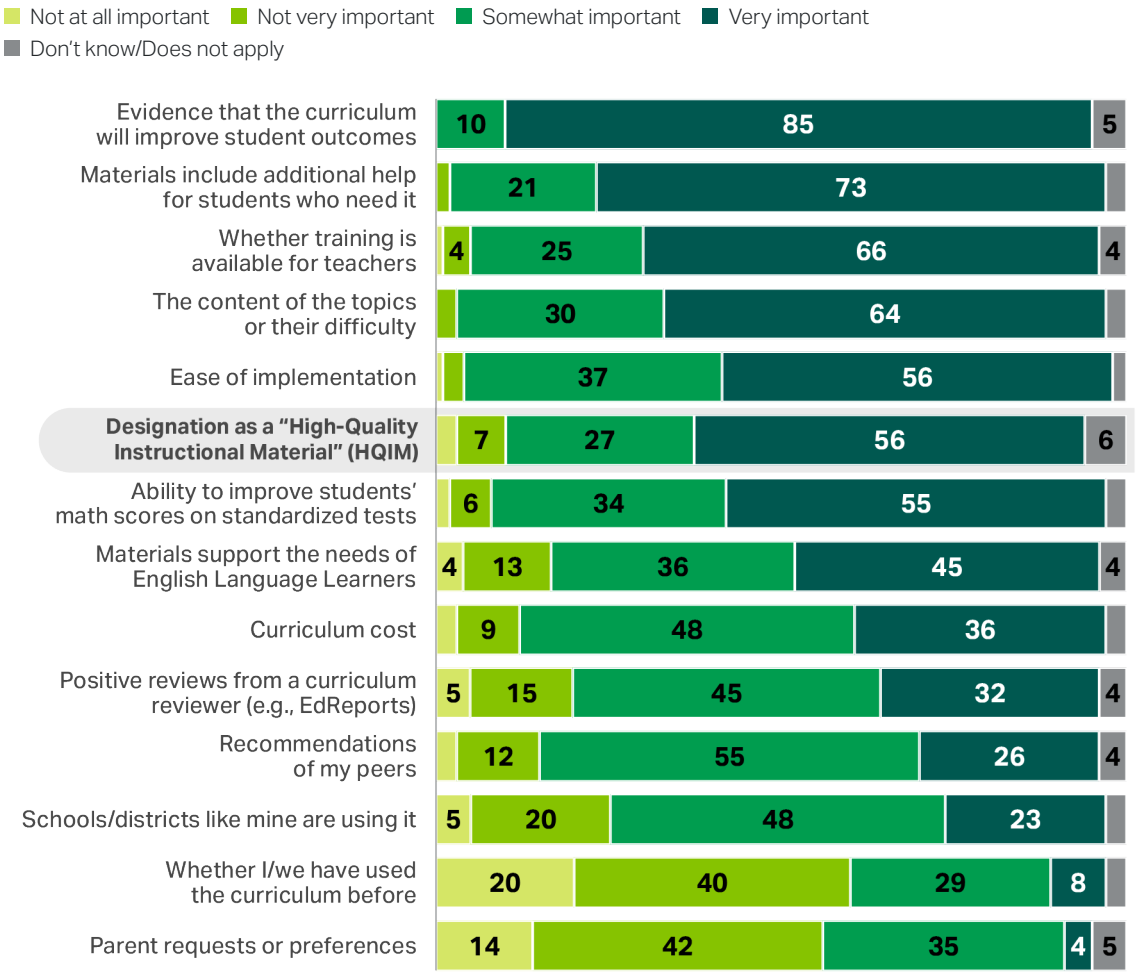


More than eight in 10 education leaders (83%) say designation as HQIM is important in selecting math curriculum

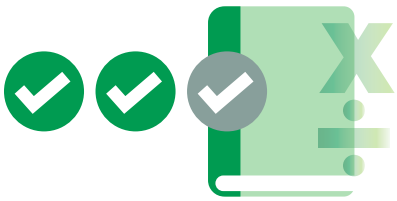
Most education leaders say that designation as HQIM is a very (56%) or somewhat (27%) important factor in determining which math curriculum is used (6% say they don't know whether designation as HQIM is important). Evidence that the curriculum will improve student outcomes — a key aspect of HQIM — is the most-cited factor education leaders use in determining which math curriculum is used in their school or district.

