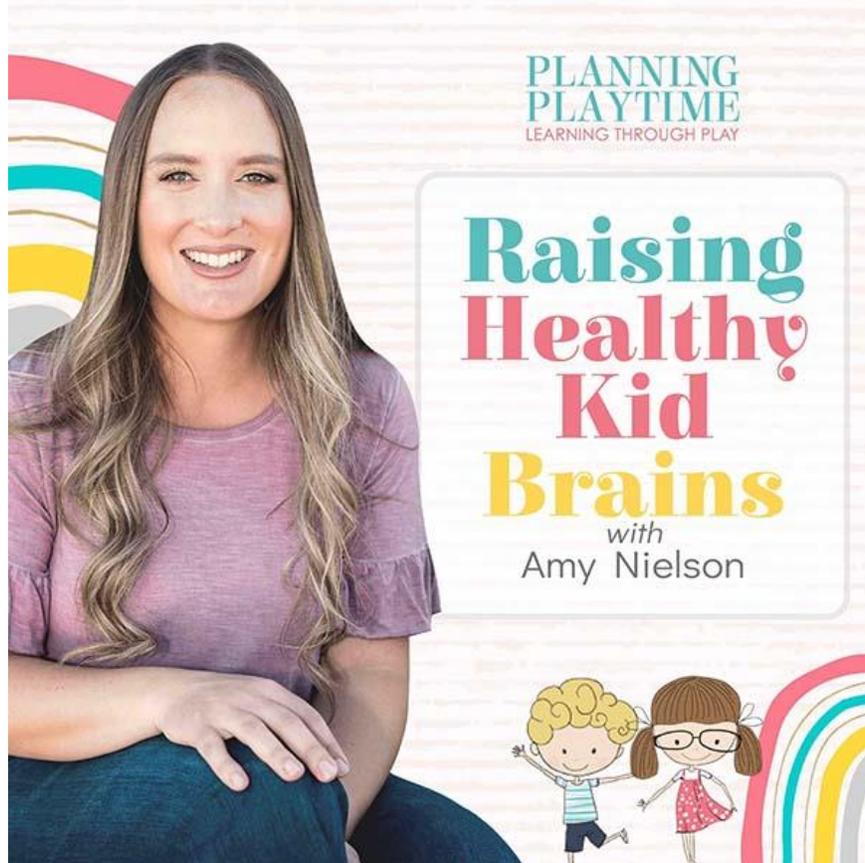


## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler



### Full Episode Transcript

With Your Host

**Amy Nielson**

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

How early is it appropriate for your child to start learning about history and science and how will that affect their reading ability and reading scores later on in schooling? Today I had the most amazing conversation with Natalie Wexler who is an education writer. She's the author of *The Knowledge Gap: The Hidden Cause of America's Broken Education System and How to Fix it*. She also co-authored with Judith Hochman, *The Writing Revolution: A Guide to Advanced Thinking Through Writing in All Subjects and Grades*. And she is a senior contributor at forbes.com.

Natalie and I had an amazing conversation about what's being taught in schools, how you can find out what your children need to know and if they're getting that, the impact of core knowledge in early education and how that grows over time. And if your child's not getting what you feel they need, what you can do about it either as a teacher or as a parent? So come join us for this conversation. It's amazing. I actually found Natalie by reading her book for myself and reached out to her and asked if she would come join me on the podcast. She was gracious enough to say yes.

I'm so honored to have her on the show, come listen to our conversation right after this.

Welcome to the *Raising Healthy Kid Brains* podcast where moms and teachers come to learn all about kids' brains, how they work, how they learn, how they grow and simple tips and tricks for raising the most resilient, kind, smart, compassionate kids we can. All while having lots of grace and compassion for ourselves because you know what? We all really need and deserve that too. I am your host, Amy Nielson. Let's get ready to start the show.

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Amy: Hi, Natalie, welcome to the show. I'm so happy to have you here on the podcast today.

Natalie: Well, thanks, Amy, I'm delighted to be here.

