Strategies to Improve Secondary Students' Writing Skills:
Lessons from the
***Teaching Secondary Students to Write Effectively* Practice Guide**

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Hello, everyone, and thank you for attending today's webinar, "Strategies to Improve Secondary Students' Writing Skills: Lessons from the *Teaching Secondary Students to Write Effectively* Practice Guide." Before we begin, I'd like to cover a few housekeeping items. The bottom of your slide area—you can click on the bottom of the right corner of the slide window and drag to increase the slide size. If you've accessed the audio through the teleconferencing line, you may experience a slight delay. If possible, we encourage you to listen to the webinar using your computer.

We encourage you to submit your questions using the Q&A tool on the webinar page. You can ask your question when it comes to mind. You don't have to wait until the Q&A period. Because we are recording this, members of the audience are in listen-only mode. That means you must ask your questions using the Q&A tool, so use it. We have scheduled this webinar for an hour. We will try to answer as many questions as possible. The slide deck, the recording, and the transcript of the webinar will be available via the WWC website for download. With that being said, I would now like to introduce Julie Lyskawa, Researcher at Mathematica Policy and Research. Julia, you now have the floor.

Thank you, Brian. I want to welcome everyone and thank you all for joining us today. My name is Julia Lyskawa, and I am a researcher at Mathematica Policy Research and the deputy for communications for the What Works Clearinghouse at Mathematica. We are joined by Dr. Steve Graham from Arizona State University and the chair of our expert panel that helped develop the "Teaching Secondary Students to Write Effectively" Practice Guide.

Today, we're going to be talking about evidence-based strategies for improving secondary students' writing skills using the recommendations from the practice guide. I have the privilege of working with Steve and the rest of our expert panel to develop this practice guide, and we're looking forward to sharing this presentation with you today. We'll present for about 40 minutes, and then we'll have time for questions and answers. As a reminder, you can submit your questions using the Q&A tool at any time. You don't have to wait until the Q&A session.

We would like to begin with a brief overview of the What Works Clearinghouse and its resources. Over the past few years, there has been a push for education decision makers to make instructional or curriculum choices using evidence from scientifically-based research. Identifying evidence-based programs and practices can often be time-consuming and difficult; however, searching on an educational topic may return hundreds of studies. And even if educators did have the time to find and read all of the relevant research, it can often be difficult to identify the high-quality studies that are credible.

The WWC was established in 2002 to be a central and trusted source of scientific evidence for what works in education. The Clearinghouse was one of the first investments of the Institute of Education Sciences, which is an independent, nonpartisan entity within the U.S. Department of Education. The Clearinghouse aims to identify all relevant rigorous research on a topic, review those studies against design standards, and then summarize the findings from high-quality research into free products that

you can use. The WWC's goal is to help busy educators efficiently make evidence-based decisions based on the most rigorous research. The Clearinghouse does not directly test or study interventions. We summarize the evidence for educators and can support you in finding and accessing evidence to answer a range of questions.

The WWC produces a number of different resources to assist educators with evidence-based decision making. A few of our main resources are listed here on this slide. Intervention reports provide a comprehensive summary of the evidence for a particular intervention, practice, curriculum, or policy. We'll discuss the second resource listed here, practice guides, in a few moments. The WWC also has a resource called *Find What Works*, where you can select a topic to see programs that have evidence showing they have a positive impact on student outcomes. For example, you could search specifically for effective science programs.

WWC practice guides are intended to support educators and administrators in addressing common challenges in their schools and classrooms. Each practice guide provides solutions to a particular problem or to improve student achievement on a specific topic or for certain students. The solutions are based on the findings of rigorous studies, as well as the wisdom of a panel of experts that includes researchers, classroom teachers, and sometimes administrators. Practice guides typically include three to five evidence-based recommendations that can be implemented in a school setting at little to no additional cost. They are designed to be compatible with your school or classroom's existing standards or curricula.

Each recommendation is presented as a set of practical action steps that describe how to implement the recommendation, and include many examples. Each recommendation concludes by noting some common obstacles to implementing the recommendation, and providing the panel's advice on how to overcome those obstacles.

The WWC has produced practice guides on a range of topics, including reading, math, dropout prevention, data use, classroom behavior, and many other topics. To date, the WWC has released 22 practice guides. They are the WWC's most popular products, as each guide has been downloaded tens of thousands of times. You can download all of the WWC's practice guides for free on the WWC website. You can access WWC practice guides through the quick links section on the homepage, or by navigating through the menu button at the top of the page.

So, now let's turn to the "Teaching Secondary Students to Write Effectively" practice guide. Before we dive into the recommendations for how educators can improve students' writing skills, we would like to give you some information about the scope of the practice guide. The recommendations in the guide are appropriate for teaching students in grades 6–12. They are also applicable to different populations of students, including general education students, English learners, and students who are struggling.