CHART 8

To your knowledge, how important are each of the following factors in determining which math curriculum is used in your [building/district]?



Note: Data labels less than 4% are not displayed. All education leaders were provided with all questions in the list, regardless of their familiarity with HQIM.



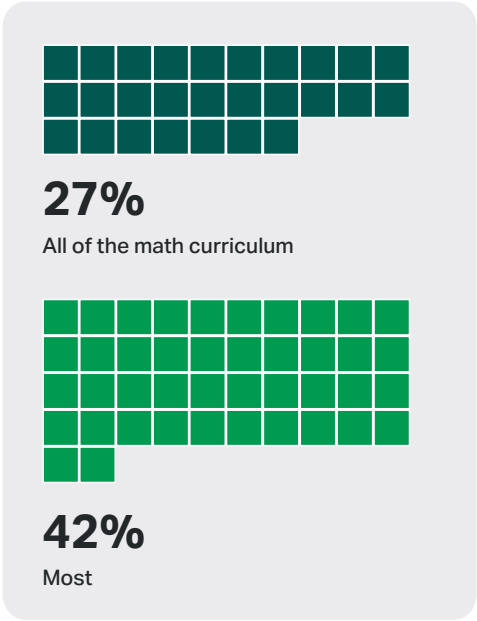
About two-thirds (69%) of education leaders say that most or all of their math curriculum counts as HQIM despite an overall lack of familiarity with HQIM and little definition alignment within schools.

This rate is similar across schools in both higher- and lower-income areas, but K-8 leaders are more likely than their counterparts in high schools to say most or all of their math curriculum counts as HQIM (72% vs. 60%).

CHART 9

In your opinion, how much of the current math curriculum in your building/district counts as a "High-Quality Instructional Material" (HQIM)?

Among all education leaders



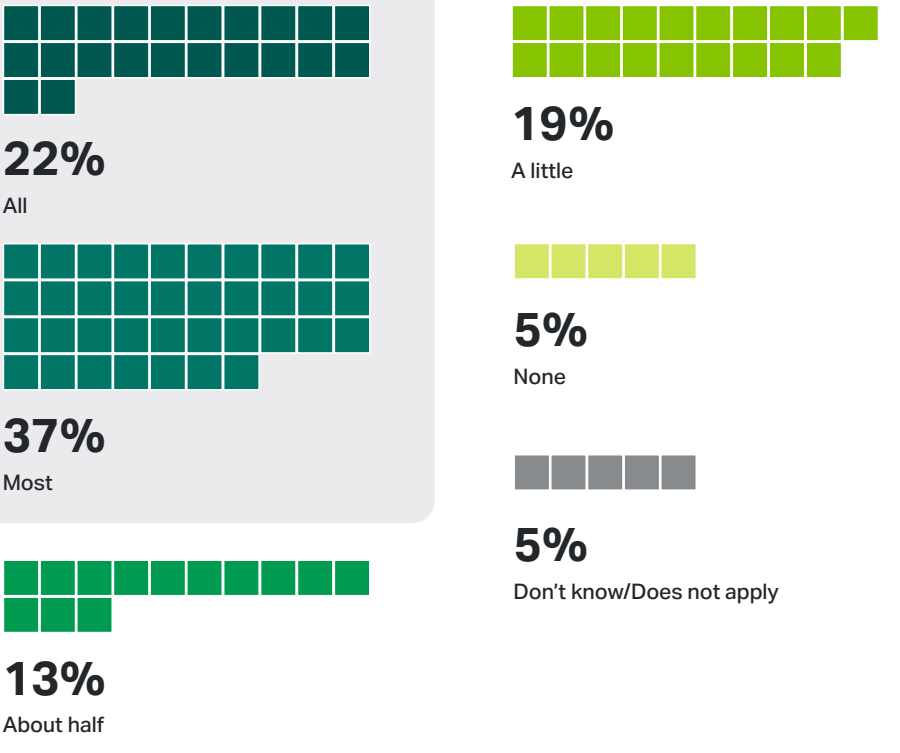
Six in 10 education leaders say most or all of their school's professional learning is aligned to their curriculum

