



THE NOODLE MARKETS REPORT

Powered by SmartProcure

February 2017 – 6-8 Math Instructional Resources

A recurring dive into K-12 purchasing data, exploring impacts and trends.

THIS EDITION'S RUN-DOWN:

For this edition, Noodle Markets and SmartProcure set out to study the landscape of **6-8 math instructional resources**.

We know that, historically, socioeconomic status correlates with student achievement; we've largely confirmed this in previous reports covering K-3 math and ELA resources. How, if it all, do 6-8 math instructional resources moderate that impact? What market trends exist for core resources and supplemental materials? To dive in, we analyzed thousands of lines of **purchase orders, assessment data, and district demographic info**. Our findings suggest that a few 6-8 math products correlated to higher achievement, most notably the non-traditional personalized learning initiative from New Classrooms, Teach to One.

In terms of spending, we found that **low-achieving districts across the socioeconomic spectrum spent 30% more per student** than middle and high-achieving districts. Finally, it's notable that **yearly spending growth on supplemental (largely digital) 6-8 math resources outpaced spending on core resources (largely textbooks), 90% to 63%**.

MARKET TRENDS:

We separated frequently purchased products as either core or supplemental resources. Across categories, **over 36% of spending goes to three companies**: Pearson, McGraw-Hill, and Houghton Mifflin Harcourt. This is a much smaller share than we observed in our report of K-3 math resources (over 85% of spending.) Purchase data tells us **there is ebb and flow in product market share**, and relative cost is not always directly related to spending trends.

Core Instructional Resources: Market Share, Cost, Trends (2008-2015)

Publisher	Product	Relative Cost	Market Share	Trend	Top Spending Districts
Agile Mind	Agile Mind	\$\$	♦♦	↑	Baltimore City Public Schools (MD), Central Consolidated School District #22 (NM), Galveston Independent School District (TX)
Big Ideas Learning, LLC	Big Ideas Math	\$\$\$	♦♦♦	↑	Los Angeles Unified School District (CA), Long Beach Unified School District (CA), Lee County Public Schools (FL)
CORD Communications, Inc.	Bridges to Algebra and Geometry	\$	♦♦	↓	Buffalo Public Schools (NY), Plano ISD (TX), Miami-Dade County Public Schools (FL)
Pearson	Connected Mathematics	\$\$	♦♦	↑	Chicago Public Schools (IL), Corona Norco Unified School District (CA), Pittsburgh Public Schools (PA)
McGraw-Hill	Contemporary Mathematics in Context	\$\$	♦	--	Burlington-Edison School District (WA), Interstate 35 Community School District (IA), Arlington School District 16 (WA)
CPM Educational Program (CPM)	Core Connections	\$\$	♦♦	↑	Sweetwater Union High School District (CA), Los Angeles Unified School District (CA), Cupertino Union School District (CA)
SMc Curriculum	Core Focus on Math	\$\$	♦	--	Roseburg Public School District (OR), South Lane School District (OR), Neah-Kah-Nie School District (OR)
Pearson	digits	\$\$	♦♦	↑	Consolidated School District No. 158 (IL), Elyria City Schools School District (OH), Akron City School District (OH)
Pearson	enVisionMATH	\$\$	♦♦	↑	Bethlehem Area School District (PA), Shoreline School District (WA), Winston-Salem/Forsyth County Schools (NC)
Great Minds	Eureka Math	\$\$	♦♦	↑	Rio Rancho Public Schools #94 (NM), St. Louis Public Schools (MO), Los Angeles Unified School District (CA)
McGraw-Hill	Everyday Mathematics	\$\$	♦♦	--	West Contra Costa Unified School District (CA), Poudre School District (CO), Moorhead Independent School District No. 152 (MN)
Houghton Mifflin Harcourt	Glencoe Math	\$\$	♦♦♦	↑	Miami-Dade County Public Schools (FL), Metropolitan Nashville Public Schools (TN), Lee County Public Schools (FL)