How did the WWC come up with these recommendations, exactly? First, we did a comprehensive literature search that identified more than 3,400 studies related to writing instruction. We then screened those studies and reviewed them using our strict design standards to identify the high quality, rigorous research. Ultimately, 15 studies met design standards and were related to the practices in the guide.

We worked with our expert panel, who are listed here, to help us make sense of the research and draft recommendations in the guide. The WWC appreciated working with this panel of researchers and

practitioners, and we were lucky to have representation from the National Writing Project and the National Council of Teachers of English on the panel. This webinar won't go into detail about the process the WWC uses to review the research, but if you'd like to learn more, you can visit the WWC website to read our review protocol or to download the guide.

The practice guide highlights two general and interrelated themes. First, that writing encourages critical thinking. Writing requires students to think about their ideas and how to convey those ideas based on their own goals and the intended audience. Approaching writing tasks strategically facilitates the development of sound arguments supported by valid reasoning.

Second, writing occurs in every discipline and every classroom. Writing is a key component of English language arts classrooms. And secondary students, on average, write more for their ELA classes than they do for any other class. However, students write more for other disciplines combined than they do for ELA. We encourage you to keep these themes in mind as we discuss ways educators can improve their students' writing skills.

Here are the three recommendations you'll find in the guide. The WWC assigns a level of evidence to each recommendation, and the possible levels are strong, moderate, and minimal. These levels signal if well-executed studies support the practices in each recommendation and how generalizable the findings from those studies are. In other words, whether the studies reflect the context and students that the guide is meant to apply to.

One important point I'd like to make here is that minimal evidence does not mean that there is no evidence supporting the third recommendation. There are still rigorous research studies that support this third recommendation, but we assigned a minimal level of evidence because we have some concerns that the intervention was not yet tested widely. And when it was tested, it was combined with some other practices. So, while we know that using assessment was associated with positive outcomes, we can't be sure that the positive effects were due only to this practice alone. We won't go into depth on the studies that support each recommendation, but the practice guide has a thorough research appendix that you can read for more information. And with that, I will turn it over to Dr. Steve Graham to introduce our first recommendation for teaching secondary students to write effectively.

Thanks very much, Julia. I'm Steve Graham, obviously, and I'm so glad that you are spending some time with us today to learn more about the What Works Clearinghouse practice guide for secondary writing. My goal is to share with you the three recommendations formulated by the WWC and our panel. And I want to really emphasize that these recommendations are appropriate for teachers in all secondary classrooms, not just English teachers, but biology, chemistry, math, social studies, and so forth.

In essence, the basic message here is that writing provides a powerful tool for facilitating learning in the classroom. So, in English classes, it's obviously important to use writing as a way to explore new fictional worlds that kids create as they write, but also, in all classrooms, writing provides a way for students to share and show what they know. But even more importantly, it provides a method for learning and thinking. So, whenever you have to write, you have to make decisions. And so, one of those is, you have to select which ideas are important that you're going to commit to text. Many kinds of writing activities require that you take that information and organize it in some way which can often lead to new learning.

We also have to put ideas, usually, into our own words, and that forces us to wrestle a little bit more succinctly and specifically and harder with those ideas, as it helps us see if we actually understand what they are. And its permanence is just phenomenal for us, because it allows us to go back and look at ideas, make changes in them, rethink them, and reconsider them. So, I just want to emphasize before moving on, this is a tool for everyone. I'd also like to point out that the practice guide itself, as all the practice guides are, they're full of recommendations and examples that really fit all classrooms. So, in this case, there's appropriate recommendations and examples for English teachers, but also for teachers in the sciences, math, social studies, and so forth.

Our first recommendation, basically, is about teaching students, explicitly, strategies for carrying out the processes... the thinking processes involved in writing. It also includes a second recommendation that's part of this first one—we have a 1A and 1B, as you can see—that not only emphasizes that we need to teach students how to carry out these processes by teaching them strategies for doing so, but we also want to make sure that we use effective, instructional procedures, such as the "Model-Practice-and-Reflect" instructional model, which we'll look at in a little bit.

In terms of thinking about what those processes are that people engage in through writing, that engage thinking, you can see in the middle of this slide, there's a wheel with basically six slots, and it identifies those processes that are really critical for writing. Those include planning, which involve gathering and organizing information; goal-setting, which is thinking about what to do and what to say; drafting, which is carrying out those goals and the plans that you create; and also, while you're involved in that, updating and changing those plans to fit the task that you're working on and your audience needs; evaluation, which involves self-review or even external review, and often external review; revisions, that are based upon your self-evaluation or the external evaluation; and obviously editing, where you go back and you make that product as neat and as correct as possible, so that others will be very willing to read it.