HQIM can make a big impact on students' math learning, but the educators who teach with them are critical to student success and bringing the content to life.[8] Prior research has shown that when professional learning[9] is aligned to curriculum and content, it is much better positioned to support teachers and, ultimately, student outcomes.[10] About six in 10 (59%) education leaders say their math-related professional learning is completely or mostly aligned with their curriculum, leaving opportunity for further alignment.

CHART 10

What portion of the math-related professional development, if any, is aligned to your math curriculum?

Among all education leaders



8 Sterner, D. (2024, January). The Unrealized Promise of High-Quality Instructional Materials. *State Education Standard, (24)*1. https://www.nasbe.org/the-unrealized-promise-of-high-quality-instructional-materials/

9 The term "professional learning" is used interchangeably with "professional development." Education leaders were asked about "professional development" in the survey.

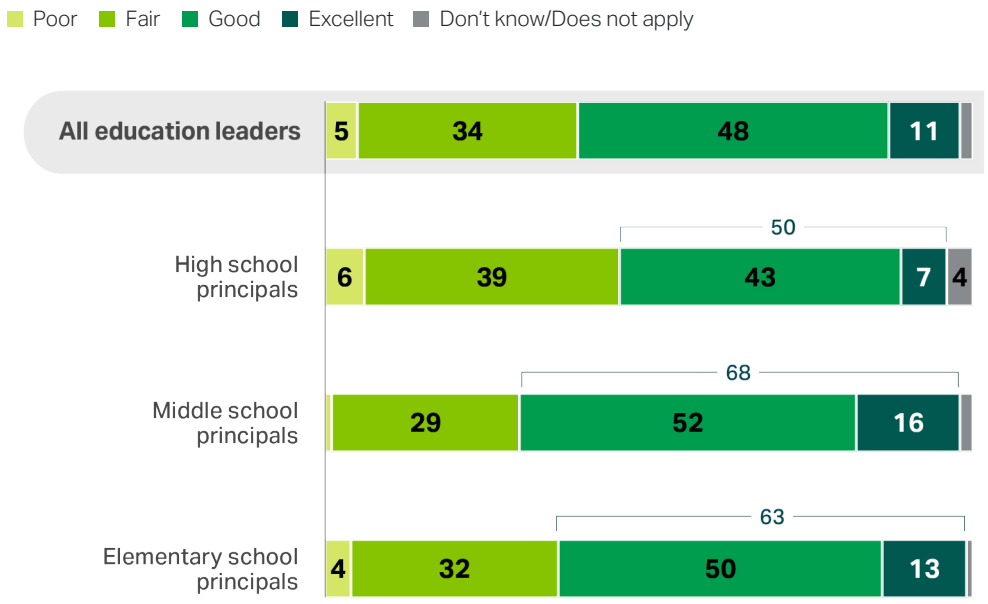
10 Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017, June). Effective Teacher Professional Development. Learning Policy Institute. https://learningpolicyinstitute.org/media/476/download?inline&file=Effective_Teacher_Professional_Development_REPORT.pdf

When asked to rate the quality of their math-related professional learning overall, the majority of education leaders say it is excellent (11%) or good (48%). About a third say it is fair and only 5% say it is poor.

High school principals are less likely than their peers at middle and elementary schools to rate their math-related professional learning as excellent or good (50% vs. 68% and 63%, respectively).

