Marshall Memo 915

A Weekly Round-up of Important Ideas and Research in K-12 Education
December 13, 2021

In This Issue:

Quotes of the Week

"Ultimately, when we're looking for people to serve our students, my key questions are: Can you teach these students, even if they don't look like you, [even if] you're not familiar with their culture? How are you going to teach them as if they were your child, your cousin, your brother, your sister?"

Karen Rice-Harris, American Association of School Personnel Administrators, quoted in "Districts Are Trying to Screen Out Racial Biases During Teacher Job Interviews" by Madeline Will in *Education Week*, December 8, 2021

"Whenever I design a lesson, I hear the voice of my mentor teacher coaching me to consider, 'What's the biggest takeaway you want every student to learn?'"

Sarah Kesty (see item #5)

"Self-management skills are often the secret sauce of school success."

Sarah Kesty (*ibid*.)

"A reader's comprehension ability is more fluid than often thought. In other words, any one individual will have different levels of ability depending on what is read and for what purpose."

Hugh Catts (see item #3)

"In many districts, up to half of the referrals to special education are, at their root, due to reading difficulties."

Craig Gibbons and Richard Viard (see item #3)

"The schedule keeps getting in the way."

A reason often given for inadequate services for students with special needs (*ibid*.)

"The best way to accelerate learning in American education is to slow down."

Fred Jones, *Tools for Teaching*, 2000

1. What Are the Results When Elementary Teachers Specialize?

In this Annenberg Institute paper, NaYoung Hwang and Brian Kisida (University of Missouri) report on their study of the impact of elementary schools having teachers focus on fewer subjects – for example, one teaches math and science while another teaches ELA and social studies. While the majority of U.S. elementary students learn in self-contained classes, with the homeroom teacher covering all major subjects, a growing number of schools are using a semi-departmentalized structure, with teachers specializing in one or more subjects and working with two or more homerooms. The percent of schools using this model has increased from 5 percent in the mid-1990s to 20 percent by the early 2000s.

Over the years, advocates have advanced a number of arguments for elementary specialization:

- Although highly effective teachers in one subject are usually effective in others, there is variation; teachers are more proficient in some subjects than others.
- This suggests that getting teachers working in their best subject will have a positive effect on student achievement.
- When teachers specialize, they can more easily hone their skills.
- Training and PD are streamlined and less time-consuming.
- Teaching the same lesson two or more times a day improves performance.
- Having fewer preps reduces teachers' workload and stress and increases job satisfaction.

Despite these appealing advantages, specialization has some downsides:

- Teachers are responsible for at least twice as many students, making it more difficult to know each students' strengths and weaknesses, needs, and special circumstances.
- It's more challenging for students to build trusting relationships with teachers and develop a sense of belonging in the school.
- That's concerning since research consistently shows that relationships play an important part in student success, especially in the early grades and for vulnerable students.
- For parents, having to deal with several teachers makes it more challenging to communicate about their children's development and learning.

Hwang and Kisida say these pros and cons of elementary specialization haven't been adequately researched, despite more than a century of debate. However, two recent studies – one in Houston, the other in North Carolina – cast doubt on the practice, documenting negative effects on student achievement.

Hwang and Kisida followed up on those studies by looking at statewide data on fourth and fifth grade teachers in Indiana public schools from 2011 to 2017. The researchers were able to compare data on the same teachers in years when they taught self-contained classes and years when they specialized in one or two areas. The data linked 591,311 students to 15,895 math teachers and 17,101 reading teachers. Here are the conclusions.

- Teachers performed less well when they specialized than when they taught self-contained classes.
- Students with specialized teachers performed less well in reading and math than students with self-contained homeroom teachers.
- This was especially true with low-achieving students, English language learners, students with special needs, and those eligible for free and reduced-price meals.
- Schools implementing specialization saw no improvements in student achievement, attendance, or disciplinary infractions.
- The researchers found that teachers who specialized tended to be less qualified by Indiana standards and often had a prior track record of lower impact on student achievement.
- However, the researchers don't believe this was the reason specialized teachers did less well; that's because in the North Carolina study, specialized teachers more often had higher effectiveness ratings.

What explains the negative findings on specialized elementary classrooms? Hwang and Kisida believe it's because "specialization weakens student-teacher relationships." They were able to test this hypothesis by looking at schools where students looped with specialist teachers – had the same combination of teachers two years in a row. In these classes, the negative effect of specialization on math achievement was significant lower. These data, say the authors, "show that finding strategies to increase student-teacher familiarity with specialists may improve their effectiveness." There's also the option of not specializing.