Now, when I mention these processes, they don't operate in a set order like I just gave: planning, goal-setting, drafting, evaluation, revising, and editing. They're very recursive and they're very messy. So often, when we plan, we're also in the process of evaluating and making revisions. And, as I gave with the example of drafting where new ideas and evaluations come up as we're doing that, in essence, you know, these basic processes move about, and it depends on what we're doing. Now, the writing strategy part are basically methods or techniques that we use to carry out, in an effective way, our plans, our goals, our drafting, our evaluation, revising, and editing. They're basically the mental and physical activities that we engage in to make these thinking processes happen.

In terms of thinking about this first recommendation, let's take a look back really briefly. You know, the first step is to explicitly teach strategies for planning, goal-setting, drafting, evaluating, revising, and editing, and the second is using those basically flexibly. So, let's say that you're a science teacher, and you want to teach students a heuristic for engaging in writing as they're working through a laboratory experiment.

So, the first part of the strategy might be a pre-writing thing, where they're thinking about what they already know, what their hypotheses are. The second step or stage in this might be, as the experiment is going on, recording their notes. A third might be coming back to those notes and drawing some conclusions. And a fourth may be meeting with other students to share their conclusions, to reflect on those, and to revise those. So, when we're talking about a strategy like that, we're talking about explicitly teaching it so students know what processes and mental activities to engage in.

The second part of this is, we want students to be able to use these kinds of strategies flexibly, so that it meets their purpose and the audience for who they're writing for. And so, one kind of lab experience may require different kinds of things to happen up front, where prior knowledge or thinking through what you already know, or the conceptions you have, may be especially important. So, we want to be sure that students don't use these in a rote kind of mindless manner. We want them to be used in a flexible and thoughtful way.

I'd like to share with you three strategies that are highlighted, amongst many, in the What Works Clearinghouse guide. And the first one particularly, I'm going to come back to a couple of times to illustrate some specific aspects of this, but it's the "PLAN" strategy. And basically, "PLAN" stands for four basic operations that one might engage in. And the first is, thinking about or pay attention to the writing assignment. What are you asked to do, and what kinds of hints or guides are you given for carrying this out?

The next three steps all relate to gathering and organizing information. And so, you might list out or acquire information on a bunch of different kinds of ideas that you might include, and you might evaluate and end up with four or five ideas that you think are particularly important to this plan's topic. Next, you need to figure out what ideas you're going to use and what supporting details will help make those main points important. And then, you've got to come back and consider what order you want to present those in. So, that gives a basic outline or idea for what you're going to do with the idea that that's going to be used flexibly as you start to write.

The second strategy that is mentioned there is a "Three, Two, One" strategy. So, let me give an example of this, if we were thinking about something like an English classroom, where we're reading about a particular character. So, the first thing that we might do, as students may have a homework assignment where they're reading the first chapter, and they're asked to write out three things that they learned about the protagonist or main character, and then two things that they would still like to know, and maybe one question about how they'd like to extend this topic.

Another example here is color-coding. And in this particular event or this particular example, we might pick a topic like global warming in a science or social studies classroom, and students might read arguments for and against global warming. And as they're doing that, after they read them and analyze them and talk about them, they might go though and, using different colors, they might highlight what the basic premise was, what the reasons and supporting evidence were, and the conclusion. And then, as they write their own essays on their particular viewpoint on this topic and they share with friends, they might reengage in that, so that they point out where their premise is, which are their major reasons, et cetera.

In addition to learning strategies like this, we want kids, as we mentioned earlier, youngsters, to be flexible and smart in terms of picking which strategies to use at which point, as well as making adjustments in those strategies when they do so. So, one of the things that we can do, regardless of the classroom—whether it's science, math, social studies, or English—is encourage students to ask themselves a series of questions, and those include things like, what are my goals here, and what strategy will help me to accomplish these goals for both my audience and my purpose. What strategies do I already have that I know that works well for this kind of assignment and this kind of audience? What do I know about this assignment that would help inform my strategy selection? And I would go beyond that and say how I might need to use this strategy, which leads right into the next one, when do

I use the strategy, when am I planning, drafting, revising, and so forth? So we want kids to think smartly about when they use particular strategies, and make modifications as needed.

The other aspect of this first recommendation is not only explicitly teaching strategies, but a model for how to do that. And so, you remember the PLAN strategy that I mentioned earlier. In that one, you're basically analyzing the prompt in the first step, and you're generating your main ideas, your details, and then you're making some decisions about ordering. So, in terms of the "Model-Practice-Reflect" instructional cycle, we'd basically be involved in three activities.

First, the teacher would model how to apply that strategy. And, of course, in terms of doing that, they want to make it clear what the purpose of the strategy is, when and why you use it, but they want to show, make visible what's going on in the head when you use this strategy to students so they can see it in its applications. So, it gives a concrete model.