CHART 11

In your opinion, what is the quality of the math-related professional development that your building or district offers?



Note: Data labels less than 4% are not displayed.

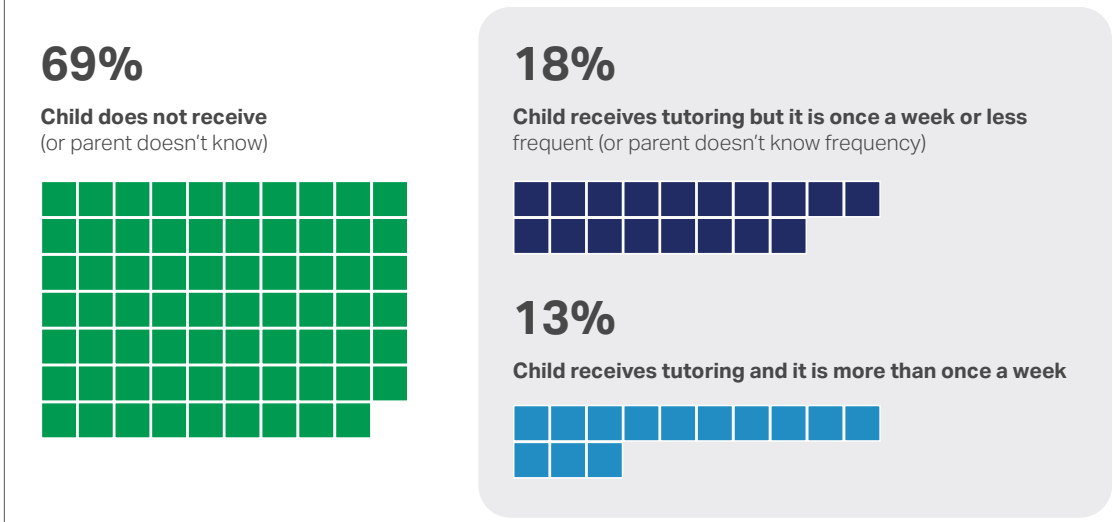
Three in 10 children receive tutoring; even fewer (13%) receive tutoring more than weekly

In addition to curriculum-aligned professional learning, high-dosage tutoring is another promising intervention to support math learning. Prior research has shown that high-quality math tutoring can improve achievement by an additional three to 15 months of learning, but the most impactful tutoring programs must include frequent sessions (three times a week or more).[11] About three in 10 K-12 parents (31%) report their child receives any 1:1 or small group math tutoring, but fewer (13%) say they do and that it occurs more than once per week. Among those who do receive tutoring, parents report the tutoring is mostly in-person (68%), with just 8% of the tutoring happening exclusively online.

CHART 12

Does your child currently receive any 1:1 or small group math tutoring? How often does your child meet with their math tutor(s)?

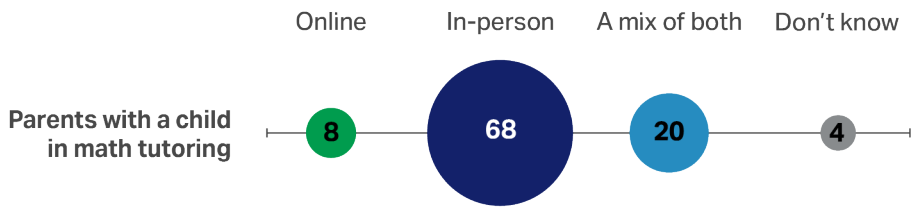
Among all parents



11 Robinson, C. D., Kraft, M. A., & Loeb, S. (2021, February). Accelerating Student Learning With High-Dosage Tutoring. EdResearch for Discovery. https://files.eric.ed.gov/fulltext/ED613847.pdf

CHART 13

Is the math tutoring online or in-person?



Among the 69% of parents whose children are not enrolled in tutoring, almost half would enroll their child if it were more available or accessible, equaling 33% of all parents.