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

Amy: And we get to talk about one of my favorite things which are knowledge and children and how important that is at an early age. And talk to me about this book, *The Knowledge Gap*, how you got there, why you wrote it and why it's so important.

Natalie: Well, it was almost accidental really. I started writing about education in Washington DC where I live, maybe 12 years ago now, 13 years ago. And when I started I was mostly interested in what's often called the achievement gap between kids, basically the upper and lower ends of the socioeconomic spectrum. And when I started I thought the problem really was high school, a lot of education reformers have thought that. But when I started digging into it I realized that really the roots of the problem lie in the way we teach reading in elementary school.

And it's not just kids from poor families who are disadvantaged by this because the way we've been teaching it, really just doesn't mesh with what cognitive science has found. Specifically what I focused on is reading comprehension. We have problems teaching kids how to decipher or decode words but I discovered that the standard approach to teaching reading comprehension which schools spend a lot of time on just doesn't line up with what cognitive scientists have found about how reading comprehension works. And the result is that kids and this goes on through elementary school, sometimes through middle school.

And kids get to high school and they just don't have the background knowledge and the vocabulary to understand the curriculum, the materials that they're expected to read at the level they're expected to access them. So that was kind of how I got into it and I also have focused to some extent on writing, the co-author of this book, *The Writing Revolution* because literacy, reading, writing, those things are really connected. And also connected as we might talk about with listening and speaking. They're all components of literacy and we haven't been using them together in a way that can unlock all students' true potential.

Amy: Yeah. I found your book so fascinating and was also interested that this was a challenge starting in elementary school. And you talked about knowledge and the role of knowledge and content in elementary schools. Can you talk to

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

me a little bit about what you found as you were doing research for the book about knowledge in elementary schools, kind of where the focus is versus what cognitive science was telling us it should be?

Natalie: Yeah. Well, I think we've always spent a lot of time on reading and math in elementary school. But that's become even more pronounced in the last 20 years or so as reading and math tests have become so important. And the way that reading comprehension has been approached is to look at these tests essentially and see what they seem to be trying to measure. And they're things like finding the main idea, making inferences and so kids get a passage on something they may not know anything about and they're supposed to read it and then answer these comprehension questions.

And so our instruction, this was going on even before the tests became so important but it's really been kind of put on steroids after these tests got so much emphasis. The theory is we want to equip kids for these tests then our instructions should kind of look like what they're going to be seeing on the tests. We want to prepare them for the tests. The problem is that what reading comprehension really relies on is not so much abstract skill and finding the main idea, making inferences.

It's really how much knowledge you have, either knowledge of the topic or general academic knowledge and vocabulary. But the way schools have been approaching comprehension is they've been marginalizing or even eliminating the subjects like social studies and science that could build that kind of academic knowledge. And instead, having kids practice these, finding the main idea and there's a whole bunch of skills, year after year using texts or books on just random topics that are supposed to be easy enough for kids to read on their own.

So it's going to be at their individual reading levels which could be well below their grade level. So you could be in fifth grade but you spend your time practicing finding the main idea on a book maybe at a second-grade level. And the theory is that if you get really good at finding the main idea they'll be able to apply that skill to gain meaning and knowledge from anything that you're

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

reading. But in fact, if you don't have a sort of the minimum level of background knowledge and vocabulary necessary to understand the text you don't get a chance to demonstrate your skill at finding the main idea because you just don't understand that passage.

And so this explains a large part of the so-called achievement gap because kids who are coming from more highly educated families. And in our society, that's highly correlated with having more wealth, more resources. They're able to pick up that academic knowledge and vocabulary at home, they have a better chance of doing that because their parents use these words in conversations or they take them to museums, read them books, take them on trips, whatever.

But the other kids, they rely on school for that kind of knowledge and vocabulary. And unfortunately, they're the least likely to get it there because especially in schools where test scores are low the theory is well, we just need to keep working on those skills that appear to be measured by tests. But we don't have to worry about social studies and all of those things. They can learn that later on after they've gotten their reading skills up. But we've really been shooting ourselves in the foot.