And then, students need practice in terms of applying it with help from the teacher and their peers until they can do that independently. An important part of this process throughout is to ask students to evaluate and reflect upon their use of the strategy and their peers' use of the strategy, and also the products they produce. We want to be sure that students see that the strategies that they're using actually makes a difference. And sometimes, that's not really obvious unless we look for ways of making that happen.

So, in terms of the first part that I mentioned, the modeling, in some ways, this seems like an obvious thing to do, but in my experience, in talking to many teachers, this is not something that they always feel readily confident to do. And so, we have a think-aloud protocol here for modeling a planning and goal-setting strategy. And in this particular case, there's a series of model questions.

And I think the way that I would encourage you to think about this is, if I was to model the PLAN strategy for this particular topic that we're looking here about animal and plant cells, then one of the things I'd want to do is think about the things that we have here, like who is my topic audience. I want to be sure that when I'm modeling the strategy, I'm focusing all of my thinking out loud for students so I'm establishing the purpose of using this strategy, I'm establishing my goals that will help guide the use of the strategy. I'm talking about the strategy as I'm engaged in using it, and I'm talking about how I'll carry that out as well, which each of these kind of examples illustrate. And at least for me, when I do this, I often will generate a small script and then practice it in my head before doing it in the classroom.

I'd also like to share with you, in terms of thinking about this model that we've been talking about, the "Model-Practice-and-Reflect," a couple of different activities that cut across content areas. And the first one that is presented here is using a procedure called "Compare, Diagnose, or Operate," or CDO. And basically, it's a revision strategy. And what happens with CDO is that you read back through something, and you have this kind of moment of, like, "Oh, that's not what I meant there," or "I thought of a new idea," or "Should I consider this." So, that's the compare part.

The next step is to diagnose. So, if you notice something's not quite right, you might be able to diagnose what the problem is, or you might not. That's not actually obligatory. But, in any event, you have to make a decision of what to do next, which is operate. In some instances, I'm going to leave it alone. In other instances, I may need to add something, I may need to rewrite something, I may need to move something, or I may need to take something out.

And so, the activity that's provided here would be... revolves around the teacher initially modeling by writing out a geometric proof. And then, what she does is, she reflects about the proof using the "Compare, Diagnose, Operate" strategy, and makes changes in that proof so that she makes it better, more clear, easier to understand, and sequential in the way that it needs to be. Then, she asks students to solve a second problem and explain, in writing, how they solved it. And the teacher, at the same time, does the same thing. And they may make comparisons between the two, but this gives students a chance to practice not only the geometric proof, but then, they may come back to it and apply the CDO strategy. And then, they can also do this as a whole class.

The next strategy presented there is for a social studies class, and it involves peer revising, which I suspect almost everybody in the audience is familiar with the peer revising idea. But in this case, the example is a little bit different; it has both a teacher and a student model the strategy with each other's writing. And then what happens is that students... and they... and there's a discussion around the strengths and the areas that could be improved in terms of writing. And then, what the teacher does is involve peers in doing the same thing. And so, this gives students in the classroom a chance to practice the strategy, but also be the recipient of the evaluations, which, when they come back and discuss this, they may be able to modify the strategy or make it more effective, or talk about places where breakdowns occur.

Now, with everything that we might suggest to you, from the What Works Clearinghouse guide to anything else really, to be honest, there's always potential roadblocks. And one of these is that we sometimes deliver instruction. Even when we do it really well, not everybody responds in the same way. Some kids get it, some kids don't always get it. So, what happens if you implement, say, a strategy like the peer revising one on the previous page, and some of your students don't seem to be able to do that effectively, and some of them, it seems like it's just too easy.

So, one strategy would be to think about bringing the strategy, paring it up or paring it down in terms of its sophistication. So, for example, let's say that on that peer revising strategy, for a kid who's struggling, we might have had four criteria that they were giving feedback to a peer on, we might bring that down to two that we know they can pretty well deal with. And so, in that case, it might be, look for any places that are unclear and look for places that might need additional information. And that can also work from the point of view of the writer as well. But, if we have a student or several students who could use more criteria, we might add more into the strategy as well. So, we can think about these strategies as being flexible. And, of course, we can always do more instruction and more modeling and things of that nature as well.

So, our second recommendation is to integrate writing and reading to emphasize key writing features. Now, this isn't part of the writing guide, but I want to say this works both ways. So, when we teach writing, or we use writing to think about reading, there's positive benefits for reading as well. But, we're focused on the emphasis of writing and reading to make a difference in writing. Now, why would we recommend something like this? Well, one of the primary reasons is that when you think about reading and writing, although they differ and they're not exactly the same, the pools of knowledge on which they draw have a lot of similarities in them.

And so -- excuse me for a second. I'm having a little trouble advancing my slide. So, I'm going to ask, on the WWC part, would you advance my slide, because mine's frozen up? Thank you.

