

TO READ
Stuff You Have
TO KNOW
Stuff

Books by Kelly Gallagher

Reading Reasons

Deeper Reading

Teaching Adolescent Writers

Readicide

Write Like This

In the Best Interest of Students

180 Days
with Penny Kittle

4 Essential Studies
with Penny Kittle

To Read Stuff You Have to Know Stuff

Kelly Gallagher

TO READ

Stuff You Have

TO KNOW



Helping Students Build and Use **Prior Knowledge**

Heinemann

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Contents

<i>Acknowledgments</i>	ix
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1	BUILDING KNOWERS	1
	The Importance of Owning Information	4
	Prior Knowledge and Teaching	6
	Building a Web of Knowledge	8
	Knowledge Collection Begins in Infancy	13
	WORKS CITED	17

2	WORDS, WORDS, WORDS	21
	Overcoming Word Poverty	23
	How Teachers Can Address Word Poverty	28
	Closing Thoughts	48
	WORKS CITED	49

3	<i>The Importance of Prior Knowledge</i> AT THE SENTENCE AND PASSAGE LEVEL	53
	Understanding Syntactic Cues	53
	Bringing General Knowledge to the Page	57
	Introducing Prior Knowledge at the Sentence Level	58
	How to Help Readers Build Prior Knowledge at the Sentence Level	61
	The Importance of Prior Knowledge at the Passage Level	69
	Introducing Prior Knowledge at the Passage Level	71
	How to Help Readers Build Prior Knowledge at the Passage Level	73
	The Value of Prior Knowledge in Reading Test Passages	78
	Closing Thoughts	79
	WORKS CITED	80

4

The Importance of Prior Knowledge **AT THE ARTICLE LEVEL.85**

Build Background Knowledge Through the Article of the Week.	87
Having Prior Knowledge Enables You to Talk Back	92
Prior Knowledge in the Age of Click-and-Go Reading	94
Prior Knowledge and Genre Study.	97
Introducing Prior Knowledge at the Article Level	100
How to Help Readers Understand the Importance of Prior Knowledge at the Article Level.	101
Closing Thoughts.	106
WORKS CITED.	107

5

The Importance of Prior Knowledge **AT THE BOOK LEVEL.111**


The Benefits of Long Reading	113
How to Help Students Build Prior Knowledge Through Reading Books. . .	115
Closing Thoughts.	134
WORKS CITED.	136

6

WHAT KNOWLEDGE? WHOSE KNOWLEDGE? *Implications for Teachers and Curricula141*

What Should We Teach?.	144
The Curriculum Should Arise from a Collaborative Process	146
The Curriculum Should Be Balanced and Structured.	149
The Curriculum Should Strike a Balance Between Depth and Breadth . .	152
The Curriculum Should Be Tuned in—a Living, Breathing Thing	153
The Curriculum Is More Than Meets the Eye	154
Closing Thoughts.	156
10 Things Teachers Can Do to Build Prior Knowledge in Students. . . .	158
WORKS CITED.	161

<i>Index.</i>	<i>164</i>
-----------------------	------------



*It is difficult to
understand the
universe if you study
only one planet.*

—Miyamoto Musashi
The Book of Five Rings

BUILDING KNOWERS

I discovered the news of Colin Powell's death via this two-sentence news bulletin:

Colin Powell, the first Black US secretary of state whose leadership in several Republican administrations helped shape American foreign policy in the last years of the 20th century and the early years of the 21st, has died from complications from Covid-19, his family said on Facebook. He was 84. (Cole 2021)

Figure 1–1 shows where my mind went as I read this passage.