Amy: I found that so interesting in your book talking about yes, that kids, they needed a certain amount of basic knowledge to be able to even do these tests. And you talked about that, these tests were kind of more like knowledge tests as opposed to reading tests because they couldn't comprehend the text if they didn't have some background knowledge around it.

Natalie: So there's a cognitive psychologist named Dan Willingham who has called them knowledge tests in disguise which I think is a great way of putting it.

Amy: That is fascinating. In your book, you talk about some of the different parts of reading which I found really fascinating. So obviously there's kind of phonics or decoding, the decoding part of reading which historically for the last 100 years or so it seems it's kind of trended more towards kids will figure this out naturally if we give them enough things to read. And then there was

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

comprehension which then we're trying to teach skills. Talk to me a little bit about what you found out about that.

Natalie: Yeah. Well, it's interesting because if you look at what cognitive science has found out about reading, they've found that really if you want all kids to learn to decode well you need to teach this as a set of skills. Have these kids practice not just phonics but also phonemic awareness which is the ability to hear and reproduce the sounds in words. And that enables kids then to connect those sounds to the letters that represent them which is the phonics thing.

On the comprehension side basically, the science tells us, well, it's not so much teaching these skills systematically. That will kind of come naturally if you develop kids' knowledge in the right way. But teachers and it's not their fault, it's really a whole system and a lot of it has to do with schools of education, how teachers are prepared. They have kind of been trained to think the opposite, that most kids will pick up the decoding stuff naturally if you just surround them with good children's literature and maybe read aloud to them a lot.

And then on the comprehension side especially in the last 20 years, they've been trained to think that, well, for comprehension we have to focus on these skills and have kids practice these skills. So it's really it's kind of gotten to be backwards. On the decoding side though there is as you say a long history of this idea that reading is something that comes naturally essentially to most kids except, for a few who need the special help, kids diagnosed with dyslexia but that's really not the case.

I mean it has been estimated that at least half and maybe especially in certain socioeconomic subgroups, many more kids will never become fluent readers unless they get that systematic instruction and foundational skills including phonics. And it doesn't, I mean it's true that not all kids are going to need that but it doesn't really hurt any kids to have 20 to 30 minutes a day of that kind of instruction in kindergarten through second grade. And the estimates are that if we do provide that kind of systematic instruction in phonics that 95% of all kids will be reading by the end of second grade.

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

Whereas now we have basically, a third of kids are maybe where they're expected to be in say third grade. And it's complicated. There's been this idea that phonics if you really teach it systematically it's going to kill children's love of reading. But there's really no evidence for that and it's kind of hard to learn to love reading if you can't read. But we've been making some progress lately on the decoding side of things. There's a lot more awareness than there used to be that we need to change our approach.

And in fact, a number of states and schools across the country are changing that approach. I think there's been less awareness that we also need to change our approach on the comprehension side or we won't turn out kids who are fully literate.

Amy: Yes, I am so excited that you're putting out this message because I think it's so valuable and I'm excited to see it continue to spread. I was actually having a conversation at soccer this last Saturday with a mom who has her children in a charter school and was talking about the content-based curriculum they had there and it sounded fabulous. And I was just so excited to see that starting to kind of work its way into the system. It was so great.

Natalie: Yeah, that's terrific.

Amy: Yeah. So we talked about knowledge and kind of what that looked like, tell me a little bit because you have some beautiful stories in the book about some of what you witnessed as you were kind of looking at classrooms that had a more content-based curriculum. What does that look like? Because it seems like a lot of classrooms feel like this content is maybe developmentally inappropriate to be teaching history and science at these younger ages. Talk to me about that and maybe some of what you saw in classrooms where content curriculum was being used.

Natalie: Yeah. And I would follow up on a point you made about the friend you were talking to that it's still a minority of schools. But this trend towards content which knowledge building curriculum is spreading across the country. And I mean the best way to do this really, the most effective way to build kids'

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

knowledge is through a coherent curriculum that includes a lot of content, goes deeply into topics and social studies and science and the arts along with literature, fiction, poetry.