> One-third of parents would enroll their child in tutoring if it were available or accessible.

CHART 14

Does your child currently receive any 1:1 or small group math tutoring? Which of the following statements comes closest to your current situation regarding math tutoring?

Among all parents

31%

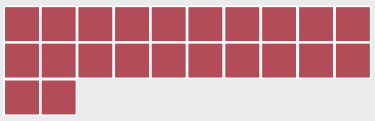
Already enrolled in tutoring

36%

Not enrolled (or parent doesn't know) and **not interested**

11%

Not enrolled (or parent doesn't know) but **would enroll if it were available**



22%

Not enrolled (or parent doesn't know) but **would enroll if it were more accessible**

During the school day, some students' math learning is also complemented by advanced math classes or math interventions (to support children or help them catch up). Thirty percent of parents say their child takes an advanced math class, and 16% say their child receives math intervention/support. Participation in advanced math classes is higher in sixth to 12th grades than in kindergarten to fifth grade (37% vs. 21%).

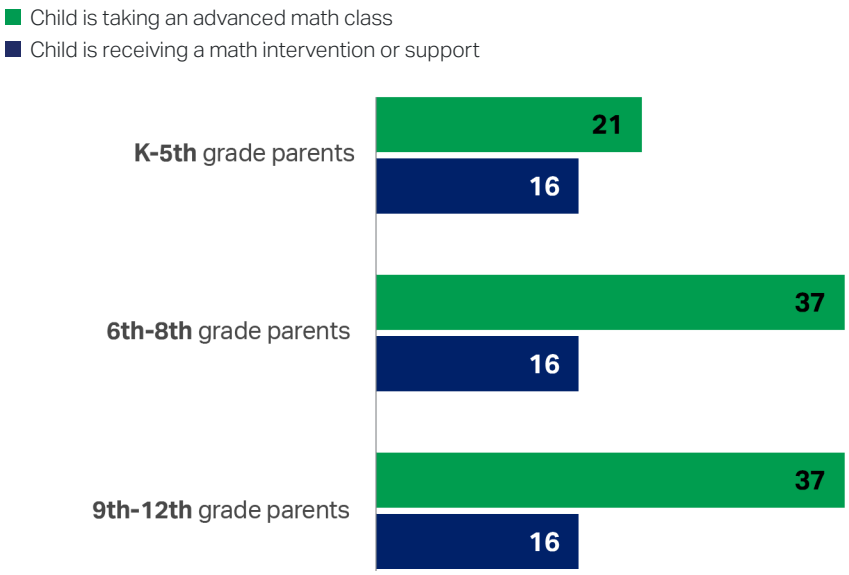
CHART 15

During the school day and during this school year (2024-25), is your child taking any advanced math classes?

% Yes

During the school day and during this school year (2024-25), is your child receiving any math interventions or additional math support to help them "catch up"?

% Yes



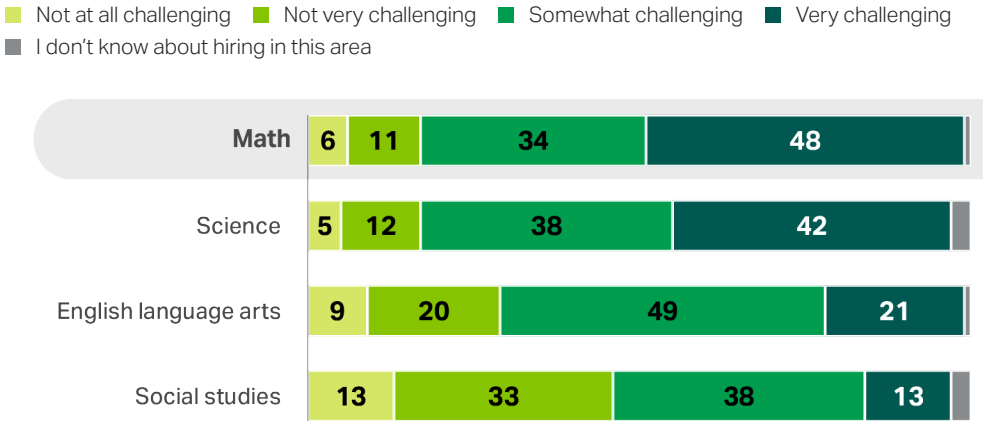
About half of education leaders say finding well-qualified math teachers is very challenging

Forty-eight percent of education leaders say finding well-qualified math teachers is very challenging, further complicating efforts to improve students' math outcomes.