So, in terms of the second recommendation, there's two steps to this. We want to help make sure that students understand that both writers and readers use, you know, those similar pools of knowledge in terms of strategies, knowledge, and skills to create meaning. So, one way of doing this is, we look for opportunities to point that out. So, if students are writing on a particular topic in a social studies class, we want to point out that they draw upon their previous knowledge to help them understand what they're reading. When they write about the same knowledge, they're drawing on those same sources to gather ideas.

We also want to use a variety of written exemplars to highlight the key features of text. And so, let me share kind of an aside here on this, is that, when Toni Morrison, the famous American writer, was asked about how she learned to write, what she said was, through reading. And what she went on to say, even more specifically, was that as she read, she analyzed the text she was looking at, and that helped give her ideas about what was important in particular types of writing and how to go about engaging text that was not only clear but engaging. Would you advance the slide, please?

So, in terms of thinking about what some ways or activities that we can go about helping students make that connection between writing and reading to facilitate writing, there's a sentence starter strategy here that's presented, and I want you to think about this is, if you were an English teacher and you were working on something like reading "The Great Gatsby." So, in terms of revising meaning, you might have students use sentence starters as they read through certain parts of "The Great Gatsby" where they think "At first I thought X about 'The Great Gatsby,' but now I think X," or "My latest thought about 'The Great Gatsby' is," or "I'm getting a different picture here because," and reflecting and relating.

So, this could be, as you're reading the book or about writing about "The Great Gatsby," the big idea is, the conclusion I'm drawing is, the most important message is. But, the basic idea here is that we use these sentence starters to help us in both reading and writing about a particular topic. And they serve a conjoined purpose across the two. Next slide, please.

Another example in terms of helping students use reading to facilitate their writing is using editorials as peer and professional exemplars for students' own persuasive text. And so, there's a series of recommendations here that I really think, even if we weren't talking about editorials, apply pretty broadly. So, we can read the editorials or some other type of persuasive text to identify the specific features of the editorial. So, what is it that makes this an editorial? So, we look for those basic features.

We can also ask students, then, to reread that editorial or multiple editorials to take a look, see what makes them effective. And we can do this by having both strong examples and weaker examples, so that they get a sense of how those particular elements play out. Then, we can ask students to write their own editorials using those same basic elements. So, they try to actualize that for themselves based on their new knowledge about what an editorial is. And then, just as importantly, in terms of the "Model-Practice-and-Reflect" that we talked about earlier in Number One, in our first recommendation, we want to have students discuss those features with each other, how it worked out in their own editorial, places where they might want to make changes in terms of the use of those features to make their editorial even stronger and more relevant for the audience. Next slide, please.

Now, again, you know, we're back to the same issue that we talked about with Recommendation One, and that is, you know, I'd love to say there's no obstacles to doing any of these, and this represents one we talk about in the What Works Clearinghouse manual, but there are recommendations across each of these or limitations that you're going to want to think about, and the guide offers some solutions. So,

the one I'd like to talk about with you is that, often what we hear is that, from content area teachers, "I don't teach reading or writing. That's not part of what I do. That's not my responsibility." And so, I want to point out a couple of things that you might consider.

One is that there's considerable evidence that when you have students write about what they read in your content class or write about what they learn, it improves performance. And that's the case even with fairly simple writing activities that don't have to be necessarily taught directly or explicitly. So, writing responses to homework questions, taking notes which may have been taught in an earlier grade, generating your own questions for something that you've read. So, there's many things that we can ask students to do that involve writing that may help focus their attention in useful ways.

Another thing is that this often feels like it's an individual effort. It's all falling on me as the biology teacher to do this. But, this should be, and obviously could be, a school effort, so that if we're introducing an approach to writing persuasively, then what we might do is make that a school effort, where that general basic approach is used across the classrooms, but then the teacher individualizes it for their particular content area to make it more relevant, because what counts for a fact or a detail, a relevant detail in English, science, and social studies is likely to differ, and each of those content areas has their own specialized way of how to make an argument, but a general frame can provide a starting point for doing that.

It's working again for me, so I won't be calling out "Please make the slide advance."

So, our third and final recommendation involves the use of assessment of students' writing to inform instruction and feedback. And so, I want to return back to the PLAN strategy that we started off with pretty early. And you'll see on this slide over to the left, there's three basic steps to implement this recommendation. And so, with thinking about that PLAN strategy, where you're planning something up front that you're going to write about, one of the things that you might do in terms of thinking about what instruction might be needed to put a strategy in place, is to take a look at what kinds of strategies students already use.

So, if they're already using an effective approach for kind of generating or, in a sense, organizing their information, we want to know that up front, because we don't want to make that go away. We may end up modifying our strategy to incorporate that in there. We might also find that they're doing very little planning, which is more common than not. We also want to take a look at what students are writing because we'd like for the strategy -- the PLAN strategy -- to make sure that they're including within the composition the things that we think are most important and most likely to deliver the message that they're going to develop in an effective and clear manner.