"Spread Too Thin: The Effects of Teacher Specialization on Student Achievement" by NaYoung Hwang and Brian Kisida, Annenberg Institute, October 2021; the authors can be reached at nhwang@missouri.edu and kisidab@missouri.edu.

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2. Ensuring Good Instruction for Elementary Students with Special Needs

In this *District Management Journal* article, Craig Gibbons and Richard Viard say that during 18 months of remote instruction, it was especially difficult to provide the full range of services to students with special needs. "Even before the pandemic," say Gibbons and Viard, "ensuring that students received the mandated supports and that they received these services from the most appropriate, best qualified professionals proved challenging." Common refrains: "We just do the best we can" and "The schedule keeps getting in the way."

Meeting the specifications of students' IEPs comes down to the effective use of time, say the authors – specifically:

- Time in the master schedule to deliver all of the mandated instruction in the IEP;

- Time to receive interventions in addition to – not instead of – regular class time;
- Matching a student's needs with the skills of the most appropriate provider;
- Time to fully and equitably leverage the skills of teachers and staff.

Gibbons and Viard suggest ten guidelines for making these goals a reality:

• *Require at least 90 minutes of literacy and 60 minutes of math for all students each day.* "In many districts, up to half of the referrals to special education are, at their root, due to reading difficulties," say the authors. Ensuring enough high-quality ELA and math instruction can prevent many learning problems.

• *Establish common grade-level schedules*. This allows regrouping students across classrooms during intervention or small-group instruction, as well as providing common planning time for each grade's homeroom teachers.

• *Create a daily period at least 30 minutes long for intervention and enrichment*. Supplementing core instruction, this is when students get extra help and special-education services – or participate in enrichment activities. Studies have shown that these dedicated extra minutes are key to raising the achievement of all students and closing SES and racial gaps.

• *Stagger the daily intervention-and-enrichment period across grades*. Many teachers prefer to teach core subjects in the morning, but this pushes almost all pullouts and specials to the afternoon, resulting in major inefficiencies in staffing. Staggering intervention and enrichment blocks through the school day ensures that there are no times when services can't be provided and makes optimal use of special-education and other teachers' time.

• *Specify when whole-class and small-group instruction will occur in homerooms*. This allows specialists and interventionists to pull students only from the small-group portion of reading and math lessons, so those students don't miss out on all-class core teaching.

• *Ensure that students receive interventions and supports in addition to, not instead of, Tier 1 instruction*. For example, guidelines might say that pullouts are not allowed during reading and math blocks, but push-in services may take place during small-group instruction.

• *Ensure that content-strong staff provide interventions and support and that student needs are matched with teacher strengths*. This means that paraprofessionals don't provide extra instruction, nor do special-education teachers if their primary expertise is not in ELA or math. "A teacher who has engaged in extensive study and training in a particular subject," say Gibbons and Viard, "is more likely to understand individual student needs and have a wider repertoire of ways to teach the material."

• *Cluster students with similar needs for small-group instruction and interventions*. This boosts the reach and impact of educators and creates opportunities for students to connect and collaborate with peers.

• *Clearly communicate that general-education teachers have primary responsibility for students with special needs*. In the RTI model, general education is the "foundation for all students' success," say Gibbons and Viard.

• *Maximize collaboration among all teachers by being transparent about when students are available*. Coordinating IEP services and interventions is complicated, say Gibbons and

Viard, especially with students who need a combination of services each week. The key is reducing scheduling conflicts and preventing interruptions in core instruction.

"10 Tips to Better Support Students in Special Education, Interventions, and/or Receiving Related Services" by Craig Gibbons and Richard Viard in *District Management Journal*, Winter 2022 (Vol. 30, pp. 51-55)

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3. What IS Reading Comprehension?

In this article in *American Educator*, Hugh Catts (Florida State University) says that reading comprehension "is one of the most complex activities that we engage in on a regular basis, and our ability to comprehend is dependent on a wide range of knowledge and skills." Treating reading comprehension as a discrete skill – on a par with phonics and fluency – doesn't do justice to its depth and intricacy. Unfortunately, some attempts to simplify the findings of the well-regarded 2000 National Reading Panel portrayed comprehension as one of the "Five Pillars" of reading instruction. This, says Catts, gave "the false impression" that comprehension was comparable to the other four subcomponents "in terms of its complexity and the way it is best taught and measured." Teaching different aspects of comprehension – for example, making a prediction or finding the main idea – further supports the misconception that comprehension is a relatively straightforward skill.