While staffing challenges are widespread across content areas, the challenge of finding well-qualified math teachers outpaces that of science, English language arts and social studies teachers.

CHART 16

How challenging is it, if at all, to hire well-qualified teachers in the following subject areas?



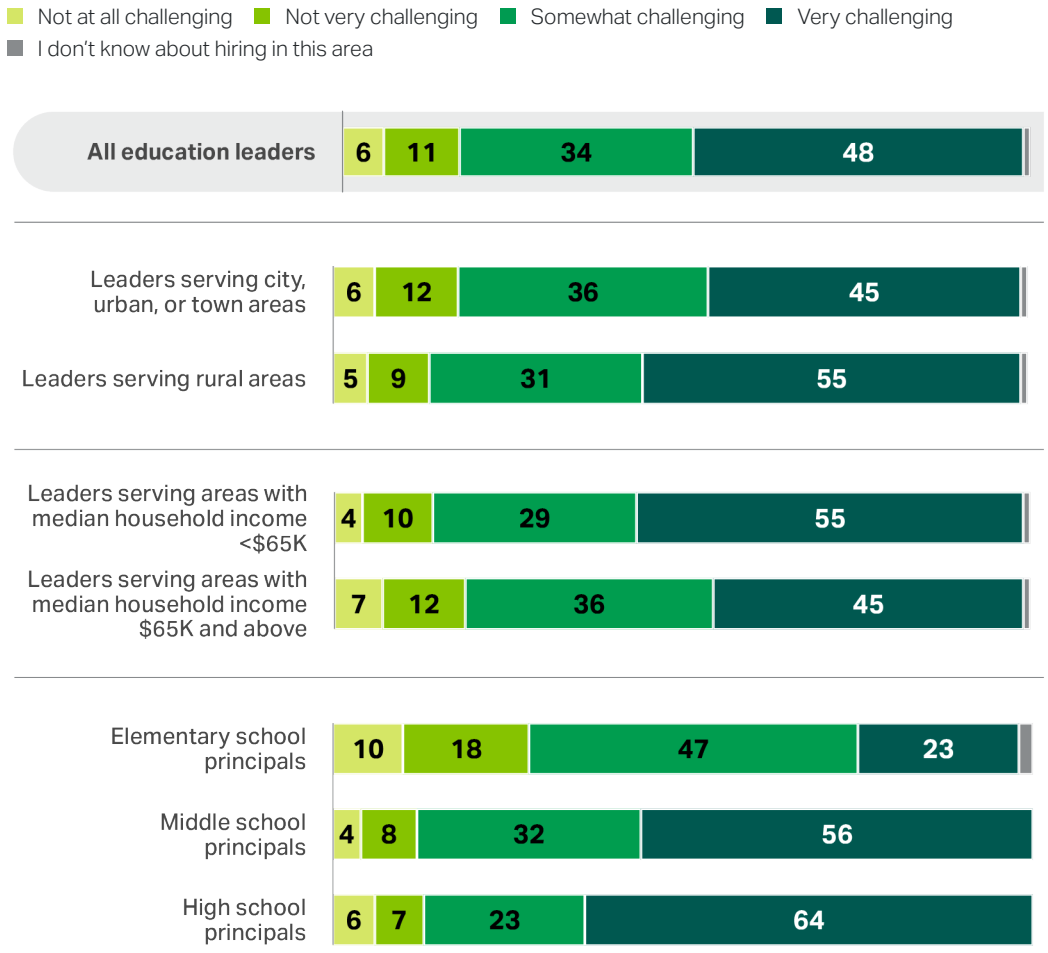
Note: Data labels less than 4% are not displayed.

