Evidence-based practices in teaching writing - with Dr. Steve Graham

Triple R Teaching Podcast #203

Hello, this is Anna Geiger, author of *Reach All Readers* and creator of the Reach All Readers website. In today's episode, I interviewed Dr. Steve Graham, and this is kicking off quite a series on writing. I think it's eight parts. I've interviewed all kinds of teachers and other experts to help us understand what research says about teaching writing and how to apply that in a variety of different grade levels.

I had to start with Dr. Steve Graham, who has been studying writing for 47 years, which interestingly is my age. He has been doing this my entire life and has no plans to retire, which is exciting for all of us that love to continue to learn from him with all the things that he writes and shares. He shares in a very understandable way.

Also you may have noticed that he is extremely generous with his time. I think he's been on almost every podcast that has had a series about writing, and I appreciate all the time that he gave to me. I wanted to ask as many questions as I could, which is why this episode is a little bit longer than normal.

In this episode, we're going to look at six evidence-based practices for teaching writing and then go into a little bit of detail about each one. Here we go!

Anna Geiger:

Welcome, Dr. Graham!

Steve Graham:

Thank you. I'm really glad to be here.

Anna Geiger:

Well, you have certainly made your way around all the podcasts. I've listened to almost every interview probably that you've given about teaching writing, and I've learned a lot from you. I'm excited to share that with my audience today.

But before we get into that, could you introduce yourself? I know you've been in education for a very long time. Tell us what you've been doing and what you're doing now.

Steve Graham:

Yeah, I started about 47 years ago as an assistant professor at Auburn University. I'd been a special education teacher before that. My initial area of focus was reading as a doctoral student, and I did what I would call a mediocre dissertation. My minor person on my dissertation committee took me aside, very politely, and said, "I think you could have done better than that."

It made me start thinking about what is it I really was interested in. I realized that what I really wanted to focus on was writing. That's probably not the time you want to find that out, right at the end of your doctoral program.

Anna Geiger:

Right.

Steve Graham:

But for the next 47 years, that's what I've focused on. Although I've come back around to connections between reading and writing.

Basically I do all kinds of work in the area of writing, and that includes work taking a look with observational studies and survey studies to see what's going on in classrooms.

We do work trying to figure out how writing operates, what are the basic ingredients in them, and how they work together or don't work together.

Also, I've done a lot of different instructional studies. A lot of those have focused on the self-regulated strategy development model, which my wife, Karen Harris, created.

I guess the big thing in the last 15-20 years is I've probably done about 25 meta-analyses trying to bring the research together in terms of what works. Those have covered things all the way from how to teach writing effectively, how are reading and writing connected in terms of teaching each and supporting the other, and how does writing support learning.

I've got work going on in about seven or eight different countries. I've gone more international in the last 10 years.

The big thing on the plate right now is AI, so I'm doing a number of studies, mostly outside of the country, taking a look either at teacher or students' viewpoints on AI and the use of AI to give feedback.

Anna Geiger:

That is so interesting!

You've been at this my whole life because I'm 47 this year. That's quite a career you have. Are you still serving as professor at ASU?

Steve Graham:

I am. I will have to make a decision in a year's time whether to retire. I had worked on an agreement with my dean for these last three years, and I may try to revisit with her about maybe another three years. I haven't decided, but I really doubt that I'll stop working. I really like what I do, and I really like working with other people. My guess is I'll work until I drop.

Anna Geiger:

It's hard to imagine stopping, isn't it? I know my kids ask me that too, and you're inspiring to me in thinking about working for many years yet. That's very inspiring.

I've read many of your works. One of the books I particularly like to recommend is *Best Practices in Writing Instruction* that you helped edit, but today I want to talk about a chapter in the *Handbook of*

Writing Research. You wrote, or co-wrote, I can't remember, a chapter that was about evidence-based practices in teaching writing. There were six or seven that you listed there, and we're going go through those and talk about those. I also have some specific implementation questions about some of those.

Let's start with what does it mean to use evidence-based practices in teaching writing?

Steve Graham:

Okay. The basic idea behind evidence-based practices, and I think this sometimes is overlooked in our zealousness as academics to implement these and ask teachers to implement them in the classroom… This primarily grew out of work in medicine where there was concern that… For years what doctors did was they basically picked up from others the techniques that they thought would work. There wasn't this systematic study of it; it was clinical practice that drove that.

There's nothing wrong with clinical practice, right? If you're a teacher, you learn things that work for you and your students over time, and you do not want to discard those.

But one of the problems is that you're kind of stuck. You teach like you were taught, or you teach as other people have taught. What that does is that means that the testing out of new procedures might not make their way into your classroom.

The basic idea behind evidence-based practice is that we want practitioners, in our case teachers, to use the best evidence available in terms of how to teach. That's where scientific studies come in, but it's not meant to disregard their expertise.

I mean, obviously, if you're going to use practices that have been found to be effective in research studies, that needs to be combined with your knowledge of how to teach writing and your knowledge of your students.

It's this dance between the two, and I think that dance is often overlooked. At the most extreme end, we have researchers who would say, "You've got to implement this exactly, step by step, as it was done in the study." That's not going to happen.

The other part of this is that teachers don't have the same resources that were often available during the studies.

My take on this is what we're able to do with evidence-based practice is to identify practices that "potentially" will work in your classroom. It adds to your tool belt, if you'd like to take a metaphor from people who work with their hands.

When you apply them, you need to monitor whether they're working out for your students and for you, and you make adjustments as needed.

It's the same thing as if you go to a doctor and they give you a medicine. When you go home, they're not going to be there to monitor whether it works. You have to let them know whether it's working or not, or if changes need to be made.

That would be my basic take on evidence-based practice. Maybe it's not exactly the same as everyone's, but I'm always a little skeptical of saying this is going to work in all situations, because you know that's not going to happen.

Anna Geiger:

I had a teacher who had emailed me and said, "My principal says every single thing we do has to be research-based."

I thought, "Well, that's a real problem because there's not enough research to dictate what you do in every single choice you make, right?"

Steve Graham:

Absolutely.

Anna Geiger:

Yeah, I appreciate you explaining how that's a combination of things. I think maybe some people, myself I would say in the past, have weighed too heavily on the personal experience side, but we need to put those two things together.