And so, our initial assessments may be, on both of those, to use the PLAN strategy. And then, once we teach it, we want to regularly monitor whether or not it's working out. And I'm also going to say, in a little bit, it's not just us regularly monitoring, it's also students doing it at the same time. And part of this regular monitoring ought to be, that students may have useful suggestions for how to change the strategy so that it's more effective. The PLAN strategy I'm particularly familiar with, because it was a strategy we developed and did with middle school students and what we found when we got to the reflection part, was that students said, "You know, I'm using this simply -- the plan that I make without any modifications as I write." And we talked about that, and so they added a plan-m, which was to modify as you write.

And so, a way of thinking about this now, turning to the right, is we want to do our assessments and analyze what we learn about the students. We then want to take that information in terms of our objectives, goals, feedback, and instruction, and design instruction for teaching that strategy or skills or whatever we're teaching in an effective way. We want to put it into play, and we want to keep assessing to make sure things are working as we do this. And we want to engage students in helping us do that as well.

Now, this next slide provides an example of how we might do some of this online assessment, and so it centers around summarization to a large degree. But we might have an online or on-demand prompt, and the use of graphic organizers to help students generate information and examine how that's working for them. So, what did students do well in terms of their pretest, so that would be our initial "trying this out"? Were they able to summarize the information, give the basic theme? Or, we might ask what students did not do -- what did they not do well on this? For example, they did not quote from the text or other commentary. And then, that would lead us to think about things we need to teach or do to make sure students could use our strategy effectively. But we can try it out, see what works, see what doesn't work, and then modify or construct our instruction so that it takes that into account.

Another important part of this, and the reason that the graph is here, is that if we're graphing a student's practice in that "Model-Practice-and-Reflect" model, if we're practicing how they're doing in terms of using the strategy or some aspect of the product that they're producing, this provides us, as teachers, with information where we might consider whether we need to make a modification. So, you notice here on this graph, we kind of go flat and then there's a big jump. There was a modification made by the teacher.

There's another advantage to doing this if students are involved in this graphing as well, because they can see their progress. One of the challenges in writing is that when we teach students to do something new, we're asking them often to replace something that they're doing now that may require little effort on their part and gets the job done, maybe not as well as we'd like or they would like, but there's a tendency to fall back on that default kind of "less effort" strategy. When students can see their progress and see the changes are made, they're more likely to use the new things we're going to teach them.

And then finally, a potential obstacle for doing the formative assessment we've been talking about is time, and it's always a problem for us. And so, one of the things I want to point out here is we can always ask students to be part of this process, and they're often very smart about how things are going. And they can carry part of the load for us as well. We can also look at current assignments that we're using to see if we can modify those in ways in which we can make those part of our informative assessment as well.

And, at this point, I'd like to turn back to Julia, and I'd like to thank you for being with us today.

Thanks so much, Steve. To conclude, we just want to mention a few ways that you can keep up to date with the What Works Clearinghouse. Joining our mailing list and following us on Twitter or Facebook are really the best ways to stay informed about future practice guides and intervention report releases, webinar opportunities, and other exciting events. You can also send us an email through our "Contact Us" page to ask a question or share your thoughts. We always look forward to hearing from you.

And we also encourage you to contact your Regional Education Laboratory, or REL. The REL program is a network of ten laboratories that provide access to high quality, scientifically valid education research,

and offers technical assistance. And then lastly, we also hope that you will take the time to answer a brief survey about this presentation following today's webinar. We really appreciate your feedback. And with that, we will turn it to the question-and-answer portion of the webinar.

Great. Thank you, Julia. So, good afternoon, everyone. My name is Shannon Monahan. I work on topical products, including practice guides, for the What Works Clearinghouse. And we have received a few questions. Thanks to all who have submitted. And please, continue to add your questions if you have some. So, I'm going to start with a question.

This one is directed to Julia. It has to do with the sample that's included in the research studies. There was a question whether the diverse groups of students who were studied in the research included in the guide are all students of traditional age, so teenagers specifically, or did any include adults with literacy skills at the secondary level?

So, that's a great question. Thank you. Of course, the practice guides are tricky, in that we always have to put a scope around our literature search. And for this particular practice guide, the studies included students in grades 6–12 who, yes, were of traditional age, so teenagers. They did not include any adults in any of the research samples.

Great. Thanks, Julia. So, we also have a question for Steve. Steve, this question has to do with students who might be struggling, and specifically, whether students with learning disorders internalize the strategies. So, how much time should a practitioner spend on each strategy for students that are struggling?