The true complexity of comprehension, Catts believes, was captured in a 2002 report by the RAND Reading Study Group, which said it is the combination of three factors: the reader, the text, and the activities involved in reading:

• *Readers* bring a number of factors to the table – background knowledge, interest, motivation, language skills, reasoning ability, attention, memory. Variation in these factors has a big impact on comprehension.

• *Texts* differ by genre (narrative, descriptive, expository, persuasive), subject matter, and level of complexity. They also vary in form – paper or digital, the latter displayed on phones, tablets, or computers. Skilled readers often rely on more than one text and format.

• *Activities* are the reasons for reading – enjoying a book or magazine, evaluating the strength of an argument, learning the rules of a game, preparing for a test. "It is often argued that the purpose of reading is comprehension," says Catts. "But we actually seek to comprehend for a specific reason… Each purpose brings unique knowledge and skills that must be acquired to be successful." There are also a variety of contexts – home or school, with or without support, and how much value is placed on reading by family, peers, and other groups central to a student's identity.

In short, says Catts, "any one individual may have multiple levels of comprehension ability depending on what they are reading and why they are reading it. As a result, *comprehension cannot be reduced to a single notion because it is not a single ability*."

Background knowledge has a major influence on reading comprehension, as does the context. Catts shares a passage (Bransford and Johnson, 1972), written to be ambiguous; it's designed to be read aloud to college students, who are then asked to recall as much as they can:

> The procedure is actually quite simple. First you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities, that is the next step; otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run this may not seem important but complications can easily arise. A mistake can be expensive as well. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then one never can tell. After the procedure is completed one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they will be used once more and the whole cycle will then have to be repeated. However, that is part of life.

Students who don't know the topic up front are baffled and recall very little. Those who are told the topic afterward (it's about washing clothes) are still confused and don't recall very much. Only those who know what it is about beforehand – and have some background knowledge about doing laundry – quickly make sense of it and recall many details. The point of this exercise: context and knowledge are an essential part of reading comprehension.

Unfortunately, says Catts, more attention has been paid to *activating* background knowledge than *building* it. "Somewhere along the line," he says, "educators and researchers – myself included – got distracted and failed to pay attention to its importance." Why? Perhaps it was the idea that meaning is contained in each text and the reader's job is to extract it. Or it could be the notion that comprehension is a skill like phonics and vocabulary that, once taught, can be applied across topics. Or maybe it's the sheer difficulty of filling in students' knowledge gaps so they can understand a variety of texts.

Thanks to the work of E.D. Hirsch Jr, Daniel Willingham, and Natalie Wexler, knowledge is making a comeback in the debate on reading comprehension. Catts summarizes the reason this is so important:

• Knowledge provides a framework for organizing incoming information, and guides readers as they proceed through a text, helping them anticipate what's coming next and infer where the author is headed. Prior knowledge also provides a framework to anchor new information in memory, linking it to what's already known and making revisions in light of new insights. "It is this integration of the new information in the text with what we already know that brings meaning to what we read," says Catts.

• Background knowledge allows readers to make inferences and fill in information that's "between the lines." When encountering words with multiple meanings – for example, *pitcher* (is it the vessel or the baseball player?) – knowledge helps decide which is appropriate to the context.

• Knowledge is essential for critical thinking, which Catts says is not an independent skill but can only be truly activated when students know what they're thinking critically *about*. "We can't think logically about different approaches to government," he says, "without

knowing a lot about different forms of government. So, in this sense, knowledge is the most critical component of critical thinking."

• Knowing stuff helps with working memory, since there are limits to how much information we can hold and think about simultaneously. "Knowledge coming from long-term memory places a much smaller burden on working memory than new knowledge coming from a text (or a speaker)," says Catts; "it also leaves us with more capacity in working memory to think about things in novel ways."

• There's a reciprocal relationship between knowledge and reading comprehension; it improves understanding as students read, and it facilitates building new knowledge.

Of course knowledge isn't everything, says Catts: students need high-quality, grade-appropriate instruction in decoding, fluency, spelling, grammar, vocabulary, and comprehension strategies – including pre-reading discussions, concept maps, and anticipation guides. But he believes it's essential for schools to beef up science, social studies, and other subjects to build knowledge and integrate it with ELA.