One of the things that you said as a recommendation is to increase the amount of time that students spend writing. Does research recommend a particular amount of time students should spend writing each day, and does that vary across the grade levels?

Steve Graham:

The data that you were looking at I think was from 2016. We have just completed two new meta-analysis, one at the secondary level that's published in the *Journal of Educational Psychology* in 2023, and the other one at the elementary level, which we're still working on. They involve a large number of studies, around 350 each, which is much larger than the data base from the earlier stuff.

On the one hand, and I'm sorry to say this, but what we found was that increasing writing, as more data became available, doesn't have a positive effect on students writing at either of those grade levels.

Now, the reason that I have a little trepidation saying that is I don't want to give people the impression that kids don't need to write. In 75% of the studies that we looked at in those reviews, kids were writing. They were learning something, but they were writing.

Now there were studies that focused on spelling or something like handwriting where they really were not composing text. But you can't just say, "Okay, increasing writing didn't work, so we won't have kids write. All we're going to do is teach them things."

We need to do this in combination is my take on it.

The other way of thinking about this is we do have evidence that when you have kids write about things that they're reading, it increases their understanding and remembrance of that material. When you write about material presented in science, social studies, and mathematics, it also increases your comprehension and learning of that material.

I'm always a little cautious about this now when you ask about the amount of time. We don't really have a data-driven answer to that at this point. In the *What Works Clearinghouse Guide* at the elementary level that we did a number of years ago, they still allowed you to make kind of clinical recommendations. With the group of experts on that panel, which included teachers, our recommendation was at least an hour a day for elementary kids, and that should be split between teaching and writing.

We picked kind of the midpoint on that, but I have to tell you we're not seeing in the surveys we do or the observational studies we do, that teachers are spending an hour a day on writing at the elementary level.

Anna Geiger:

I do remember reading about that, and I remember thinking that "Ooh, that's a big lift for teachers to think about spending that much time!"

If someone would ask you, "I have all the time in the world, how much do you think I should give to writing instruction?" would you recommend that amount of time?

Steve Graham:

Absolutely, I would do that.

I would make the case here that part of the problem is that we're often short-sighted. I think about the reform movement as it's existed in the US over the last 50 or 60 years. At the top of the reform list has been reading and science in many ways. What we've done is we've been so focused on those, we've often left out other things that can improve reading performance or how well you do in content area classrooms.

We've done a number of meta-analyses that have taken a look at when you teach writing, what are its effects? What we find is when kids write more, and now here's another kind of twist on this… When kids write more, their comprehension goes up. When they write about what they read, their comprehension of that material goes up.

When we teach writing, things like spelling, sentence construction, and strategies for writing, we see corresponding improvements of specific aspects of reading. It goes the other way as well. It works vice versa.

And so we really should not be talking about, in my opinion, writing as a separate thing. I do think kids need to write sometimes separate from reading, but our instruction should be taking a look at how we bring these two together so that they benefit each other. It's kind of a functional view, if you'd like, of reading and writing relationships.

Writing for 30 minutes a day is not that hard if you're writing in your literacy time, if you're writing in science, and social studies, and other areas. It's not really that hard to get it, and you get a boost in learning as a result of doing that.

I think we need to be more creative and less territorial.

Anna Geiger:

That's a great quote.

Thinking about when I was teaching writing, I did the Writing Workshop model. That's what I was taught to do, it made sense to me, and I read all the books. I didn't really think about putting writing into other subjects. It felt like kind of a waste of time.

But what you're saying is that the 30 minutes of writing is cumulative. It's not like we have to sit right here and do this all in a row. We don't have to necessarily block it out.

I know the Writing Workshop was very popular in the 90s to early 2000s. I'm not sure how popular it is now for teachers. What is your view on having that special time where you go through the writing process with that mini lesson? Do you believe that there's a lot of value in that and that it's well supported by research, or that it's not necessary and it makes more sense to put writing in the other subjects, or some other thought?

Steve Graham:

I'm a fan of the process approach to writing. Now, when I say that, I would also recommend revisions to it. But if you look at the data that's available at both the elementary and secondary levels, where you have randomized control trial studies or quasi-experiments with pretests to control for any possible difference that existed, then the process approach, or Writer's Workshop, however you want to call this, has a positive effect on the quality of students writing. That's been demonstrated again and again.

We've looked at this in meta-analyses focusing just on that and meta-analyses focusing on writing more broadly. Now, its effect sizes are not huge. They're not topping out. They're somewhat in the moderate range.

My take on this is that there are a lot of advantages. Kids write. They write for extended purposes. We want them to be using writing for multiple purposes and doing extended writing, not just short pieces all the time. There's an emphasis on planning, drafting, revising, editing, monitoring, and evaluating what you're doing. Those are important self-regulation processes in their own right, but critical. Those are the production processes involved in writing, and kids need to learn how to use those in a flexible manner.

You have these mini lessons that teachers use when the need arises.

I think all that's good; there's no problem with that. I think what we need is to use this in ways that bring in more explicit, and sometimes more extended, instruction.

An example of this is that engaging kids in activities like planning are less successful if you don't have strategies for doing that that are specific to the type of writing that you're doing. We can teach kids to do that, but a 20-minute mini lesson isn't going to be enough.

We may be working on this over a series of a couple of weeks of teaching kids, say, a strategy for generating ideas on both sides of an argument as an example. We're teaching them to make decisions about which of these ideas are most important in terms of convincing their reader of their point of view, and also rejecting the other point of view, and how to organize this together. Now, that's not taught in 20 minutes, but that can be taught in a series of connected lessons or mini lessons over time.

A second thing that sometimes worries me about the process writing approach is I often see teachers apply it in an inflexible manner. Kids always plan, they always draft, they always revise, they always edit, they always publish.

Well, honestly, that's not the way the world works. We mix these things up. We plan, and we might get feedback on our plan, and we might revise that plan. But there are times that we do a quick write because we just want to find out what kids know. We need to use it more flexibly.

Then I think one of the other things is that there's been a tendency to downplay the importance for young kids of foundational writing skills. Something like handwriting, as an example, or typing.

I type like this, finger by finger with one finger. I wish I typed differently, and I could learn to do that, right? I know that. I took a typing class when I was in high school, but I got thrown out of it for talking too much, and I sat in the hallway and never learned to type.