That's a really good question as well. I'm going to use a pneumonic my wife, Karen Harris, developed. And, forgive me for its crassness. She basically has a saying, "Don't PEE in the classroom" with the P-E-E standing for post the strategy that you're going to learn, explain it, and expect that students are going to do it. You know, basically, I think for most kids, what we found in the work that we do is that, often for kids with learning disabilities, and that's really my primary area of expertise, we end up modeling the strategy once, sometimes twice, and the second time may actually be in a smaller group setting. We usually find that it takes about three or four practice sessions before students start to internalize. But really important to this, even if it takes more or less, is that the initial approach that we do is we model, with the teacher taking the lead, but students helping. Then, what happens is, peers work together to do the strategy with all the support material in front of them, for example, you know, something that gives them an idea of what to do first, second, or third. And, we're really clear, the idea is to make those materials go away, to do this independently and effectively. And so, that material is faded out. And so, with two modelings and, let's say, three or four practices, we find that most kids with learning disabilities can use the strategy independently and effectively. We also pneumonics like the "PLANs" one to help them remember the steps. But the idea there is basically, it's not the pneumonic that's important, it's the processes that you engage in. So, these strategies can be used effectively with all youngsters, including those with learning disabilities.

Great. Thank you. And in addition, Steve, can you talk a little bit about how the strategies might be adapted for English learners?

Yeah. One of the challenges, I think, in terms of English learners is that, you know, initially, depending -- you know, I mean, this is a really difficult question because we have a broad range of English capabilities in a classroom. But if you have very little English, then an initial starting point, and we've done a number

of studies outside this country with other people, we start with the initial language. In a place like Arizona, where I live, that's controversial, because they want everything done in English. We actually start in the native language to do the practice, and then we start switching over. So, that's one way of approaching it.

Another is that a lot of times, in terms of teaching strategies or other writing skills, we want to make sure that our vocabulary that we're using to describe the skills, strategies, knowledge that we're teaching are understood by students. So, we need to take extra care to make sure that that happens. We're doing some work now with English language learners in Arizona, and basically, we find that the "Model-Practice-and-Reflect" model works well. We just need to be sensitive to the background knowledge that students bring and the level of their English in terms of modifying what we're teaching to these students or to these youngsters.

Great. Thank you. So, going back to Julia just for a moment and talking, again, Julia, about the sample of the research included in the practice guide, were at-risk students included; for example, students who were formally identified as having or were struggling or having disabilities or students who were English learners?

Yes, so the research supporting the guide did include diverse groups of students. When we talk about students who were struggling, we both mean students who may be struggling in the classroom who have not yet been identified as having a disability, as well as students who have been formally identified as having a disability. As Steve mentioned a few moments ago, this is really the bread and butter of his research. But yes, to answer your question, we did have students that were struggling, students formally identified as having a learning disability, as well as English language learners included in the sample of studies supporting the practice guide.

And, do you mind if I add something, Julia?

Please do.

Some of the studies, for those wonks who are interested in looking more specifically at the studies, particularly the work by Carol Booth Olson and her colleagues, involved a large number of kids in the classrooms who were English language learners. And almost all of the studies we're talking about here, if they involve regular classrooms, had the full breadth of kids in them. So, kids weren't excluded from participating in those studies. So, they would also have students with disabilities who are included as part of the regular classroom.

Thank you both. Julia, another interesting question that we received, "Were there any areas of writing instruction that the panelists were interested in, but that there wasn't enough research to explore or investigate with the practice guide?"

Yes, this question really stretches my memory, as we have been working on this practice guide for the past 2 years, so I have to really think back here. But after consulting with our team, there were a few areas or a few groups of practices that came out of our literature search but did not end up having a sufficient enough evidence base for us to write about or recommend in this practice guide. One example is technology.

I think, you know, technology and technology in the classroom is definitely a buzzword topic these days. We see increased use of technology in the classroom, but we did not find enough studies really supporting or examining the effects of using technology in the classroom on students' writing achievement. So, I think that's one key area that, you know, we looked into, but we just did not find a sufficient evidence base to pursue for the guide.

Great. Thank you. So, Steve, this question is for you, actually a couple people asked a variant of this question, which is basically, why, in schools, do they teach reading and writing separately? So, when we think of the second recommendation that talks about how they're drawing from the same well, is there research to support that teaching them separately is valuable or important?

Okay. They say always answer the question you want, so I'm actually going to go back to the last question, and then come back to this one. I also want to mention that I think the panel would have been interested in ways of facilitating more sophisticated sentence construction. Maybe about 90% of one's mental effort goes into that aspect of writing, and also motivation as well.

Now, with that said, I love this next question. You know, there's really a lot of different reasons why reading and writing are separate. And there's a couple of assumptions underlying that question that I'll touch on as well. One is that, in some ways, they come out of different disciplines. So, when you think about writing instruction, for a large part, you have people in English departments, et cetera, who are very much focused on that. When you think about reading instruction, it often comes out of schools of education. Not that the two don't overlap, but historically, there's been a separation of the two.