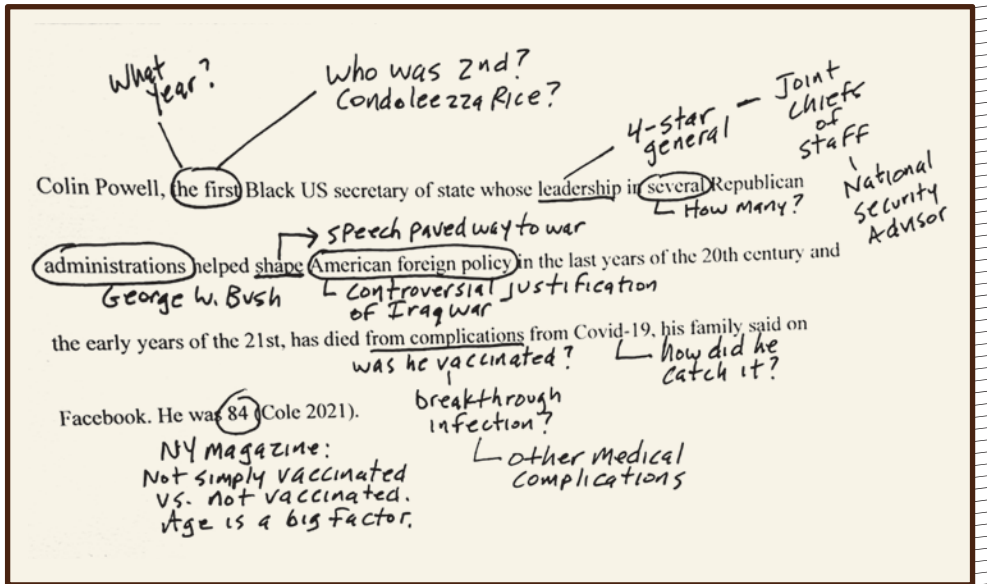


Figure 1-1

In reading this short passage, I deepened my comprehension by connecting what I was reading with what I already knew. Specifically, I did the following:

- made a connection to Powell's successor, Condoleezza Rice
- recalled key moments in Powell's military and political career
- remembered his appointment by President George W. Bush (and his subsequent resignation)
- recalled his speech that proffered a controversial justification to pave the way to war (All these years later, I can still visualize exactly where I was sitting while listening to Powell give his infamous speech.)
- considered Powell's vaccination status and wondered whether this may have been a breakthrough infection
- made a connection to an article I recently read about the virus' magnified effect on the elderly
- wondered if Powell had preexisting conditions

When it came to reading about Colin Powell, it was not simply reading the words on the page that led me to deeper reading. *It is what I brought to the page that deepened it.*

This should not come as a surprise to teachers of reading. As Bob Probst (2004) and others have pointed out, it is impossible *not* to apply prior knowledge while reading. (You are most likely using prior knowledge right now as you consider the claim in the previous sentence.) Take the word *Anaheim*, for example. When you see this word, you might think of your first trip to Disneyland. Or it might conjure up an image of a perennially bad Major League Baseball team. Or perhaps the word brings you back to the NCTE conference at the city's convention center. If you live far away, you might be trying to place where the city is located in a mental picture of a map of California. I taught at a high school in Anaheim for thirty-five years—and drove through the city daily—so my understanding of the word is likely much deeper than yours. For any reader, it is impossible to read the word *Anaheim* and not activate *something* in their past. It is this activation that deepens your comprehension.¹

But what happens when the reader lacks prior knowledge? Let's try another word in isolation. What comes to your mind when you read the word *contig*? My guess? Not much more than *What the heck does contig mean?* If you don't know what a contig is, and there is no context to figure it out, it won't matter if you are a proficient reader. It won't matter that you have phonemic awareness or a high degree of fluency. It won't matter if you apply word-attack skills or are highly motivated to figure it out. Your inability to understand the word is rooted in the fact that you have little or no background with the word to draw upon. No strategy from your reader's tool belt is going to help you. Without prior knowledge, making meaning may be impossible. (For the uninitiated, a contig "is a series of overlapping DNA sequences used to make a physical map that reconstructs the original DNA sequence of a chromosome or a region of a chromosome" [Green 2024].)