Anna Geiger:

Oh, that's funny.

Steve Graham:

But it works for me. I'm not as fast as I'd like to be, but I'm not willing to take the time to learn to type differently. Those motor patterns are stuck, unless I do something that's going to take quite a bit of effort on my part to change that.

The same thing happens with handwriting. When you learn to write letters in ways that are inefficient, it's not easy to turn that around. It's better to start right from the start, model how to write the letter, give students a little bit of practice, and then fluency comes from writing a lot.

Spelling is another thing, I think, that in some ways was one of the demises of the whole language movement which relied heavily on a process writing approach.

English spelling is tough stuff and for most kids it's not going to come naturally. I don't care how much reading or writing you do; they need some instruction to master the underlying consistencies that exist in English spelling to be able to spell the words. It's not that large of a corpus of words that account for the words we most often use.

So there needs to be an influx, in my opinion, of both foundational and process strategies for writing, and a loosening up on how we use the process approach to writing.

Now with that said, if it's the choice between no writing and the process approach, I take the process approach every time because it does get effects. It can be made better. We've shown that in some studies that we've done. It can be used flexibly, and teachers who often use it are very interested in writing, which I always like. They're motivated teachers of writing for the most part.

Anna Geiger:

Yeah, so if I could sum up your view on Writing Workshop, it would be that it has shown small effects in research.

There is value, a lot of value, in helping kids work through the writing process with flexibility, knowing that we don't go through it in a lockstep manner necessarily.

However, teachers need to be aware that quick mini lessons may not do the job. It may take multiple days to teach a particular strategy, and we need to give students the tools to do it.

In the primary grades we have to remember to take the time to work on those foundational skills, particularly spelling and handwriting.

Steve Graham:

Yeah, and that would move up into later grades to some degree as well with sentence construction skills, which are kind of completely left out of common core.

If you think about it, about 90 percent of your time writing is engaged with taking that idea and putting it into the right words and the right vessel to display your meaning that will be understandable to the reader. A lot of our cognitive effort goes into that; that'll never be automatic.

It shouldn't be, because it's a thinking skill, but it needs to be facile. We need to be able to do it in a more efficient manner.

Anna Geiger:

So if someone would come to you and say, “I want to do more writing in my classroom,” and let's say they teach second grade. They say, “I'm working on putting it after the reading work that we do and other subjects, and I feel like I maybe have a little bit of extra time in my day, but not a lot.”

I think the challenge in advising teachers on this is they're starting to understand the value in writing about reading so they can put that in their other subjects, but then they may not find time to do these extended writing pieces. Do you have any recommendations for that, for teachers that are short on time?

Steve Graham:

Yeah, so I would recommend that if you're not going to be able to put it in your language arts program, if you just don't see that as a possibility, then I would suggest that on extended writing things, you do it in other subject areas.

Quite frankly, whatever "learning to write" occurred for me in school was in a seventh grade social studies class on a military base in France. I grew up in an Air Force family and I had a social studies teacher who really, I would say, taught us how to write. We did extended pieces in that class.

As you're working on other kinds of areas like social studies or science, there are opportunities for doing extended writing there if you just can't find the time to do it in your language arts period.

Now I would argue that you need to *make* the time to do it in language arts, but I also want to be pragmatic about this.

Anna Geiger:

I know there's been a push more towards writing informational text. Many of us, myself included, maybe perhaps overemphasized narrative writing and poetry writing in Writing Workshop. Do you feel that those are still valuable uses of our time? If so, should there be a balance? How do we decide how to choose which genres for our students to write in?

Steve Graham:

Yeah, this is an interesting thing for me, particularly because when we first started doing work on persuasive writing, or opinion writing, with elementary grade kids, we were working in the Washington, D.C. area. We would go to the Prince George County's School of Education office, and we knew the personnel very well because we were there for 23 years and worked closely with them. We'd say, "We want to do something persuasively."

They would say, "You know, our teachers only do narrative writing."

My wife's response to this was, "You know, kids are great at arguing." If you've ever had a kid, you know that this kind of comes naturally to them. And so we kind of started working our way down until we got to the point of about second grade in terms of introducing stuff.

Then Common Core came along and they pushed this idea of focusing on a smaller set of writing genres, which in some ways was good. We looked at five states one time and came up with 64 different writing activities across those states that they wanted kids to master in a single grade level. You do need to focus.

The downside of this has been that the focus has been so great on informative writing and persuasive writing, that we're seeing poetry completely disappear from the classroom, and we're not seeing very much narrative writing.

This extends all the way up. We've been taking a look at what teachers are doing at the secondary level, and we're seeing very, very little narrative writing in English classrooms anymore. That's a little bit of a surprise.

Now, I think we want to be able to take advantage of all three of these different kinds of writing. We need to do a better job of balancing them. We don't want to go from, in the elementary grades, all narrative to all informational and persuasive; we need to balance these.

Is there a right balance? Well, there's not a research-based balance, but if I had to pick something, I'd go one-third, one-third, one-third. That's a simple way of thinking about it. I think all three of these genres are critical to students writing, and I really would hate...

I'm not a poet by any stretch of the imagination, and as a kid I hated poetry and having to write it. I think that was probably something of being a boy at the age that I grew up.

On the other hand, I see the value of it, the playfulness with language, and we surely don't want to lose that.

Anna Geiger:

Yeah, and you can even tie it together, right? You can write a poem about what you learned in science. There can be an informational poem. There are different ways, so thank you for your perspective on that.

Steve Graham:

That's a really great point that you just made because you can write a story about information that you've learned in any content area, and there is some evidence that doing so makes a difference in terms of either remembering the information from the reading material that you've looked at, or from the content material you're looking at. Narrative writing can be used to support learning too.

Anna Geiger:

Yeah, that's really good to remember. Another thing that you said in your evidence-based practices was that we should create a supportive writing environment.

I know writing is very sensitive. We're all very sensitive about our writing. You've done lots and lots, so maybe you're not so sensitive as the rest of us. I published a book last summer, and I sent it to lot of different people to look at, and you do kind of bristle a little bit when someone tears apart something that you really thought was pretty good.

Asking young children to write and then to criticize that is asking a lot. I know that the supportive environment is important, but what does that mean? What does that look like, and does that vary across kindergarten to high school?