Because I mean there are teachers, individual teachers can do something to build knowledge but they only have control over the class in front of them. And building knowledge is really a gradual cumulative process that extends across years. So only a curriculum that extends across years is really going to ensure that kids get that knowledge developed in a logical sequence so that when they're learning about say the war of 1812 which is included in one of these curricula in the second grade which may come as a surprise to a lot of people.

But the kids love it if they've gotten the background knowledge they need to understand it. So if they've had, they've learned about the American revolution and before that the colonial era, and before that, native Americans then it all makes sense. So there are now I'd say half a dozen elementary literacy curricula that do build knowledge in this kind of coherent logical way. There is a website called the [knowledgematterscampaign.org](http://knowledgematterscampaign.org) where you can find more information about all of these curricula and knowledge building in general.

But just briefly I'll say, so, all of these curricula. They cover different bodies of knowledge in different ways. But they all have a couple of really crucial things in common and one is they are organized by topic rather than the skill of the week. This week we've done comparing and contrasting. And here are some texts we can use to help us practice to learn how to compare and contrast. No, start with the topic and then read a series of texts aloud usually, especially if kids are young, about that topic. Lead classroom discussions that focus on that content. Use the vocabulary that kids have just heard.

And then have them read about the topic and also write about the topic. So that's another thing that all of these curricula are going to have in common is they connect these different aspects of literacy in that way. And through these read alouds and discussion they give all kids in a classroom, access to the same complex text instead of this basically, tracking system that has become

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

standard where the kids, first of all, they're reading texts on all different topics but they're also reading at different levels.

And so the kids in the low reading groups never get access to this rich content that the more advanced may be getting access to and there's no reason for that. And in fact what I keep hearing over and over from teachers who have switched to this is, "It's the kids who would have been in the low reading group, the kids with the IEPs, the special education plans and the English language learners who often make the most insightful contributions to classroom discussion once they're given a chance to access that kind of complex content."

There's nothing wrong with their intelligence, their reasoning abilities. They should not be held back by their decoding ability. And eventually, their decoding ability, if they're getting the right instruction is going to catch up to their oral language and their oral comprehension. And at that point, the knowledge that they've built through listening to texts and talking will kick in and enable them to read on their own and write on their own at a higher level.

Amy: I love it and we talked about when we had our previous conversation about what parents could do at home too and one of those things was to be reading texts that were above the child's reading levels to be reading texts with different vocabulary. Talk to me a little bit about what that would look like.

Natalie: Yeah, I mean I think I hear a lot about parents should read aloud to their kids. Now, if your kid is struggling with decoding, reading aloud is probably not going to solve that problem. So that's just one thing I'd like to make clear. But as far as building that background knowledge and that vocabulary, reading aloud is very important from rich complex text, from chapter books and books especially if you know your kid is interested in dinosaurs or sharks or whatever. Read books on that topic and not just reading aloud.

And it would be good to read a series of texts because kids need to hear the same concepts and vocabulary repeatedly in different contexts for those things to really stick. But in addition to reading aloud having dialogs, having conversations about the text, about the content, answering and asking

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

questions, using that same vocabulary, that's going to be the best way to enable that information, those concepts to stick in a kid's memory. And of course, then you have a lot more flexibility when you're dealing with one or two kids as opposed to a classroom of 25 or 30 where you can't just cater to every kid's interests.

But I would say so cater to your child's interests but don't be bound by them because there's a lot of emphasis on kids choosing and following their interests but you can't get interested in a topic that you don't know about. So also introducing kids to new topics that you think they might become very interested in. And beyond reading aloud and talking, if possible going to museums, going to historic sites, all sorts of things that will really help build this kind of interest in the world and knowledge of the world.

Amy: So good. So you had a quote in the book that I loved and it was knowledge is like Velcro, it sticks to other knowledge or something like that. I kind of just was typing notes as I was listening on the treadmill. Tell me a little bit about that and the Matthew effect, why starting to build this knowledge and doing it as early as possible is really helpful.