Houghton Mifflin Harcourt	GO Math!	\$\$\$	◆◆◆	↑	Austin ISD (TX), Visalia Unified School District (CA), Cypress Fairbanks ISD (TX)
Houghton Mifflin Harcourt	Holt McDougal Mathematics	\$\$	◆◆	↓	Vancouver School District (WA), Battle Ground School District (WA), East Valley School District 90 (WA)
McGraw-Hill	Impact Mathematics	\$\$	◆◆	--	Mercer County Schools (WV), Aldo Leopold Charter School District (NM), Nashoba Regional School District (MA)
McGraw-Hill	Math Connects	\$\$	◆◆	↓	Teaneck Public Schools (NJ), Kanawha County Schools (WV), Kelso School District No. 458 (WA)
Houghton Mifflin Harcourt	Math in Focus	\$\$\$	◆◆◆	↑	Newark Public Schools (NJ), Highline Public Schools (WA), Mentor Exempted Village School District (OH)
Kendall Hunt	Math Innovations	\$\$	◆	↓	Grand Island Sch Dist 2 (NE), Lewis County Schools (KY), Madison Metropolitan School District (WI)
Center for Math and Learning	MathLinks	\$\$	◆	↑	Alhambra Unified School District (CA), North Monterey County Unified School District (CA), Downey Unified School District (CA)
Houghton Mifflin Harcourt	McDougal Littell Math	\$	◆◆	↓	Fulton County Schools (GA), Chicago Public Schools (IL), William Penn School District (PA)
Houghton Mifflin Harcourt	McDougal Littell Pre-Algebra	\$	◆	--	Wheaton-Warrenville School District No. 200 (IL), Chapel Hill-Carrboro City Schools (NC), Lackawanna City School District (NY)
Pearson	Prentice Hall Mathematics	\$\$	◆◆	↓	Stafford County Public Schools (VA), Lansing School District 158 (IL), Wake County Public School System (NC)
Curriculum Associates	Ready Common Core Mathematics	\$\$	◆	--	Mohawk Area School District (PA), Lafayette Parish School System (LA), Tangipahoa Parish School System (LA)
Houghton Mifflin Harcourt	Saxon Math	\$\$	◆◆	--	Chicago Public Schools (IL), Auburn Union School District (CA), San Angelo ISD (TX)
College Board	SpringBoard Mathematics	\$\$\$	◆◆◆	↑	Broward County Public Schools (FL), Albuquerque Public Schools (NM), Orange County Public Schools (FL)

\$=Lower third, \$\$=Middle third, \$\$\$=Upper third, ◆=Lower third, ◆◆=Middle third, ◆◆◆=Upper third

Supplemental Instructional Resources: Market Share, Cost, Trends (2008-2015)

Publisher	Product	Relative Cost	Market Share	Trend	Top Spending Districts
ALEKS Corporation	ALEKS Mathematics	\$\$\$	◆◆◆	↑	Fulton County Schools (GA), Horry County Schools (SC), Hazelwood School District (MO)
Carnegie Learning, Inc	Carnegie Learning Math	\$\$	◆◆	↑	Miami-Dade County Public Schools (FL), Yakima School District (WA), Roswell Independent School District (NM)
DreamBox Learning	DreamBox Learning	\$\$	◆◆◆	↑	Charlotte-Mecklenburg Schools (NC), Parkway School District (MO), Houston ISD (TX)
Edgenuity	Edgenuity	\$\$\$	◆◆◆	↑	Miami-Dade County Public Schools (FL), Palm Beach County School District (FL), Fulton County Schools (GA)
First in Math	First in Math	\$\$	◆◆	↑	Cleveland Metropolitan School District (OH), Humble ISD (TX), Judson Independent School District (TX)
Curriculum Associates	i-Ready	\$\$\$	◆◆◆	↑	Palm Beach County School District (FL), Miami-Dade County Public Schools (FL), Orange County Public Schools (FL)
IXL Learning	IXL	\$\$	◆◆◆	↑	Chicago Public Schools (IL), Fulton County Schools (GA), Los Angeles Unified School District (CA)
Learnbop	Learnbop	\$	◆	--	North Chicago Community Unit School District 187 (IL), San Benito High School District (CA), Belvidere Community Unit School District No. 100 (IL)
Mathletics	Mathletics	\$	◆	↑	Chicago Public Schools (IL), Davis School District (UT), Clark County Schools (KY)
Mathspace	Mathspace	\$	◆	↑	Modesto City Schools (CA), Rowan-Salisbury School System (NC), Freehold Regional High School District (NJ)
McGraw-Hill	Math Triumphs	\$\$	◆	↓	Kelso School District No. 458 (WA), West Contra Costa Unified School District (CA), Clover Park School District (WA)
Renaissance Learning	Renaissance Accelerated Math	\$\$	◆◆	↑	Corona Norco Unified School District (CA), La Joya Independent School District (TX), Dry Creek Joint Elementary School District (CA)
Rocket Math	Rocket Math	\$	◆	--	Yakima School District (WA), Crete-Monee School District No. 201-U (IL), Port Huron Area School District (MI)
Amazon	Ten Marks	\$\$	◆	↑	Lafayette Parish School System (LA), School District of Waukesha (WI), Palm Beach County School District (FL)
Think Through Math	Think Through Math	\$\$	◆◆	↑	Chicago Public Schools (IL), Comal Independent School District (TX), Philadelphia School District (PA)
Voyager	TransMath	\$\$	◆◆	↑	Palm Beach County School District (FL), Los Angeles Unified School District (CA), Lee County Public Schools (FL)
Wowzers	Wowzers	\$	◆	--	Lewis County Schools (KY), Barnegat Township School District (NJ), Jersey City Public Schools (NJ)

\$=Lower third, \$\$=Middle third, \$\$\$=Upper third, ◆=Lower third, ◆◆=Middle third, ◆◆◆=Upper third

PER STUDENT SPENDING:

Low-achieving districts across the socioeconomic spectrum spent more per student on 6-8 math instructional resources than middle and high-achieving districts, based on 7th grade state assessments. Low-income districts also tend to spend more, regardless of performance level.