Steve Graham:

Yeah, this is an interesting thing. Our recommendation on this was not based on empirical studies. It was based upon the qualitative study, or case studies for the most part, with exceptional literacy teachers. This was teachers where there was evidence that their students were doing better than what you would expect. Sometimes they were working in a city on the south side in Chicago, or they were

working with kids with learning disabilities, but their performance on statewide literacy assessments were much higher than expected.

One of the things that was a common theme to us as we looked across these studies, because we treated each of those studies as a case and a qualitative analysis, was that these exceptional teachers, for the most part, set up environments in which students were likely to be motivated and were likely to flourish as writers.

Some of the things that they did, and I think these principles do apply across all different levels, is that…

I'll start with a hard one. One is that they tended to push out the envelope a little bit. They didn't settle for what students did. When they gave feedback, it was positive, but they also were pushing the envelope to push the kid a little bit further, to expect a little bit more. In a sense they were setting challenging goals, but goals that could be achieved either by the student or with some help. That's challenging. I don't want to suggest that that's easy to do.

Another thing that you saw was that writing, especially at the elementary level, was everywhere in the classroom. Students had folders with their writing, it was on the board, it was talking about writing. Even with older students they created anthologies, they created books, they participated in contests. You saw writing as a visible part of the classroom. It was always there.

Teachers often shared what they wrote with their kids so that they were part of the writing community, and they sought feedback from students.

Something that *is* empirical that we've seen is that giving feedback is particularly important, but as you said, it's very challenging.

When you look at feedback studies across all the kinds of different areas, feedback works in about two-thirds of the studies that are available. For about a third of the studies, educationally, it doesn't have much of an effect, and so we know that feedback's not always effective.

In writing, it's really challenging because we take it so personally. Almost everybody has an example of where somebody gave them feedback, and they left thinking, "Shoot, I can't write. I should not be doing this." I have my own personal examples of this.

What that means is we have to learn how to give feedback in both positive and constructive ways. We let students know what they did right, and then our feedback may be used to guide where they go from there.

It's not done where I write a little something here about a misspelled word, and you're expected to correct it. Typically, we want feedback to have a larger effect than that.

Two of the things that I often find interesting is that…

One is that we often don't connect feedback across papers. I did a workshop once with about 500 teachers in Texas. I had them in small groups think about feedback they'd give a kid with a learning disability on a piece that he wrote. We had a great discussion around that.

About an hour later I gave them another paper from the same kid and asked them, "What would you now say?"

Out of 500 teachers, only two who were sitting together actually connected the two papers. It's almost like we're brain damaged when it comes to this. The focus is just on the immediate paper.

The other thing is that we expect that it's our only chance. We kind of act like it's our only chance for students to get better. We don't have to give feedback on everything. In fact, for many kids, it's overwhelming. It can have a negative effect.

The other thing is that we also saw, in terms of these exceptional teachers, is they set a positive attitude around writing and the teaching of writing.

They talked about writing as we hope teachers talk about reading, right? You would think, I really hope that's not my kid's teacher if a teacher said to you, "I don't like to read."

They set an exciting and motivating mood around the process of writing.

My experience has been when we see teachers who are part of the National Writing Project, they're there because they love writing and it shows through. Quite honestly, if I had a teacher when my daughter was in school that said, "I don't like to write," I would not have been happy.

Anna Geiger:

Back to the feedback question, you noted that it's really hard to pick out what's the thing we should work on. Do you have any advice for deciding what's worth tackling in this piece of writing versus trying to fix everything?

Steve Graham:

Yeah, not to sound pedantic, but I will.

I always think you should say three things that you like about whatever the kid is sharing with you. That's a good way to start. Pick some things that you think are important to that kid.

I'll give an example of this. We when we first started doing work with peer feedback, I had this disastrous tryout with two kids in fifth and sixth grade where I asked one kid to give feedback to the other kid.

The kid giving feedback just said to the kid, "Your paper stinks." No, it didn't go well.

A couple of days later I went back in and I apologized to the kid who got the feedback. Then I said, "Look, I want you to try something a little different. I've taken a look at this paper and, I think, like a lot of kids in your grade, often there's not enough information in certain places, and then there are some places that might not be clear."

The young lady read her paper to the young man and I said, "Any place where it's not clear, put a question mark. Any place where you think more information is needed, put a carrot."

Then we practiced on how to give the feedback. She talked about what she liked about the story, but also said, "At this point, I didn't quite understand what you meant here, or what was going on." It took some of the sting out of it, in terms of giving the feedback.

If you have the time, what I would say is take a look to see areas that you think are problematic across a student's paper. A lot of times kids just don't have enough detail or there are organizational problems, but I'd focus in on those broader issues first, and then start working my way down as those things change.

The other thing that we found is that when students give each other feedback, like the type I was just talking about, we start to see changes in their first drafts of their *own* writing. We start seeing less places where more details are needed and less places that are confusing.

Giving feedback, if it's in a structured way, can be really powerful to the kid giving it.

Anna Geiger:

As long as we're in the middle of this, I'll just note to our listeners that I unintentionally jumped ahead to another evidence-based practice. We've moved into the next one, which is providing feedback, which was later on the list.

Back to feedback. As a Writing Workshop teacher, I did conferring where I would go around. I would only meet with them maybe once a week, and they tended to be kind of long.

For teachers who have this extended period of writing time, where they… I mean, even in a short period of time, you're still moving around the room, right? Do you have any advice for how to distribute the feedback so enough kids get it? Should you have something in mind for how long this takes? Anything at all about procedure and how to make sure that everyone gets the support they need because you have 25 kids who may all have a different issue at the time?

Steve Graham:

That's right. I think you need to take advantage of all of the resources at your disposal. Now I want to say this right up front, this doesn't mean that teachers disappear from the feedback part of this, but we can teach peers to give feedback to each other. We can teach students how to evaluate their own writing. We've had very positive effects with that.

We also don't need to give feedback on every piece of writing. I used to say in workshops that you need to double the amount of time you're writing. Now that was just plain BS, okay? It was meant to provoke a reaction and it always got a reaction from administrators. They would say, "We can't do that! Our teachers don't have time to give feedback."

I said, "You know what? They don't have to give feedback on everything." If you're writing a short summary to help you better understand what you're reading, you don't really need feedback on that.