Now consider a reader who has never heard of Colin Powell. He can read the news bulletin and still learn a few things (e.g., Powell was the first Black secretary of state), but his comprehension will remain at the surface level. He will never understand the queasy feeling I had listening to Powell justify the upcoming invasion of Iraq—a queasiness I felt again (over twenty years later!) when I read of his passing. Reading the text is one thing; being able to read while accessing prior knowledge is another. What we attach to our reading is what gives our comprehension nuance and depth.²

1. This is something that David Coleman and Sue Pimentel, authors of the Common Core State Standards, got wrong when they suggested that readers should strive to stay within the four corners of the text. As Louise Rosenblatt (1970) famously argued, every reading of a text is a transaction between the text and the reader's unique point of view. To insist readers stay within the four corners of the text "flattens our reading, removes the depth, and erroneously teaches that there is an objective, authorial meaning that you will always be able to discern from the text" (Roberts 2013).

2. When considering the importance of attaching knowledge, we should make a distinction between declarative knowledge and procedural knowledge. What is the difference? *Declarative knowledge* refers to the knowledge of facts or information (e.g., my knowledge of Colin Powell). *Procedural knowledge* is the knowledge of how to do things (e.g., how to make your grandmother's apple pie). Even though we sometimes use both declarative and procedural knowledge in tandem to understand something, the case I make in this book is primarily about the importance of building declarative knowledge in our students. Students need to know things.

Having prior knowledge not only positions you to learn easier and to learn more but also *helps you think about the new information in front of you*. When I read the Colin Powell news, for example, I did not have to spend any cognitive space trying to figure out what the term *secretary of state* meant. I was already aware of his effect on American foreign policy, so thinking about that didn't slow me down. And because I already knew that the COVID virus affected the elderly more severely, I could infer that this may have played a factor in his death, given Powell's advanced age. I didn't simply ingest the information in the passage—my background on the topic opened space for me to think *beyond* the words printed on the page.

THE IMPORTANCE OF OWNING INFORMATION

You may have heard the argument that students don't need to know information because we live in an age where they can just look things up. After all, everything they might need to know is as close as their phones. So, instead of teaching them stuff, what we really should be doing is teaching them how to think.

Well, yes and no.

Certainly, we want to teach students to think critically, but this is not an either-or case. In fact, quite the opposite. Alongside the teaching of critical thinking skills, it is imperative that we also teach kids stuff. Lots of it. Why? *Students who know more are able to learn more, and they are able to learn easier*. Daniel T. Willingham, professor of psychology at the University of Virginia and author of *The Reading Mind: A Cognitive Approach to Understanding How the Mind Reads* (2017) notes that those who possess knowledge find learning less difficult. This is because “factual knowledge enhances cognitive processes like problem-solving and reasoning. The richer the knowledge base, the more smoothly and effectively these cognitive processes—the very ones that teachers target—operate” (Willingham 2006).

There are a number of studies to support this. In one study, David Hambrick (2003) tested college students about their knowledge of basketball during the middle of the season. He tested students again two and one-half months later at the end of the season. Hambrick found students who knew more about basketball prior to the experiment learned more as the season progressed. Having knowledge was a major factor when it came to their learning. Their prior knowledge provided a base and thus enabled them to more easily grow new learning.

CLOSING THOUGHTS

Our general ability to learn is highly correlated with general knowledge. The more you know about baseball, or music, or math, the more you are able to learn about baseball, or music, or math. In fact, the correlation between having general knowledge and learning was found to be *twice as high* as the correlation attributed to socioeconomic status (Lubinski and Humphreys 1997). Your ability to learn rests largely on what you already know, regardless of your background.