Spending Per Student by District Socioeconomic Status and Performance on 7th Grade Math Assessment

	Lowest Income \$13,000-\$51,000	Middle Income \$51,001-\$67,800	Highest Income \$67,801-\$222,000
Low-Performing	\$108	\$85	\$65
Average	\$94	\$87	\$54
High-Performing	\$86	\$75	\$73

**Red indicates spending greater than or equal to the median (~\$85). Lower performing and less wealthy districts spend above the median per student on 6-8 Math resources.*

MOST USED PRODUCTS WITHIN INCOME LEVELS:

We looked at variation in product usage within relatively high-performing districts across three bands of district median income. Though we find some differences in products across income bands, we note several that seem to be utilized across the income distribution, such as SpringBoard and GO Math!.

Most Used Core Products (by Total Expenditure), by District Income and Achievement, 2008-2016 Combined

	Lowest Income \$13,000-\$51,000	Middle Income \$51,001-\$67,800	Highest Income \$67,801-\$222,000
High-Performing	GO Math!; SpringBoard Mathematics; Big Ideas Math; Glencoe Math; Agile Mind	SpringBoard Mathematics; GO Math!; Agile Mind; Connected Mathematics; Eureka Math	GO Math!; SpringBoard Mathematics; Core Connections; Glencoe Math; Math in Focus

Most Used Supplemental Products (by Total Expenditure), by District Income and Achievement, 2008-2016 Combined

	Lowest Income \$13,000-\$51,000	Middle Income \$51,001-\$67,800	Highest Income \$67,801-\$222,000
High-Performing	DreamBox Learning; i-Ready; Renaissance Accelerated Math ; ALEKS Mathematics; Math Triumphs	i-Ready; DreamBox Learning; IXL; Edgenuity; ALEKS Mathematics	DreamBox Learning; i-Ready; Think Through Math; ALEKS Mathematics; Edgenuity

MOST POSITIVE PRODUCTS WITHIN INCOME LEVELS:

In our models, some products appeared to moderate the effect of income on achievement more than others, although more research is needed to draw concrete conclusions. However, we were able to determine which products were correlated with the most positive impacts across district income levels. McDougal Littell Pre-Algebra, a core resource was one of the high-impact products for low, middle, and high-income districts. Among supplemental resources, no product appeared as high-impact across all income levels, though a few appear in more than one level.

Most Positive Product Impact at Income Levels (Core)

Lowest Income \$13,000-\$51,000	Middle Income \$51,001-\$67,800	Highest Income \$67,801-\$222,000
Everyday Mathematics	McDougal Littell Pre-Algebra	Contemporary Mathematics in Context
McDougal Littell Pre-Algebra	Everyday Mathematics	Math Innovations
Bridges to Algebra and Geometry	Contemporary Mathematics in Context	Prentice Hall Mathematics
Impact Mathematics	Bridges to Algebra and Geometry	McDougal Littell Pre-Algebra
SpringBoard Mathematics	SpringBoard Mathematics	Holt McDougal Mathematics

Most Positive Product Impact at Income Levels (Supplemental)

Lowest Income \$13,000-\$51,000	Middle Income \$51,001-\$67,800	Highest Income \$67,801-\$222,000
Wowzers	ALEKS Mathematics	First in Math
IXL	Wowzers	Carnegie Learning Math
ALEKS Mathematics	First in Math	Ten Marks
Think Through Math	Rocket Math	TransMath
Mathletics	Ten Marks	Renaissance Accelerated Math

NON-TRADITIONAL CORE IMPLEMENTATION:

Our data contained an intriguing outlier that merits further research. The Teach to One program from New Classrooms is a personalized learning initiative that was launched by the New York City Department of Education under Joel Klein, and is significantly backed by foundation dollars. The program is in 38 schools and involves a redesign of a school’s math programs and, often, their buildings. Each day, assessment data is used to match students to optimal lessons and modalities. Participating schools spend over \$100 per student for content licenses, but they report over 1.5 years of gains, almost double the gains of schools working with similar students. Further research into similar holistic overhauls in other areas, not to mention community school initiatives, could be compelling.

Non-Traditional Core Implementation *Market Share, Cost, Trends*

Publisher	Product	Relative Cost	Market Share	Trend	Top Spending Districts
New Classrooms	Teach to One (Math)	\$\$\$\$	◆	↑	New York City Department of Education, Jersey City Public Schools District, Fulton County Schools

\$=Lower third, \$\$=Middle third, \$\$\$=Upper third, \$\$\$\$=High outlier ◆=Lower third, ◆◆=Middle third, ◆◆◆=Upper third

CLOSING:



While this research cannot conclude direct causal relationships between products and student achievement for purchasing leaders, it’s worth looking at what products might best serve a particular student population, especially by comparing similar districts. At the same time, disparate spending among districts with different achievement levels suggests **a need for greater transparency in purchasing decisions** and a **deeper investigation into product impacts**—particularly when it comes to non-traditional curriculum. Stay tuned for more K-12 market insights.