Then the other thing, and this is going to increasingly be a tool that we can use, is we're currently doing a meta-analysis now and taking a look…

Now this isn't at the elementary level, but at the secondary and college level, we're taking a look at automated essay feedback, including feedback from things like ChatGPT. What we found is that you get about the same effect as you get with the process approach with writing in terms of students' performance. Those tools have gotten better in a relatively short period of time.

What I think is really critical, and I have it mentioned here, is that the feedback's not always right. I left that until we talked about the machine, because we're suspicious about machines giving feedback. They don't understand what they're reading, right? It doesn't understand, like a human does, what it's reading.

But what I will say is that machines have gotten better at giving feedback that basically mimics, or has the same effects instructionally, as feedback given by human beings do.

What is really important in terms of feedback is that we used to think about feedback as you're the teacher, you give feedback, and the kid makes the change.

It's not really like that, and it's never been like that. People give me feedback, I decide what I'm going to use, and what I'm not going to use, and what I can get away with, and what I can't get away with, based upon what my goals for this piece are. I have to satisfy this reviewer, but there are sometimes I'll just say no, I believe they're wrong and this is the reason why.

We want kids to be able to engage in that dance and challenge the feedback that they're given to make decisions about what makes their paper better given their goals, but also to make decisions about what they're not going to do. I think that's as important as the giving feedback in the long run. Many kids get to that point themselves, but a lot don't.

Anna Geiger:

That's super interesting to think about because I think part of the problem that teachers have when the kids are doing their independent writing and they're all wanting to talk to the teacher at once, is they have this idea that I must have the teacher's word before I can move on. She's got to tell me, or he's got to tell me, if this is right or not right.

I think probably a very useful thing would be for the teacher to model reception of feedback and deciding how I'm going to use that.

There's also a different kind of feedback from you have to capitalize this word, versus is there a different way you could begin this. Yeah, that's really good.

Steve Graham:

You know, the other part of this is that seeking help, where everybody raises their hand at the same time. Part of growing as a learner and being self-regulated is learning *when* to seek help.

I don't think we always do a good job of that. You have some kids who want help with everything, right? Part of the learning process for them needs to be asking for that when they really need it, and having other options than the teacher, like a peer buddy or a writing buddy that they can turn to for help.

When I say that, I always say that with a little trepidation because I've seen some kids who are great at giving that help and they're like a second teacher, and other kids who are dismissive in terms of doing it. I don't think that is in anybody's best interest.

Anna Geiger:

Let's move on to another one, which is a hefty one. All the things we could say in this one would take for sure over an hour, but another evidence-based practice is teaching writing skills, strategies, knowledge, and motivation.

I know that you've talked a lot about self-regulation. You mentioned your wife and the SRSD model, and I'll be interviewing her next week. (That's next week on my calendar, I don't know when that interview's going to come out for those who are listening.)

Maybe you can start by talking about self-regulation, what that means, and why this is something we need to teach because writing is so much more challenging and asks so much more of students than reading does.

Steve Graham:

Yeah, a writer's kind of like an orchestra director. There are a lot of different things that you can bring to the task, right?

It is active. You're creating something. You have to have something that gets on paper, but you have to think about it. It's a very challenging thinking task, because you have to think about what you're going to say.

Unless you're just throwing stuff on the paper as the ideas occur to you, which is not a bad strategy for some things like writing a note to your spouse about being out to go to the gym.

But for most of the academic kinds of things we want kids to write about, we want them to be thoughtful, we want them to be planful, we want them to be reflective or evaluative, and we want them to be able to make changes in what they do.

Conceptualizations, ideation, and reconceptualization are core elements to the processes that we use to create text. And you know what? They're not visible to kids. They sit in our heads.

You might be very, very good at it as a teacher, but that doesn't mean that because you're good at it, your students can see how to do this, because that's sitting up there in your head, hidden away.

One of the things that we often talk about in terms of strategy instruction is making that thinking visible through modeling and self-talk.

But that's not enough. Seeing is great, but it's even better when you *do*. And so if you're seeing something complex, it's not going to be a doing thing that you can do in one situation.

It's a guided release kind of thing. I might initially model how to do something with your help in terms of getting information on the page. We might do that with me giving you more responsibility, to you doing it with a couple of peers, to you doing it alone. The goal is to be able to apply these self-regulation procedures, whether they're a strategy for planning a persuasive text, or a strategy for planning a narrative text, or the ways in which you're going to think about giving feedback, or evaluating your own text.

We want to make sure you can do these effectively and independently without us, because we're not going to be around. A lot of the time in the classroom, like you said, we're not here for you. We're here for 25 people or 22 people. Next year, we're not here. You're going to have to be able to do this yourself.

If you're going to enjoy writing, you're more likely to enjoy writing if you have the tools to be successful. When we talk about process, that's what we're talking about.

When we talk about skills, what we're typically talking about is transcription skills and translation skills. Transcription is what you think, handwriting, typing, spelling, those kinds of things. We want kids to be able to do that without thinking. The more you think, the more it interferes with your writing. If you can only write 10 letters per minute...

Let me try this a different way. Take something and write it with your non-dominant hand, and every fourth word spell it backwards, and see how long you like it or how much you enjoy it.

Then translation is the sentence construction. It’s taking those ideas and putting them into the sentences you want.

Right there with the process stuff, with transcription and translation, you've got most of the basic things that we do in writing.

But you also need to have knowledge about the types of things that you're going to be writing in.

If I was in China, and traditionally writing a persuasive text, I probably would never name my premise. There are strategies that have existed for 2,000 years to get around from doing that.

But if you're in the U.S. writing a persuasive text, you know that you need to be explicit about what you believe or think. You need to provide evidence and examples to support it, and hopefully you deal with the other side of the issue, particularly when you're in about fourth grade or up, maybe even third grade, and you bring it all together.

You need to know what the purposes of these writing tasks you're doing are and what the basic building blocks of them are as well, because that helps you structure and organize your ideas. That's the basic idea there.

Anna Geiger:

Yeah, so with the self-regulation, these are ideas about how to get started, how to keep yourself going, how to know what you're doing next.

