Triple R Teaching

Hello, Anna Geiger here from Reach All Readers!

In the last week or so, I've been doing a lot of study surrounding the foundations of the science of reading - what it is, where it came from, what are the big things we need to know - and it had me start to think about some misconceptions around the science of reading, even among people that support it.

We're going to talk about some of those things today. We're going to talk about six important things to remember when it comes to the science of reading.

Number one is something that you probably already know, and that is that the science of reading is simply a body of research. That's it. We hear from people that it's a pendulum swing, that it's a fad. And while it may be true that being excited about the science of reading is a fad, if that fad disappears, the science of reading will not disappear with it because it's a body of research. You can't erase it. It's just there. So that's the first thing to remember. That's all it is, a body of research about reading and how we learn to read.

Something else to remember, though, is number two, that the research doesn't tell us everything. I know, that would be nice. There's a lot of really interesting questions in the big science of reading Facebook groups that people ask wondering, for example, what research says is the best order to teach the alphabet, or wondering what exact kind of handwriting paper I should be using with my preschoolers. What does research say?

These are fine questions to ask, but I don't think we should be surprised to learn that the research doesn't tell us. There's a lot that is involved in setting up a good quality study that shows us causation. You need to have groups that agree to participate. You want to have randomized assignment to groups if possible. You need a control group. You need time to do the study. You need to have a way to determine whether there's causation. You need to pay for the study. So there's a lot involved in a study, and not the least is expense.

I think to expect that there's a research study out there for every little question we have is a little bit of a dream. There isn't going to be something like that. So we have to remember that research is not going to answer every single question.

Number three, just because someone says something is research-based or research says..., doesn't mean that it actually says it. I see that a lot in groups too, where people ask really good questions or they talk about a certain practice that they have and someone says, "Well, research says..." or, "Well, you shouldn't do that because research says..."

And I think a lot of people then back off and they say, "Oh, okay, the research says, so I won't do it," or "I'll try something different," but we need to take it a step further.

I always like it when people very kindly and respectfully say, "Could you link to a study that shows the research in this topic," because that's really what we want to see.

If someone sends you a link to an Education Weekly article, or an article from The Atlantic, or a blog post on my website, or a Reading Rockets article, those can certainly be very useful and interesting to read, but they are not the research. They may be someone's opinion or summary of the research, but they're not the research itself.

What you want to see is a link that leads you to something with the parts of an actual research article. You want to see the abstract, which is the summary. You want to see the introduction, the method, the results, and then a discussion or implications. If you're not seeing that in the link that someone sends you, then that's not the research itself.

Interestingly, it can be hard to find quality research even among places that have the things I just mentioned. The National Reading Panel, as you know, was a group of educators commissioned by Congress to study the research around teaching to read. 2000 was the year they submitted their report, and they actually had 115,000 studies to sort through. A lot of people will say they analyzed a hundred and some thousand studies to do their report, but that's not true. They actually had to whittle it down to just about 600 because only 600 studies or so of those 115,000 studies actually met their criteria for a quality study.

Now there are different opinions about this, but, in general, if you're trying to find a study that shows causation - this thing led to this, so therefore this educational practice is superior to that - you want to see that the study has experimental and control

groups. You want to see a clear hypothesis that was established before they did the study. You want a detailed description of all the subjects - those in the control group and experimental groups. You want to make sure you can't attribute the causation to something else. You want the study to be replicable so that others can try it and see if they get the same results. Finally, you want it published in a peer-reviewed journal so that it's been subject to scrutiny. Now different journals have different practices of peer review and different levels of scrutiny, so it's not perfect, but it's definitely an important part of the process.

So there's a lot of research out there, but not all of it is quality research, not all of it is appropriate for drawing conclusions.

Something else to remember is number four, one study isn't enough to lead us to change what we're doing. Now as Stanovich and Stanovich point out in an article they wrote, which I'll link to in the show notes, they're clear that we need converging evidence - multiple studies - to draw the conclusion that a particular educational practice is research-based. We want a group of studies to consistently support a given theory.

