

# Core Knowledge Sequence Credited in Test Score Boosts

## Disadvantaged Students Narrow Gap

by Michael Marshall, Associate Director of Research and Publications

From *Common Knowledge* Volume 9 Number 4 Fall 1996

© 1996 Core Knowledge Foundation

---

School leaders are crediting the use of the *Core Knowledge Sequence* with making a dramatic impact on their standardized test score performance. The curriculum invigorates teachers and stimulates students, a combination that produces better learning, according to administrators at several Core Knowledge Schools across the country.

Recently the press in Colorado reported that Core Knowledge schools are outperforming their peer schools. Below are reports from other states. (In another issue of this newsletter we will summarize the excellent qualitative reports from Core Knowledge schools across the country as gathered by an independent team of scholars from the Johns Hopkins University.)

### Massachusetts

"Our test scores were always decent," said James Coady, principal of the Morse School, which serves blue-collar neighborhoods in Cambridge, Massachusetts. "With the acquisition of the Core Knowledge curriculum, our scores have jumped, really jumped. We were always in the middle of the schools in our division, but now we are in the top quartile and often the number one or number two school in a category." Sixty percent of Morse students come from low-income households (they qualify for the free or reduced-price lunch program), 60 percent are minorities, 35 percent have individualized educational plans, and many students live in families where another language besides English is spoken.

"The **Core Knowledge Sequence** stimulates children," Mr. Coady said. "They become more inquisitive and feel better about themselves because of the knowledge they have. Teachers like the curriculum because they know what other teachers are covering. Parents like it because it's a solid foundation. This combined support for the curriculum creates conditions in which learning improves.

Morse School  
Cambridge, MA  
1995-1996 CAT Scores  
Overall School Ranking  
(out of the 15 Elementary Schools)

	Ranking	
Grade	Reading	Math
grade one	3	not tested
grade two	1	not tested
grade three	1	1
grade four (94-95)	4	1

grade five	6	3
grade six	4	1
grade seven	6	1
grade eight	6	2

"We think it helps raise our reading scores because the children read so much more through the Core curriculum. It's improved our math scores because it is solid on the math fundamentals. It's the foundation that improves learning. We've seen a steady increase in our test scores [since implementing the curriculum four years ago]," he said. All Cambridge fourth-graders take the California Achievement Test.

"Everyone bases their idea of what a good school is on its test scores," Mr. Coady said. "We also developed a character education program in connection with the Core Knowledge curriculum, so there's been a decline in discipline problems. We see a direct correlation between the curriculum and the program: having fewer discipline problems means more time spent on academics. All those things tie together to make better scores. The **Sequence** makes children more interested in the classroom."

## Ohio

Since 1990, the dominant test in Ohio has been the Ohio Proficiency Test [OPT]. Fourth and sixth graders take versions of it as a measure of progress. The final version, which has five parts — reading writing, math, citizenship, and science — is given to eighth graders and passing it is a graduation requirement.

In the past, the performance of students in rural Crooksville, Ohio, had been discouraging. "Since 1990 the number of Crooksville students [eighth graders] who have passed all portions the test on the first try has varied from a low of 18 percent to a high of 43 percent, well below the state average," said Crooksville Superintendent Timm Mackley. "Composite scores on the California Achievement Test [CAT] from 1990 to 1994 place Crooksville K-8th Graders at the 46th percentile nationally." Crooksville is in a federally designated Appalachian county and has a high population of disadvantaged students, Mr. Mackley noted.

"Considering our students' past performance on both the CAT and the Ohio Proficiency Test, we were very pleased with the 1995 and 1996 scores in grades one, two and three," he said. "These students are our lead Core Knowledge classes, and they posted scores of unprecedented quality. Last spring 99 percent of our first graders met the proficiency standard in science and 96 percent met the standard in math. Our second graders were 99 percent proficient in writing, science and social studies and 97 percent proficient in math. Crooksville third graders were above 90 percent in writing, math and social studies. Only one score for any of these grades was below 75 percent proficient.

"These scores represent a dramatic departure from previous scores for any test at any level," he said. "In addition, we have seen incremental improvements in scores at grades four through eight. It remains to be seen whether this trend will hold up in years to come, but we are optimistic. Many factors have interactive effects on our students' performance and we are trying to address as many of those as we can. Even when test scores show improvement, I cannot say with any certainty which factor is creating the effect."

## Washington

"Core Knowledge is having a very strong impact on our scores, though I can't say it's totally the cause of their going up," said Ted Mansfield, principal of Ridge View Elementary in Kennewick, Washington. "Without a doubt the improvement in social studies and science is due to Core.