Then for foundational skills, I have another follow-up question about that because I did use to dismiss some of those foundational skills as not as important because I was thinking more about the output, what they come up, with versus the tediousness of those other skills and having to work through those. But as I've learned and you noted, when your cognitive energy is swallowed up by trying to remember how to spell it or form those letters, then your output is not going to be so great.

I think primary teachers understand that we have to teach spelling, and of course that goes beyond primary grades, and we want to teach the foundational skill of handwriting, but how does that work in terms of expectations for student writing? Does that mean I wait until they're fluent in handwriting before I teach them to write it? I don't think we would say that. How does that work?

Steve Graham:

That's an excellent question and this is an interpretation that I always find amusing in some ways because we again tend to go to the extremes, right?

What we do is we don't do the foundational skills and students only write, and the underlying assumption there is that they'll acquire those foundational skills through the act of writing. They will acquire some of them, there's no two ways about it, you get better as a speller by writing. You gain some, probably not enough to be a great speller, but you do make gains by reading and writing.

The other extreme is, if we teach these skills, we don't write.

The place is in between those.

Even if you take somebody like a kid in kindergarten, they can compose. If you've done something like a field trip, they might do a series of pictures showing what they did at the start, the middle, and the end, and under each of those there might be an invented spelling around a word. That's composing! They're using what they've learned.

There's evidence that invented spelling in and of itself can have a positive effect in both word reading and spelling as well. Now, as they acquire more skills, what they do to produce text, and I'm including pictures there as text at that age level, becomes more complex and more sophisticated.

We don't have to have this either/or situation.

I often think about this. I loved basketball when I was a kid. I played in high school, and I always enjoyed playing. I didn't so much enjoy the drills that we had to do for practice.

Anna Geiger:

That sounds like one of my boys.

Steve Graham:

On the other hand, it made you a better player, right? But if all we did was those drills, I don't think I'd like basketball so much. And if all we did was play, I wouldn't be as good of a basketball player.

Anna Geiger:

Yeah, that's a really good analogy.

As kids get out of out of kindergarten and first grade, teachers are understanding the different strategies we can teach and skills like helping them expand sentences and combine sentences. How would you say that should preface or tie into the writing work they're doing?

For instance, would you say, "I'm teaching this skill now and this is how you're going to apply it in response to this text we've read or in your story," even though it maybe wouldn't apply. How does all of that go together?

Steve Graham:

Yeah, and sometimes I hate saying, "That's a really good question," because it's a common response. You're listening to NPR and a person's being interviewed, and they always say, "What a great question," but it *is* a great question in this particular case.

I would say one of our downfalls in teaching students foundational skills is that we don't do a good job of connecting it back to their writing.

Let me give examples of this with three skills, handwriting, spelling, and sentence construction.

One of the studies that we did was with first grade kids who found both writing, reading, and spelling difficult according to the assessments that we gave. They were in the bottom 25th percentile in all three of those.

We did traditional things in terms of teaching letters, but all lessons had them practice those letters in some context. We'd model how to do a letter. They would trace it. Then they would write the letter from copy several times and try to write it from memory several times. Then they would go back and circle their best letter. That's traditional kind of stuff. It's a small amount of practice. It's a motor skill best learned in small practice sessions over time.

But every lesson had them apply it in a word or short sentence or something like that as they learned more letters so that they were actually using it in context.

In a spelling study that we did with second grade kids, we would actually ask them to do something funny and short with some of the words they were learning. It was five minutes that we devoted to that or three minutes. It could be a very short time, but they did it in a context of writing.

Sometimes when we're teaching them skills, kids don't actually realize, even if we say so, that this is for *this*. It's not just something you're doing here.

For sentence construction we've done two different kinds of things. If we're teaching kids how to use the word "but" as a coordinating conjunction and combining two sentences together, then what we'll do is we'll ask them to look at stuff that they've written before where they can make such combinations, so they apply it back in their writing. We ask them to create something where they can do that.

Now, we could have done the same thing with spelling. We could have looked for them to look for places where they could have corrected spellings that fit that particular pattern.

We work on patterns typically, so that we can get more for our buck, so to speak. If kids know that the sound of long A can be made by AI, A-C-E, and AY, then they may be able to find places where they've used that incorrectly with the words that we're learning and the patterns we're learning.

It's important to connect back to your writing whenever possible.

We do that in reading all the time. If we're teaching students phonics skills, now that could be done in isolation, but invariably it's some skills that are showing up in the materials that they're reading.

Anna Geiger:

I love that. I hadn't really thought about that, but of course that makes perfect sense to go back to something they've already written to revise using this strategy.

Also to keep in mind when we're giving that feedback and challenging them, that if they're not applying what we've been teaching, that's the time to remind them of that and then put that on them.

Steve Graham:

Let me make one other comment that over the years I've found for something like spelling. Teachers will tell me, "Well, they got it right on the spelling task at the end of the week, but they spelled it incorrectly in their writing."

Yeah, I'm not surprised at that. You're assuming that because they spelled it right in this one context, they mastered it in all other contexts where they've been spelling it incorrectly, especially if it's a common word, more often than not.

All of us experience this. When I type, I have certain patterns, and there are certain words I misspell every time that I'm doing it.

What you're really looking at is the collective improvement, the improvement of individual atomistic items.

There are going to be miscues. That's the way it goes. You teach kids to write more complex sentences, and initially as they apply it, they're more likely to make mistakes.

Anna Geiger:

Sure. One last thing to cover on that one, which was motivation. Any thoughts? I mean, that's just a hard one, because a lot of motivation comes from skill. Once you can do it, then you're more inspired. Is there anything you have to share about helping kids be excited to write?

Steve Graham:

Yeah, so if I had to pick, motivation is pretty complicated because there are a lot of different beliefs about writing that you can hold. They range from the value that you see in writing, to your motives for writing, to your attitudes about it, to your efficacy to do it.

If I had to pick a single one, and it happens to be the one that's most researched, I would pick efficacy.

You might say why? Because aren't motives important? I do think motives are important, but with efficacy, as you become a better writer that should increase the efficacy of your writing.

Correspondingly, as you become more efficacious, you're more likely to persevere. You're more likely to put effort into what you're doing in terms of writing.

We also know something about increasing efficacy. It's a little harder to increase, like intrinsic motivation for writers, it's a little harder to do. But with something like efficacy, if we can create a situation where...