Another thing is that we often prepare people who are going to be scholars in writing or teach writing separately from those who are going to engage in the reading process as well. And then, I think a third thing to point out is, that there's not a lot of writing instruction. We've done a number of national surveys and there's also work by Applebee and Langer that would suggest, you know, some schools are doing a phenomenal job of teaching writing. But overall, kids don't write very much in high school. There's not much instruction. So, the other part of this kind of that's assumed here is that both reading and writing instruction are going on kind of equally but separately. And the reality is more on reading, much less on writing, unfortunately.

And so, the other part of the question was, do we have evidence that integrating them together or separately is effective. So, what I can say from the work that my colleagues and I have done in terms of meta-analysis, we've found evidence that teaching writing using traditional writing approaches improves writing performance. We've also found that when you teach writing, reading gets better. Other people have found that when you teach reading, reading gets better. And we just completed an analysis that when you teach reading, writing gets better. And we're also finishing up on an analysis now that when you combine reading and writing instruction, both reading and writing get better. Now, this is not to say that we don't need dedicated time for both, but we could do a better job, I think, of bringing the two together in the service of both writing and reading.

Great. And do you know if there are any differences actually by age? So, if we took the middle grades, six through eight, versus high school, or would the recommendations sort of be the same about reading and writing's relationship?

So, I think the recommendations would be the same. Now, obviously, as you move up the grade level, the kinds of strategies that you apply become more sophisticated. The knowledge that you have to draw

on is more connected, richer, and, again, also, you know, just simply more sophisticated. Your motivations towards writing and reading may change as well. And your ability to use more sophisticated strategies for carrying out those processes would change. But students still need and are still developing as writers, and so that kind of "Model-Instruct-Reflect" model still works well. They still need strategies for carrying out the processes. Reading can still serve as a conduit for improvement in writing. And I don't think, probably, for most people, there's any point in learning process where assessment is not going to be useful.

Terrific. Thank you. So, I think we're going to come to the end of our hour soon, so this will probably be the last question that we have time for. But, if folks continue to have questions, you're very welcome to submit them through the What Works Clearinghouse Help Desk. So, Steve, this last question here, someone was describing their own experience and mentioned that students who struggle with reading, they find, have difficulty with finding or gathering information for essays, and that it tends to get in the way of teaching the more global strategies, in this person's experience. So, they're wondering if you can suggest ways to work on strategies specifically for gathering information.

Okay. That's a great question. And I'm actually going to drop down a couple of grade levels, but this will illustrate the basic point. We've been working the last 3 years with kids in fifth and sixth grade, so we're kind of, like, on the cusp of middle school. And we've been teaching them a fairly simple strategy for developing a premise and reasons to support it, and elaborations and wrapping it up in terms of a planning strategy for persuasive texts. And what we do is, we initially teach them how to do that with thoughts from their head.

Then, we move to source texts, and for the source texts, we teach them a strategy for locating and thinking about information in text that will help them gather information directly from reading material. Now, obviously, if you can't read the text, then that becomes a real issue. And so, I'll talk about that in a second. But what we found is that, when we do the initial thing with planning from your head, teaching a strategy for accessing the source material, and then bringing the two together, you know, the students we've been working with—and this includes both students with disabilities, typically, you know, kids who don't have disabilities, as well as English language learners—they really fly on this.

The real challenge point is if they can't read any of the source text. And so, the way that we've been getting around that, and not in the research studies but some of the work we've been doing with teachers, is we'll set up discussions amongst students. So, students will initially come to, you know, kind of a brainstorming session, and they'll generate as many ideas as they can, and talk through them as a way of getting at that information, and from whatever they can bring from the text, they'll bring at that point. It's not a perfect solution, but in this particular case, we don't have the option of trying to work on, you know, upgrading reading skills to a large extent. So, what we've opted for is teaching the strategy that helps them focus in on how to gain that information from text.

Great. And Steve, that's specifically the work that you do at your university, correct, that you're describing?

That is, that Karen Harris and I do, yes.

Great. So, people could read more about it by finding your articles.

Or they could contact...

Oh, go ahead.

They could contact me as well.

Great. Thank you. Okay. So, thank you so much to Steve and Julia. We've actually come to the end of our hour. But I'd like to thank all the attendees on behalf of the What Works Clearinghouse, and to remind you that if you do have additional questions, please feel free to contact us through the What Works Clearinghouse Help Desk. In addition, there's going to be a very brief survey that will pop up at the end of this webinar, and we would really appreciate your feedback on the webinar. So, now I'm going to send this back to our producer, Brian.

Thank you. This concludes today's webcast. An on-demand version of this webcast will be available approximately 1 day after the event concludes. If you are unable to fill out your questionnaire at this time, that feedback questionnaire is there as well, and if you can, contact the WhatWorksClearinghouse.ed.gov for information. Thank you, and have a nice day.