The difficulty of finding well-qualified teachers is higher in some schools and districts than in others, with the biggest predictor being the grade level of the students served. Elementary school principals are much less likely to report that hiring well-qualified math teachers is very challenging, compared with middle and high school principals. Difficulty also varies by the area's median household income and the urbanicity of the school or district. Leaders serving lower-income areas and rural areas are more likely than their peers to say they experience challenges in hiring well-qualified math teachers.

CHART 17

How challenging is it, if at all, to hire well-qualified teachers in the following subject areas?

Math



Note: Data labels less than 4% are not displayed.

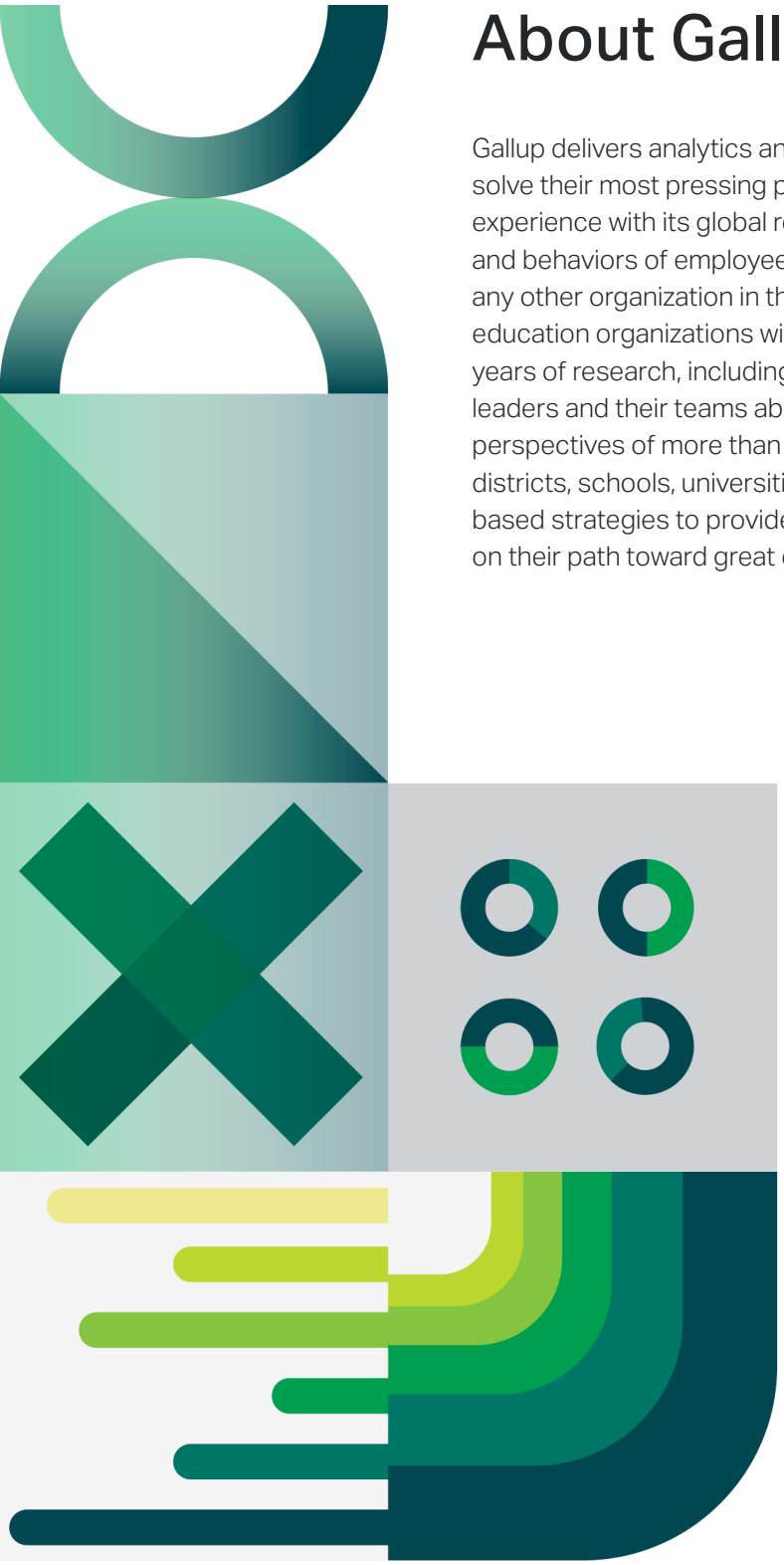
These trends among income, school level and geography are mostly similar across subject areas. Schools and districts serving lower-income areas are more likely than their peers to report that it is very challenging to hire well-qualified social studies, science and English language arts teachers. Leaders at the middle and high school levels are also more likely than their elementary school peers to say hiring well-qualified science teachers is very challenging. And leaders in rural areas are more likely than their non-rural peers to report it is very challenging to hire well-qualified teachers in all subject areas, including math.