Learning to read and *reading to learn* are not in opposition or mutually exclusive, he says. Instead of having students read about volcanoes one day and Rosa Parks the next, the teacher should organize high-interest, culturally responsive reading materials by topic and teach them in a logical and sequential way, says Catts, shaping "an integrated, content-rich curriculum… In this way, knowledge is acquired and accumulated over time." He believes this has major equity benefits, leveling the playing field for students who depend on school for this kind of knowledge acquisition. He points to several commercial curriculum and researcher-developed products along these lines, including Core Knowledge Language Arts, Wit and Wisdom, and Model of Reading Engagement.

What are the implications of this approach to assessing comprehension? "A reader's comprehension ability is more fluid than often thought," says Catts. "In other words, any one individual will have different levels of ability depending on what is read and for what purpose." One study of 995 students' reading comprehension scores on four different standardized tests found a median correlation of only .54 among the results. A separate analysis of the data found wide variation among the students ranked in the top 10 percent and the bottom 10 percent by different tests. In other words, there was a less than even chance of two tests diagnosing the same student as needing remediation or deserving placement in a gifted program.

These variations stemmed from differences in test formats – cloze versus questions on reading passages – and the type of passages used. But background knowledge was a major factor. (E.D. Hirsch Jr. has argued that reading tests are really knowledge tests in disguise.) The knowledge-heavy nature of state and national tests (including the NAEP) has had a troubling effect: students' scores have flatlined despite major investments in improving reading. This, says Catts, is because "knowledge acquisition is incremental in nature," and as long as there are weak links between what's taught in science, social studies, and other subjects and the knowledge assessed in tests, we won't see much improvement in students' reading comprehension scores.

The answer, concludes Catts, is to teach students "an integrated literacy and content-rich curriculum and to test their ability to read and comprehend passages covered in that curriculum. In other words, offer a better match between instruction and assessment. Don't just test the skills and strategies that have been taught; test the specific content-area topics that have been taught. Such an approach would be fairer and more-equitable for all involved. Teachers would have a clear idea of what content within which to embed their literacy instruction. Students would have the opportunity to learn from content-rich curricula and be assessed based on what they learned in school (instead of what they may or may not have learned at home, over the summer, etc.)."

The 2015 federal ESSA legislation encourages the development of a new generation of assessments, and five states are moving in the direction Catts advocates. During the 2018-19 school year, Louisiana began piloting LEAP 2025 Humanities, an assessment that integrates ELA and social studies, but implementation was interrupted by the pandemic. It will be a while before the results are known.

"Rethinking How to Promote Reading Comprehension" by Hugh Catts in *American Educator*, Winter 2021; Catts can be reached at hugh.catts@cci.fsu.edu.

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4. Five Ways Teaching Can Continuously Improve

In this online Solution Tree article, curriculum expert Elliott Seif says five facets of teaching are key to preparing students for future success in a changing and uncertain world:

• *Developing a positive climate, culture, and environment for learning* – This includes building relationships and trust with students, fostering their interest and curiosity in the content and skills, and encouraging a growth mindset. Some specific teaching moves: focusing on compelling essential questions, providing meaningful tasks and examples of successful work, giving specific feedback as students engage in multiple opportunities to improve, and praising effort (versus ability).

• *Focusing on relevant and significant content and vital skills* – "Often teachers try to cover too much material with too little meaning for students," says Seif. It's vital to focus on the "underlying, foundational concepts, ideas, understandings" framed by compelling questions. The goal is to build students' understanding, thoughtfulness, communication and collaboration skills, and ability to conduct research.

• *Helping students apply and deepen learning and become increasingly independent* – This happens when teachers challenge students with authentic and complex tasks, independent research projects, classroom debates, and writing persuasive essays – holding them accountable for finishing what they begin, and for seeking help when they need it.

• *Broadening and enriching students' experiences, interests, and talents* – This includes reading and projects; field trips to museums, zoos, factories, and supermarkets; learning to play a musical instrument; joining a choir, band or orchestra; playing chess; getting involved in academic competitions; traveling to new and different locales; interviewing people inside and

outside the school; doing community service; apprenticing with a local employer; and more – building in increasing amounts of choice.

• *Giving students feedback vis-à-vis high-quality standards* – In-the-moment affirmations and corrections are essential to continuous improvement; they also let the teacher know about errors and misconceptions and suggest ways to improve learning experiences. Drafts of writing assignments, partially completed performance tasks, and portfolios are ideal opportunities to fine-tune students' work, improve research, writing, and thinking skills, and build independence. And students should have regular opportunities to share their projects, writing, and other products with peers and a broader audience.