Very often, a single study will come out, and that's really good to pay attention to, but we have to remember that a single study isn't enough. We shouldn't be expected to change everything based on a single study. In the Stanovich article, which is called Using Research and Reason in Education, they wrote, "Issues are most often decided when the community of scientists gradually begins to agree that the preponderance of evidence supports one alternative theory rather than another."

If you listen to my episode from two weeks ago, I talked about the research surrounding whether we should teach letter names first, letter sounds first, or both together. What I said was, "There's a growing body of evidence that we should teach both." I said growing body because they're still sorting this out. More work needs to be done. It seems that that's what the research is telling us, but we need to have more before we can say absolutely certainly. Recommendations are good though, and using what we do know from research to make our best judgment is really important.

The number five thing we need to remember about the science of reading is that research doesn't tell us everything we need to know because education clinical trials can be limited for ethical reasons.

In other words, you might want to find out which is superior, balanced literacy with more of a haphazard approach to phonics, or structured literacy where we have a scope and sequence and we go through it and we teach everything in a structured way. But to

do a study like that where you believe that people in the balanced literacy group are going to suffer - that some students in that group are not going to get what they need - is not ethical. So it's tricky, and therefore it can be hard to get the solid answers we want because we are, of course, dealing with actual people, actual children.

Finally, Dr. Steven Dykstra, a psychologist who's really an expert on this topic, reminds us that the science is incomplete and there's not enough science to fill the classroom day. In other words, there's not enough science to dictate everything that you do. This is a little bit of a repeat of an earlier item that I mentioned, but I just want to talk about this again because I want to talk about the difference between bullseye science and the other science.

This is how Steven Dykstra words it. He said, "Bullseye science is what we know for certain based on the research, and then we still have some questions which are in the outer parts of that target."

Some things in the bullseye science realm would be that systematic phonics is better than no phonics, or embedded phonics, or haphazard phonics. We also know that phonemic awareness is essential. It's not sufficient, but it's essential for learning to read.

But there are many other questions that we still have because the research has not had enough studies to give us a convergence of evidence, or there haven't been enough studies about it because there are ethical issues, or it's such a minute issue that probably no one is going to take it on for a study."

So where does that leave us because if everything is not entirely backed by research because the research doesn't exist? What do we do?

Well, I'm going to give you a little bit of a quote from Steven Dykstra in a presentation that he did for PaTTAN. It's called Translating Science into Practice. This is a video you can watch for free. I'll definitely link to that in the show notes. Here's what he wrote on one of his slides, which I think is a really good conclusion to today's episode.

He wrote,

"Knowing how science works: What would a scientific model of reading instruction

include? It would include a foundation of rock solid truths that give broad guidance to our efforts. It would include clear statements about what we know is not true, and what we should avoid. It should include a clear connection between the science we know and our practice decisions that match those rock solid truths and avoid the forbidden."

He continues, and this is important,

"It should include a humble flexibility and an awareness of where the science ends and our best judgment begins because, as a teacher, your best judgment is going to play a big role. A scientific model of reading instruction should include a range of options, because, like medication, the best first choice for all isn't always the best choice for each of us. Finally, it would include a willingness to change as new science is developed, backed by healthy skepticism."

So those are some things to remember about the science of reading. Just a quick recap: Number one, the science of reading is a body of research. That's all.

Number two, the research doesn't tell us everything. It's a lot of work to put together a study, so they're not going to do studies for these minutia-type things.

Number three, just because someone says something is research-based doesn't mean that it is. You want to make sure that they can link to a study that actually is published in a peer-reviewed journal, and that it includes an abstract and all the other parts of a study.

Number four, one study isn't enough. You want to see a convergence of evidence before you can have a justification for changing classroom practice.

Number five, one reason research doesn't tell us everything we need to know is because it can be unethical to find answers to some of the harder questions. So there have to be workarounds for that and ways to make sure everyone is still getting a good education while we try to answer these tough questions.

Finally, the science is incomplete, and so we have to fill in the gaps using our best judgment.

I hope this was helpful. I have a lot to share with you in the show notes today at reachallreaders.com/episode108.

Talk to you next time!