Methodology

Results for the Gallup Math Matters Study are based on multiple surveys conducted with the general U.S. public, with results disaggregated among parents and education leaders nationally.

To gather the perspectives of U.S. adults and parents, Gallup surveyed 5,136 U.S. adults, aged 18 and older, using a web-based survey from Dec. 2-6, 2024. Among the total sample, Gallup surveyed 808 parents of children currently enrolled in kindergarten to 12th grade. If a parent had more than one child, they were asked to think of their oldest child in K-12 school when responding to the survey. Gallup used the Gallup Panel to randomly select and survey respondents to participate in the study. The Gallup Panel is a probability-based panel of U.S. adults who are randomly selected to join the panel primarily through address-based sampling (ABS) as well as some random-digit-dialing (RDD) telephone surveys. The data are weighted to match national demographics of gender, age, race, Hispanic ethnicity, education and region for the population of U.S. adults aged 18 and older. Demographic weighting targets are based on the most recent American Community Survey figures. For results based on the sample of U.S. adults, the margin of sampling error is ±1.9 percentage points at the 95% confidence level. For parents, the margin of error is ±4.3 percentage points. All reported margins of sampling error include computed design effects for weighting.

To gather the perspective of education leaders, Gallup surveyed 1,471 education leaders using a web-based survey from Dec. 2-9, 2024. Among all education leaders surveyed, 203 were superintendents and 1,268 were principals. Gallup used an established list of education leaders to select and invite respondents to participate in the study. The data are weighted to match national characteristics of the schools and districts represented by the education leaders surveyed on the basis of school or district type, enrollment, National Center for Education Statistics (NCES) locale classification and census region. Weighting targets are based on the 2023-24 NCES directories for public schools and all districts and the 2019-20 NCES directory for private schools. For results based on the total sample of education leaders, the margin of sampling error is ±2.8 percentage points at the 95% confidence level. For superintendents, the margin of sampling error is ±7.4 percentage points and for principals it is ±3.0 percentage points. All reported margins of sampling error include computed design effects for weighting.



About Gallup

Gallup delivers analytics and advice to help leaders and organizations solve their most pressing problems. Combining more than 85 years of experience with its global reach, Gallup knows more about the attitudes and behaviors of employees, customers, students and citizens than any other organization in the world. Gallup has served more than 1,000 education organizations with advice and analytics based on over 85 years of research, including nearly half a million interviews with education leaders and their teams about their workplace experiences and the perspectives of more than 6 million students and alumni. Gallup assists districts, schools, universities and institutions nationwide with research-based strategies to provide a culture shift in education to help students on their path toward great careers and great lives.

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