When you talk with my wife, Karen Harris, this is something that SRSD does. We create a situation where kids can be successful. They can see that success, they can monitor it and make it visible, and they can attribute that success, which we encourage them to do, to both effort and what they're learning.

We found with SRSD, in a meta-analysis that is in press right now in the *Journal of Educational Psychology*, that teaching writing improves students' efficacy in writing, and that self-regulated strategy

development is one of those techniques that also does the same. But it has built into it specific methods for doing that.

I'd love to say that kids' attitudes are easy to change. It sounds like it would be, right?

Anna Geiger:

That would be nice.

Steve Graham:

I have a daughter who hates writing. She had a lot of trouble with handwriting and spelling right from the start. She ended up being a very good writer. She won her middle school writing award. But you know, if you ask her about writing, she's never going to like it. Those early experiences of challenges with it have really stuck with her.

Now that might be an extreme, but I'll tell you, we find that after about third grade, making a dent in attitudes towards writing is much, much more difficult than making a dent in efficacy.

Anna Geiger:

We're at the end of this, but can you define what you mean by efficacy?

Steve Graham:

It's your confidence to be able to write well or to do certain things. It can be as specific as you feel that you're…

Let me give a personal example. I wouldn't have said this throughout my career, but now I feel like I'm really confident about my ability to respond to reviewers where there's a chance that the paper is going to get in. We're going to revise and resubmit, not in the reject phase. I really think I'm very good at responding to reviewers.

I have lot of efficacy, a lot of confidence, in my capabilities of doing that. If you ask me about my confidence or capabilities as a speller, meh, not so great. In fact, my first article on spelling, I misspelled "misspelling" all the way through. Thank God for copy editors.

Anna Geiger:

So basically it's the motivation that comes from knowing you can do something.

Steve Graham:

That is definitely one of the sources, but it's not the only source. Whether you value writing is going to depend upon, obviously, if you're in a community that values writing. You want a classroom that values writing, that uses writing for real purposes, that gives you agency in using writing. It's all of those things that allow people to work together, and then you're more likely to value writing.

I don't want to give the idea that motivation is simply being confident. There are a lot of other things that go into it. Where you're learning to write, the different communities, or classrooms, or at-home writing, or other places, those all play a role.

It's not that you're going to be an efficacious writer necessarily with all things and in all situations.

That helped me if I had to be a poet. I know that that would not be a calling that I would be successful at in terms of making a living.

Anna Geiger:

It's true that just being able to do something doesn't mean you're motivated to do it.

I have one boy in particular who is a fine reader, but he does not choose to read. He'd much rather go outside and play. It is not his thing; he never picks up a book just to read. I don't know that he ever has, that I've ever seen, even though he's a fine reader. I'm not sure what I can do to improve that at this point. But it's okay, if you're good at something, if it's not something you choose to do. We just have to make sure that they're equipped to do it when they're needing it.

Steve Graham:

I would add one thing, and again I'll go to a personal touch on this. I was a kid who had a great deal of difficulty in the first four grades of school because if ADHD had existed when I was a kid, I would have been the poster boy for it. I was in multiple schools because we moved so much, and the first four grades all had the same lament from teachers in my report cards. "He can't sit still. He can't be quiet. He can't keep his hands off of others." I don't even want to know what that last one meant.

I hated school, and I had a really successful fifth grade year, but I could read. I didn't like to read, but I could read.

When I was in seventh grade, we moved to France and we lived on the economy, which was off base. You had to at the time, for a year. I couldn't speak French, I was separated from other people, and I picked up reading science fiction books. All of a sudden I became a voracious reader.

Now if I hadn't had had that underlying competence in reading, that wouldn't have happened. I would have probably avoided reading.

Sometimes we set the stage and we don't really know that there's going to be the outcome we hope for, which is not just that you read well, but that you want to read and you enjoy reading down the road.

I'd say the same thing applies for writing. Our goals ought to be that you're a good writer, but also that you're somebody who enjoys and likes to do this, and can do it in ways that are helpful to you. We tend to only measure how well one writes, but eventually what's important, I think, is does this become a lifelong skill for you that you use confidently, and that when you have to use it, you're not shuddering at the idea of it.

Anna Geiger:

And we may not have control over that or see the fruits of that, but we do have control over what we teach and the feedback we give and the support.

Steve Graham:

But we may have more effect than we thought.

Anna Geiger:

Exactly, because our fruits may not show up until a later time.

We've got two more. One of those is to use twenty-first century writing tools.

You talk a lot about having even young kids learn typing. One question I have about that is, for a teacher who's evaluating student writing, so much of it is really valuable to see what they change, what they revise. But if you're just deleting things... Do you have any thoughts on that?

Steve Graham:

Well, one of the reasons for making that recommendation is... If you ask what is the evidence that shows that typing actually improves students' writing at an early age, there are very few typing studies.

What we do know is that if you increase students' transcription skills, like in handwriting or spelling, that not only do those skills get better, but we often see kids producing more text and the quality of the text might be better. We see generalized gains.

That's the basic idea here, is that if you can write efficiently and type efficiently, without a lot of thought, then that frees up resources for other kinds of things.

I don't think there's a huge advantage in typing over handwriting. You'll hear people talk about how one's better than the other for spelling and stuff. My look at the data is that it's mixed on this.

Where I'm coming from on this is that when you leave school, now this has changed somewhat since COVID, but when you leave school, how do kids mostly use writing? It's not paper and pencil. They're on word processors, they're using their phone, they're using their thumbs.

We want kids to be facile with the ways in which they communicate through writing, and this is changing on us. A hundred years ago, nothing changed rapidly. I mean, yeah, the ballpoint pen came along and it made things a little bit easier, but now things are changing radically and fast.

Anna Geiger:

Yes, they are.

Steve Graham:

Think about speech to text synthesis. I would say a good proportion of the writing that goes on in the world today is speech to text. People on their phones say something, it creates text, they send it off. We need to be able to use writing in all of its various forms that we're likely to use it, in and outside of schools.

I don't think handwriting is going to disappear because you can have a piece of paper and a pen in your back pocket. It's portable, it's inexpensive, and it's not that difficult to learn for most kids.

But on the other hand, it doesn't share the same market that it once did 100 years ago where it dominated writing. As new tools come along, everything shifts. It doesn't mean old tools go away, but their value shifts, and we use them in different ways.