Natalie: Yeah. And again I love that knowledge is like Velcro metaphor but I didn't invent it. I'm like a magpie taking things from other people, that's from a reading expert named Marilyn Adams who said, "Knowledge is like mental Velcro, it sticks best to other related knowledge." And I think that's another way of saying that when we already have some relevant prior knowledge we have more capacity in a part of our consciousness called working memory to take in and understand and retain new information, working memory is the aspect of our consciousness where we're consciously trying to learn essentially.

And it's very limited, can only juggle four or five new items for maybe 20 seconds. Starts to get overwhelmed. But if we have prior relevant knowledge in long-term memory we don't have to juggle that information in working memory and that opens up more space for new information. So for example, if you're reading about baseball and you already know baseball terminology like double

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

play, you don't have to think, well, what is that, you don't have to go look it up, think about it. You can just attend to the new information.

So having that prior relevant knowledge does help with comprehension but it also helps with retaining information. And what that means in the context of school is some kids are coming in with more of that Velcro, more of that academic knowledge that new knowledge can stick to. And in our leveled reading system they're actually getting a chance to read more sophisticated books with more sophisticated vocabulary and they are more likely to retain that vocabulary. And then in turn enables them to read at a higher level because now they have more vocabulary.

The other kids who come in with less of that mental Velcro are, first of all, relegated to simpler books. But even if there's some new information in those books they may not retain it because they don't have anything for it to stick to. And so what that can lead to is this thing called the Matthew effect where the good readers can kind of zoom ahead, they get better every year. But the poor readers lag farther and farther behind every year.

And so by the time kids get to upper-grade levels the gap between those two groups of readers can become very wide and very difficult to narrow which is why it's so important to being as early as possible. When the gap is narrower and when you get much more bang for your buck, we may never be able to eliminate that gap, parents with more resources are always going to have an advantage. But there is much, much more that we can do to narrow it and to ensure that in the early grades, we're planting the seeds of success in later grades rather than the seeds of failure which with the best of intentions is what we're currently doing.

Amy: So important. So if we're talking to teachers, we have a lot of listeners that are teachers and a lot that are parents, if you were talking to them right now what would you recommend for say a parent who is wanting to do something about this for their own children like myself, what can we do to make sure that our children are getting more of this content, this knowledge that they need, this core knowledge?

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

Natalie: Yeah. Well, it's a good question, it's kind of a tricky one because I have kids and when my kids were young I trusted the school and the teachers that they were the experts and I didn't question, what's the curriculum. But I think that is really one thing parents do need to do is just first of all find out what curriculum the kid's school is using. That's not as easy as it should be. Sometimes schools aren't using any curriculum.

Sometimes there's an official curriculum that's not getting used in the classroom because teachers traditionally have had a lot of autonomy and they need some autonomy but it can backfire if kids are not getting what they need. And then even if there is a curriculum it may be the dominant curricula at the elementary level are organized by skill. Don't have much content. Or they may have some content there but they are so bloated and so encyclopedic that they have much more content than any teacher can get through in one school year.

And so teachers have to choose and they may not be equipped by their training to make the best choices. It's complicated to figure this out but if you can and I mean you can see, well, is my child learning any content? It's not always successful, I know from having young children, what did you learn in school today? You can certainly try asking. And try asking the teacher. But I think what's going to work best from a parent's perspective is strength in numbers if you have determined that there is something lacking in your kid's school curriculum, that there's not much content, that it's basically, a focus on these comprehension skills and strategies.

If you can find other parents who share your concern, you're going to be in a much better position to go to the school administration or the school board or whatever level you can get to and say, "Look, this isn't serving kids well, not just my kids but all kids." And if you can ally with teachers and some school administrators, that's going to make it even more powerful. And I think that if the teachers can lead the way that's going to make it much easier. So finding teachers in a school district who feel the same way. That could also help.

Amy: We talked to you about some resources online, you mentioned the Core Knowledge Language Arts curriculum, that's something that's free for download

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

that people could use at home. I like to, I kind of call it, side school my kids. So I grew up very much in mixed home school background plus going into schools all over the country as my family moved every six months to a year. So I had a lot of different exposure to education in different parts of the country.

