

Project INSPIRE Lesson 5 (13:22)

SPEAKER: Prekindergarten-first grade students-- Nemeth Code within UEB contexts and strategies for supporting the student in building math skills. This is lesson five, working with the educational team.

Slide 2 has the objectives, which include being able to describe your role as a TSVI. Identifying ways that you can support the general education teacher. Listing ways you can support the paraprofessional to do his or her job successfully. And determining when to prepare a teacher reference sheet and what to include.

Slide 3 is a quote by Kapperman, Heinze, and Sticken. It reads, "in general, it is the responsibility of the person providing instruction to ensure that all students, including the student with a visual impairment, have full access to instruction and all materials used in the lesson."

And we want to remind you that this is such an important concept that you often will be pre-teaching or reinforcing concepts. It truly is the role of the person who is the math teacher for the student to provide the actual instruction. Your role as the TSVI is to ensure that your student has access to the curriculum.

Slide 4 talks a little bit more about your role in math and science. As the member of the team that has the knowledge of visual impairment, you're going to share this knowledge with other team members, but at the same time, you're going to learn from them, as well. You'll be evaluating the students' conceptual understanding. Often, our students are good about talking about something, but you really want to make sure they understand concepts, such as greater than and less than or one-to-one correspondence.

You're going to teach your student how to compute using VI specific tools such as the Cranmer or abacus or manipulatives like Teddy bear counters. Part of your role is to preview what's coming up and if your student needs to learn new Nemeth Code symbols, you'll be teaching those.

A huge part of the role of the TSVI is preparing materials, including tactile graphics. And yes, students as young as prekindergarten, first grade need experience with very simple tactile graphics. And I know that you're going to work hard to ensure your student has success each and every day.

Slide 5, talks about how you can be a member of the team with the general education teacher. How the two of you can work together. So you want to help the teacher really understand your role and the paraprofessional's role. Now, there may or may not be a paraprofessional present.

You want to think about workflow. In the picture, we see a student who has a Braille page with math problems on it. and the TSVI has placed above the Braille, the print, has interlined it. Getting that workflow established so that the student has the materials, that those materials are accessible to others in the classroom is part of your role.

And then thinking about also, the expectation. How can we help that teacher really understand what our student can do?

Slide 6 talks about being a member of the team with the paraprofessional. In this role, it's really important that you determine when your student actually needs paraprofessional support. And think about how you're going facilitate communication between you and the general ed teacher and this paraprofessional so that you're all on the same page.

Many paraprofessionals take a responsibility for materials preparation. And this can be an important role so that your student can have things on the spot when things come up. It also frees you up for time for teaching. But you want to make sure when your paraprofessional is preparing materials that your person is using proper Nemeth Code, proper formatting. So you're going to need to teach those skills and then monitor.

In the photo, we see a student who's a dual media learner in his bedroom. He's reading a Spiderman calendar that his paraprofessional gave him as a holiday gift. She adapted this print calendar by adding Braille numbers and letters. By doing this, she's able to help him practice his calendar skills in a natural way. When paraprofessionals get to know their students well, they're able to learn to look for natural opportunities to reinforce classroom instruction.

Many times, we ask paraprofessionals to collect data. And that way, you can get feedback about how your student is doing in the classroom when you're not there. I'd like you did hear from Mark, who's a teacher of students with visual impairments, who shares his perspective on working with paraprofessionals.

MARK: So working with paraprofessionals can be really fun. And it is a lot of work, but when everyone's in sync, it can be a wonderful experience.

We joke with our paraprofessionals that your job is to work yourself out of a job. Meaning, we want the student to become so independent with your guidance, but they become so independent that they no longer need you.

With working with a paraprofessional, you do need to determine what exactly their role is going to be. Where they will step in and where they will need to back off. And that's going to be a conversation between the teacher or the visually impaired and the paraprofessional. But also, there may be some conversations with the classroom teacher and the paraprofessional. How the paraprofessional can best serve the student in that particular teacher's classroom.

SPEAKER: I'm sure you enjoyed hearing from Mark. He's a very enthusiastic gentleman, who really has a great perspective on paraprofessionals. Let's move on to slide 7 and talk about how you can be a model and resource to others on the team.

In the picture, we see a young student who has a large worksheet in front of her. It has Braille on it and six shapes. She's actually pointing to a triangle.

This worksheet has been prepared on microcapsule paper with a fuser. Many people use pictures in a flash, for example. So there's raised lines on it. And those lines are black. So for a student like this who has low vision and is beginning to be a Braille reader, having that dual input is really important.

In this case, the student is using some vision so we want to make sure that when there is material that our student can see that we provide it in high contrast. When our student can't see that material, then we want to make sure we're describing it adequately.