It makes things even more complex, because now I'm talking about not just learning handwriting, but typing. Speech to text has its own issues because you want to speak extemporaneously off the top of your head. That's not always good writing.

Anna Geiger:

Yeah, and it has a lot of issues with spelling too as I find when I try to text someone in my family.

Back to the typing, I would assume when we're teaching kindergarten and first grade for sure, we're going to have them write their pieces even if they are learning to type.

At some point, do you feel that there is a grade or a level where teachers should be thinking that during writing time, now my students should type their writing? Even their rough drafts and everything? When might that be if there is an age? Then again, also going back to how do teachers evaluate whether students have edited their writing or made revisions when they can't see that?

Steve Graham:

Well, you may not get the editing part on this, and what you're left with is the kind of revisions they make from a first draft to a second draft. That becomes hard once word processing gets into the mix, right? Although there are tools that allow you to do that but you're not going to see those commonly used in classrooms.

If you ask me about a grade level, I've seen teachers do this successfully in second and third grade. But if you ask for an evidence-based recommendation on this, I don't have one.

I think this isn't going to be the issue of the future, though. I think the issue of the future is going to be how AI plays out in this.

We've done these two survey studies with high school students in Norway, and we picked Norway for lots of reasons. One is that they've been moving pretty quickly on this. We had this kind of panic in the US about all of a sudden a computer could write, and everybody that was in the social sciences went crazy. They haven't had that same reaction to the same degree.

We've been curious about how teachers implement this into the classroom, what they think about it, and what students think about it.

At this point, I wouldn't say that anybody's overwhelmingly positive. There are a lot of concerns and ethical concerns around this, but you can bet as this becomes more common, you're going to have programs as kids create stuff on word processors where teachers can look at it to see where AI came in.

Now can you cheat that system? Yes. There's no two ways about it. You'll be able to do it at the college level, you'll be able to do it at any level. But the reality is, when you take a look at cheating, kids don't cheat that much.

At least with some of the preliminary studies with AI, it appears that when you compare cheating just before AI and cheating after, we're not seeing a big increase in that. I mean, it looks pretty much the same.

But I would be really surprised if you don't see a flurry of tools that help a teacher, college instructor, or others to see where AI comes into the system.

Anna Geiger:

Yeah, that's going to be really interesting over even the next few months, it's going so quickly, with all the things it can do.

We have one more evidence-based practice, which you've already kind of covered, so I'm just going to throw it out there and see if you have anything to add. That was to use writing as a tool to support student learning. Is there anything we missed on that one?

Steve Graham:

I think one of the things that I'd like to point out on this is that the effect sizes were equivalent when you wrote about material in science, social studies, or math. That was really good. We saw very little differences. The younger students and older students had about the same effect. We didn't find statistically significant differences by the type of writing activity.

Although, I think if there were more studies, the one that I think would kind of rise to the top are writing activities that require analysis and evaluation of that content material. That should come as no surprise, right? Because that's what you're hoping that you're doing is you're thinking about that material and you're evaluating it.. I suspect those kinds of activities will prove to be especially effective.

The kind of genre that you were writing in, whether it was informative or persuasive, there was much less on narrative, didn't seem to make a difference. It was a pretty consistent effect.

In some ways that's the kind of effect you most like because you're not having to hee-haw around. Scientists have a tendency to hee-haw about everything. That's the nature of our job, but it doesn't go well with administrators or policy makers because they want an answer to something.

In this case, it's a pretty consistent answer.

Anna Geiger:

That's really great because it's hard to find those things that we know pretty much for sure from research.

This was fantastic! You answered so many questions that I have. As I had you here, I wanted to ask you as many as I could think of. Thank you so much for breaking down evidence-based practices.

I don't remember if we were recording when you mentioned this or not, but you talked about how you're working on some AI studies. What else is in the future for you, whether you retire or not? Any more additions coming out of any of your books or anything like that?

Steve Graham:

Yeah, so there are a couple of things. I'm a co-director of the WRITE Center, which is an IES-funded grant that's coming to our center, that's coming to an end. It's housed at the University of California Irvine. We've been working there with middle school and high school teachers on using writing in social studies classrooms.

As an outgrowth of that, we decided that we would finish with a book, and so we have a book where all the chapters are written. It's on teaching writing to middle and high school students. It draws on the expertise that we developed at the center and the expertise of other people.

We're holding a summit next month bringing together people in middle schools and high schools that are leading scholars in this area to talk about where we need to go in the future and what funding agencies need to do.

I'm also very, very interested in replicating findings that have worked in Western countries to other countries. I'm doing work with people in Turkey and China, as well as some European countries as well. I just finished a paper yesterday looking at self-regulated strategy development for teaching informative writing from source material with Turkish kids. It had better results than what we got in the U.S., and the U.S. results were really good.

Anna Geiger:

Interesting, interesting.

Steve Graham:

You just can't assume that if it works here, it's going to work elsewhere. You need to demonstrate that. I'm very excited about that work.

Then I guess the last thing I would say is I'm an author on the *Handbook of Writing Research*, and our third edition will be coming out sometime this early this year hopefully.

Anna Geiger:

It is? That's wonderful. That's from Guilford, right?

Steve Graham:

It's with Guilford, and I have a paper in there that you might find interesting. I took a look at 36 meta-analyses in writing to draw conclusions from those about what works in terms of effective writing instruction.

Anna Geiger:

Okay, is that order for available for pre-order yet? Do you know?

Steve Graham:

It's not, because we haven't seen the galleys yet. Everything is in to them, but you'd think they would move faster because it's so much easier now. I think it's like anything else, your backlog is still there. You still have problems regardless of the technology tools you have.

Anna Geiger:

Okay, well, I'll be definitely looking forward to that one.

Thank you. Thank you again for all that you've done all these years, and I hope you don't retire!

Steve Graham:

Well, I'm not planning on it. Thank you for asking me to share my lifelong passion.

Anna Geiger:

Absolutely.

Thank you so much for listening. You can find the show notes for today's episode at reachallreaders.com/episode203. See you next time!

Closing:

That's all for this episode of Triple R Teaching. For more educational resources, visit Anna at her home base, reachallreaders.com, and join our teaching community. We look forward to helping you reflect, refine, and recharge on the next episode of Triple R Teaching.