"Five Questions Every Teacher Needs to Ask Often" by Elliott Seif in *Solution Tree*, December 10, 2021; Seif can be reached at elliottseif4@gmail.com.

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5. Building Executive Function "Studenting" Skills

In this article in *Edutopia*, California middle-school teacher Sarah Kesty says it's clear that many students' executive function abilities got rusty during the pandemic. "Self-management skills are often the secret sauce of school success," she says. "Empowering students with these skills can boost academic performance, since grades and assessments rely on executive function as a baseline for demonstrating mastery."

Teachers get weary telling students day after day what they need to be doing. Kesty suggests replacing directions with "thought-provoking questions" – for example, instead of saying, *Please take out your book*, asking *What do we need to be ready for reading?* or *What do you picture on your desk during this time?* The idea is to nudge students toward assuming greater responsibility. "Replacing directions with questions," says Kesty, "can help increase students' awareness of patterns and routines, releasing the onus of self-management to the students."

This applies to academic work as well, especially writing, which requires lots of self-monitoring as students draft, get feedback, revise, edit, rewrite, and share.

"Whenever I design a lesson," says Kesty, "I hear the voice of my mentor teacher coaching me to consider, 'What's the biggest takeaway you want every student to learn?' It's an automatic audio track that plays whenever I'm planning…" This reminded Kesty of six "magic questions" teachers can ask to build kids' "studenting" skills as they work on a project or essay:

- *What do you notice?*
- *What parts do you understand?*
- *What do you think you need right now?*
- *How can you tell?*
- *Where can you look for that information?*
- *How will you remember to use that strategy or take that action?*

"When teachers ask these questions regularly," says Kesty, "students get used to hearing them, and they can be applied automatically as students solve problems throughout their day… What a gift for students to be able to tackle that type of thinking on their own."

"Supporting Executive Function Skills by Asking Questions" by Sarah Kesty in *Edutopia*, December 3, 2021

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If you have feedback or suggestions,
please e-mail kim.marshall48@gmail.com

About the Marshall Memo

Mission and focus:

This weekly memo is designed to keep principals, teachers, superintendents, and other educators very well-informed on current research and effective practices in K-12 education. Kim Marshall, drawing on 50 years' experience as a teacher, principal, central office administrator, writer, and consultant lightens the load of busy educators by serving as their "designated reader."

To produce the Marshall Memo, Kim subscribes to 60 carefully-chosen publications (see list to the right), sifts through more than a hundred articles each week, and selects 5-10 that have the greatest potential to improve teaching, leadership, and learning. He then writes a brief summary of each article, pulls out several striking quotes, provides e-links to full articles when available, and e-mails the Memo to subscribers every Monday evening (with occasional breaks; there are 50 issues a year). Every week there's a podcast and HTML version as well.

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Core list of publications covered

Those read this week are underlined.

All Things PLC
American Educational Research Journal
American Educator
American Journal of Education
American School Board Journal
AMLE Magazine
ASCA School Counselor
Cult of Pedagogy
District Management Journal
Ed. Magazine
Education Digest
Education Gadfly
Education Next
Education Update
Education Week
Educational Evaluation and Policy Analysis
Educational Horizons
Educational Leadership
Educational Researcher
Edutopia
Elementary School Journal
English Journal
Exceptional Children
Harvard Business Review
Harvard Educational Review
Independent School
Journal of Adolescent and Adult Literacy
Journal of Education for Students Placed At Risk (JESPAR)
Kappa Delta Pi Record
Knowledge Quest
Language Arts
Learning for Justice (formerly Teaching Tolerance)
Literacy Today (formerly Reading Today)
Mathematics Teacher: Learning & Teaching PK-12
Middle School Journal
Peabody Journal of Education
Phi Delta Kappan
Principal
Principal Leadership
Psychology Today
Reading Research Quarterly
Rethinking Schools
Review of Educational Research
School Administrator
School Library Journal
Social Education
Social Studies and the Young Learner
Teachers College Record
Teaching Exceptional Children
The Atlantic
The Chronicle of Higher Education
The Journal of the Learning Sciences
The Language Educator
The Learning Professional (formerly Journal of Staff Development)
The New York Times
The New Yorker
The Reading Teacher
Theory Into Practice
Time
Urban Education