Thinking about reinforcing concepts that that classroom teacher is teaching, a lot of times, other team members aren't sure how to help our students succeed. So providing strategies for them to use. For example, verbalizing what's on the whiteboard, hand under hand are strategies that you can model for other team members.

Thinking about how to show them how to get that child to fully participate so being more descriptive in their explanations, for example. Pairing children up to do an activity that's very visually-based.

Bringing in your APH catalog and other sources of materials, sharing that with team members. And then modeling for them how to use those materials with the student.

Now, technology can always be a challenge for all of us. So thinking about how to troubleshoot technology, giving them ideas of when you need to reboot. When you need to call for technical assistance.

Thinking about modeling for them having the student learn to advocate for him or herself, even at this young age. So that things aren't always done or given to the student, that magic fairy syndrome, but instead, the student needs to ask questions or solicit aid.

And then demonstrate and creative problem solving. We all know that things are going to change, things are going to come up so how do you solve those problems? So sharing your bag of tricks with the other team members is important.

Slide 8 talks a little bit about the importance of teaching Nemeth Code to your students for success. So as a TSVI, you want to really preview those instructional materials and identify what Nemeth symbols and what formatting you're going to teach. Then you want to pre-teach those things to the student.

And we see a picture where a teacher is supporting a student who's reading a math worksheet. Making sure that he understands the symbols on it. We also see the student's abacus off to the side. So learning how to use a tool like an abacus, a Perkins Braille writer is so important.

And as the teacher of students with visual impairment, ultimately, it's your responsibility to make sure that this child has Braille at the same time sighted students have print. And that's why that workflow is so important.

Slide 9, we're going to switch topics here and start talking about the teacher reference materials. I like to think of these as little yellow stickies that you leave for people with information, but they're a guide to support the adults who are working with the student. You want to avoid using technical language so keep it simple. Keep it direct to the point.

Sometimes you're going to either opt to omit something or to change the directions. So you want to be sure to let folks know what you did. But at the same time, do not compromise the math concept. You want to make sure your student's getting that same exposure.

Often, we're going to use extra materials or hands-on materials for the student who is a Braille reader. So you want to let folks know what those materials are and where they're located. And if there are alternative instructions, you want to provide those.

Slide 10 is our first example of a teacher reference sheet. And I'd like you to think about what you would include here. So we are in a classroom where the students are just beginning to learn to work with 10 frames. And Rico, our student who's a Braille reader, will definitely benefit from manipulatives.

We see two 10 frames drawn and it says show six on the first 10 frame and eight on the second 10 frame. Then compare which one is larger. So think for a moment about what you would do to ensure that Rico can do this activity alongside his sighted peers. Go ahead and pause and think about what you would share and then continue when you're ready.

We see Rico sitting with a teacher-made 10 frame and a basket that has Teddy bear counters and another basket that has plastic coins.

On slide 11, you'll see my teacher reference sheet that I wrote on a piece of notebook paper. It reads, "I've made a sheet with two 10 frames that have Velcro in each square. Rico can use the Teddy bear counters or coins, his choice. Verbally tell him to put six in the first 10 frame and eight in the second one."

Once done, ask him to compare which is larger. I did not Braille the question for him today because I know you are focusing on the comparison concept. And the time he would take to read the Braille would take away from the concept you're teaching."

So in this case, knowing the student, the student's learning style, and communicating with that teacher to know what the focus of the lesson is allowed the TSVI to decide what to focus on in the materials that were prepared. Giving Rico choice of which manipulatives he wanted to use lets him have some control of the activity.

On slide 12, let's take a look at a second example. So in this example, what would you include in the teacher reference sheet? At the top, it says counting fun. And then we see three houses with a line drawn, six animals with a line drawn. Draw a picture for each number. And we see the numbers five and two.

I want you to focus on the bottom part-- draw a picture for each number. How would the student accomplish this? Go ahead and pause as you think about what you would share. And then when you're ready, continue.

On slide 13, you'll see that I've gotten a metal cookie sheet and some circular magnets that the student can use.

On slide 14 is my teacher reference sheet. I've written it on a yellow sticky and left it for the teacher. It reads, "Instead of drawing. Carolyn will use magnetic circles and a metal cookie sheet to create a tactile picture for each number. I left the magnetic circles and cookie sheet in your mailbox in the teacher's workroom. Carolyn practiced building numbers with the magnetic circles and the cookie sheet with me yesterday. Email me if you have questions."

Again, the focus on these teacher reference sheets is to ensure that when you're not there, your student is going to be able to complete the activity and gain the same conceptual understanding as those who are using print.

Thank you for your time. And I hope you got some new ideas of things you can do with your student.