I was reminded of this yesterday when I met with a group of students who were reading Clint Smith's *How the Word Is Passed*, a thought-provoking tour of many of the nation's historical sites in which Smith probes the untold history of each place. The students, who were halfway through the book, were struggling. Through conferring with them, I realized that much of their confusion and disconnection was rooted in their lack of prior knowledge. Not only had the students never visited any of the sites, but they had never *heard* of them. This unfamiliarity not only made the reading much more difficult but also contributed to them questioning why they had to study any of these landmarks in the first place.¹⁶ Alberto Manguel, author of *The History of Reading*, reminds us, "Everything proceeds in geometric progression based on what

15. And that is *a lot* of mechanical writing and thinking: In 2021, over 839,000 students took either the AP language or the AP literature exam (Miller 2022).

16. Having students read books that are completely unfamiliar to them is not necessarily a bad thing. But it is a hard thing. It requires careful front-loading (as discussed in the last chapter) and other means of support from the teacher, especially in a classroom of students who are largely unmotivated readers.

is known and what is remembered every time we read something new” (cited in Wolf 2019, 88). These students lacked the general historical knowledge that would have helped them make important connections. “Geometric progression” was not possible. It is difficult to think deeply about something you know nothing about.

Having knowledge not only helps you learn more but also fuels your curiosity. As Ian Leslie, author of *Curious*, notes, curiosity “is stimulated by understanding *and* by the absence of understanding” (2015, 36). If you know nothing about a subject—say neoclassical architecture, for example—you are unlikely to want to discuss it. But if you already know something about the topic at hand, you are much more likely to be curious. Leslie says, “The more we know about something, the more intense our curiosity is about what we *don’t* know” (38). Curiosity is generated, he says, when we find ourselves in the “curiosity zone”—that place where we have some knowledge but not too much knowledge (38). Leslie rejects the notion that some students are more curious than others; instead, what really matters is the context in which students encounter new information. Not having any context creates indifference.

Students who know a lot learn more, and they are more likely to widen their curiosity, which also brings them to another benefit: they develop the ability to think at deeper levels. Consider those whom we consider experts. In *How People Learn*, the National Research Council notes that

experts, regardless of the field, always draw on a richly structured information base; they are not just “good thinkers” or “smart people.” The ability to plan a task, to notice patterns, to generate reasonable arguments and explanations, and to draw analogies to other problems are also more closely intertwined with factual knowledge than what was once believed. (Bransford, Brown, and Cocking 2000, 14)

Good thinkers have built a reservoir of knowledge. Tom Loveless, a senior fellow in the Governance Studies program at the Brookings Institution, echoes this notion: “One of the most highly replicated findings of education research is that a good predictor of *how much students will learn tomorrow is how much they know today*. Studies of interventions that simply ratchet up expectations without regard for students’ prior knowledge have yielded disappointing results” (2021; italics mine).

There is a lot at stake here. Maryanne Wolf, expert in cognitive neurosciences, worries that we rely too much on external knowledge at the expense of not building internal knowledge. Doing so would affect our ability to think critically, leading us to “become increasingly susceptible human beings who are more and more easily led by sometimes dubious, sometimes even false information that we mistake for knowledge,

or, worse, do not care one way or another” (2019, 55). When we don’t own our knowledge, we are put in a precarious position wherein we are forced to rely on others to do our thinking for us.¹⁷

Building this internal knowledge is critical, and the earlier, the better. Daniel Willingham (2012) reminds us, “Once kids are fluent decoders, much of the difference among readers is not due to whether they’re a ‘good reader’ or a ‘bad reader’ (meaning they have good or bad reading skills). Much of the difference among readers is due to how wide a range of knowledge they have.” This bears repeating: much of the difference between “good” and “bad” readers is strongly correlated with the amount of knowledge they possess. It is important to teach students the moves good readers make, but we must not lose sight of the fact that these moves are contingent on the reader knowing things.¹⁸



So what can teachers do to help students become knowers? Here are ten suggestions.

17. Exhibit A: Since Wolf wrote that passage, we now live in a society where nearly one-third of Americans still wrongly believe that the results of the 2020 presidential election were fraudulent (Kamisar 2023).

18. Knowledgeable readers not only read better but are likely to develop the ability to read faster, as knowing things cuts down on the need to reread things that are unfamiliar (Willingham 2021).