"Teacher motivation goes way up when they teach Core. So it may be partly that [which accounts for score improvements]. In our case, teacher motivation stays up because we have so many visitors from around our region. Whenever anybody wants to come look at what you're doing, it's very empowering," said Mr. Mansfield, whose school implemented the curriculum all in one year in 1992.

"Another factor is that the kids' background knowledge is better. In our first year, only a handful of our students— eight or ten — qualified for the middle school enrichment program. This year 39 qualified. Core is giving the kids so much better background that they are qualifying at much higher rates."

His cross-town colleague, Chuck Watson, principal of Vista Elementary, phased in use of the **Sequence** over the last four years. "Each year scores went up," Mr. Watson said. "Then last year scores dipped seven or eight percent. They didn't go down in social studies and science and that I attribute to Core. We sort of panicked. This year we made a more conscientious effort — we concentrated a lot on reading — and our scores are up 20 percent.

Kennewick, Washington  
**Core Knowledge Schools**  
 CTBS Scores

Year	Reading		Language		Math		Total Battery		Free and Reduced Lunch %	Minority %
	95	96	95	96	95	96	95	96		
Vista	47	67	47	64	47	58	45	66	47%	15.4%
Eastgate	31	48	31	40	35	41	31	46	67%	36.3%
Washington	45	49	35	56	38	51	40	54	49%	15.1%
Ridge View	74	78	72	73	77	84	76	81	26%	20.2%

"In our district, in the last couple of years, the Core schools' scores have gone up. There is no way that I could ever believe that a school implementing Core Knowledge would lower its test scores.

"Core lends itself to good teaching," he said. "The teachers get enthusiastic and the kids get enthusiastic. That positive creates more positive.

"The teachers who really buy in throw away their teacher's guides. They are no longer teaching according to someone's script. They develop units they know will work. They get good feedback from the kids and then they want to do more. Now they don't just have one or two favorite units, they have a lot of them. The kids' attitude gets better. They can say, 'This is what I know!' It's a concrete accomplishment.

"I anticipate that our scores are going to improve, though to raise the average, you have to raise the performance of the lowest quartile, and that's hard to do." He said he is uncertain about what to expect from Washington state's plans to shift to performance-based testing in the next couple of years.

**Virginia**

At Paul H. Cale Elementary in Albemarle County, Virginia, scores have not only steadily improved, but a statistical study shows clear evidence that the curriculum is narrowing the performance gap between students of low socio-economic status and others.

The Albemarle district's evaluation office was intrigued by a news story in which Virginia's public school divisions were statistically compared to see if the relative wealth or poverty of the locality was significant in its students' performance. In it, Professor Jacob Van Bowen Jr., chair of the University of Richmond's mathematics and computer science department, summed up the results of an analysis he devised. His method considered standardized test scores, among other things, against such factors as the number of students on free and reduced-price lunch programs. On average, performance remained along a predicted range.

Albemarle school officials adapted the method for intradivision study and the results showed most of the division's elementary schools performing within their predicted range. But Cale Elementary, a Core Knowledge school, showed much higher achievement than predicted for disadvantaged students.

"We can show that over the last four years, which happens to be when we implemented Core Knowledge, our scores for all students have consistently gone up, especially in social studies, science and math," said Cale principal Gerald L. Terrell.

"The scores surprise us because they constantly go up. We are scoring well above the national norms in social studies, above the 75th percentile. That is very good for our diverse population. These are not all middle-class kids. Half of our students taking the Iowa Test of Basic Skills each year [in the fourth grade] come from low-income homes. Our scores defy what you might expect." Year to year, roughly 40 percent of Cale's students qualify for the free and reduced-priced lunch program.

Greater numbers of Cale's free lunch students are passing the three-part Literacy Passport Test, a Virginia exam in reading, writing and math that is given in the sixth grade and must be passed in order to graduate. "Looking at all our kids on free and reduced-price lunch, both regular and special education kids, 72 percent passed the reading portion, 71 percent passed the writing portion, and 81 percent passed the math portion the first time they took it. Fifty-one percent passed all portions the first time. That's up from 43 percent last year. Nearly 95 percent of our regular, not free lunch kids passed.

"I feel very strongly that our success in reading and writing is directly attributable to Core Knowledge and the emphasis our teachers are putting on reading and writing. Core has given us something to write about," Mr. Terrell said. "The students are getting more content and in their writing they are giving more and more information. Core gets kids thinking."