But my kids enjoy public school, they love going there but I also like to give them content on the side so I kind of side school. So that was something I found interesting and potentially helpful.

Natalie: Yeah. As you mentioned, it's not just Core Knowledge Language Arts but some of these other curricula are open educational resources. So they're freely available. Now, some of them use published, commercially published books, there's one called Bookworms that I believe is, you can Google it and I think you can just download the curriculum resources but you'll have to get the books. Core Knowledge Language Arts is different in that it has its own texts and you can go to the Core Knowledge Foundation. There is also a paid version of this curriculum where you don't have to print out the texts.

But if you go to the foundation website anybody can download and print out a unit say on Mesopotamia or I mean there is one on the war of 1812 in second grade as I mentioned. Again, I mean I think that it's helpful for kids to have the background knowledge before plunging into the war of 1812 but you don't have to be bound by the grade level designation. So if you have a second grader who's interested in history you might want to start with the colonial era from kindergarten or I think that's first grade. And then the American revolution before plunging into the war of 1812. But those curricula can be really good resources.

Another resource that I know a lot of homeschooling parents have used which could certainly also be used as a supplement and has been is a series of books that again was put out this Core Knowledge Foundation called Things Like What Your First Grader Needs to Know, or Needs to Know, I can't remember exactly the title, What Your Second Grader Needs to, they're called The Grader Books.

And they summarize a lot of sort of history, science, art that E. D. Hirsch and his foundation determined, this is the kind of knowledge that is going to be assumed

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

by the curriculum at higher grade levels by newspapers, magazines, all sorts of things. So Greek mythology, that's another one that a lot of kids love and kids of all socioeconomic and ethnic backgrounds. And that's covered in second grade as well. So I mean that's a nice sort of discrete unit that you could use, doesn't really assume much background knowledge.

Amy: And it's so fun. My kids love Greek mythology. And you talked about that in your book as well, so some really fun stories there. This has been so good. I am so excited for people to hear this and have access to those resources. I highly recommend this book. I actually reached out to Natalie after reading the book and said, "Hey, will you please come and talk to me on my podcast?" Because it was so helpful. So thank you so much for coming.

Natalie also has a newsletter that you can go and sign up for and just get updates from her. And she's sharing, what kinds of things do you share in the newsletter?

Natalie: Well, it's sort of broadly, a lot of it's on the stuff we've talked about today but it's also more broadly on cognitive science, literacy, I mean the tagline is cognitive, science, literacy and fairness. So that's basically it.

Amy: I love it. So we will have links to all of that in the show notes and you can go and follow Natalie and grab this book. And I haven't read the other book that you've written but I'm excited to and will be reading that because I think writing is something that we kind of skip over a little bit. So I'm very excited to look at that too. Thank you so much for coming on and sharing your wisdom and knowledge with us today. I appreciate it so much.

Natalie: Well, thanks for having me, Amy, it was a pleasure.

Amy: Okay, thank you. Alright, I will see you guys next week.

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Thank you so much for spending some time with me today and listening to this episode of the *Raising Healthy Kid Brains* podcast. We are a brand new podcast

## Ep #13: The Vital Foundation for Reading Comprehension with Natalie Wexler

which means we are harder to find than the perfect LEGO in a big box full of LEGO. And we need your help so that we can reach more moms and parents, and teachers with this information about their children's brains. So how can you help? You can follow this podcast wherever you listen to podcasts and leave us a rating and a review. That would mean the absolute world to us.

And hey, we want to make it fun because at Planning Playtime we are all about fun. We made a very special gift for you and your kiddo. And your follows, ratings and reviews are going to unlock different parts of that gift over the next few weeks. It's going to be so much fun so after you follow, rate and review the podcast, head over to [planningplaytime.com/podcastlaunch](http://planningplaytime.com/podcastlaunch) to find out where we are and how much of that gift you can go and get for your child right now. Thanks a million and I will see you on the next episode of the *Raising Healthy Kid Brains* podcast.