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Assess with Purpose: Student Focused Assessments for the Synchronous and Asynchronous Learner

[Slide 1 – Assess with Purpose: Student Focused Assessments for the Synchronous and Asynchronous Learner]: Dr. Leanne Ketterlin Geller: Hello everyone, welcome to this second webinar in this series on Data-Based Individualization in Mathematics. This webinar is on Assessing with Purpose and it is focused on Student-Focused Assessment for the Synchronous and Asynchronous Learner. And we're very excited that you've joined us today for this webinar.

[Slide 2 – Webinar Format & Questions]: The webinar format today is that we will present our content throughout the morning or the afternoon. And then you can submit your questions in the question pod. There's a description here. If you have any technical issues, please go ahead and write those in the question pod as well and someone from the webinar team will assist you with that. Also, content area or content related questions, we will address those at the end of the presentation. We know that some of you will be watching this after the live recording, so hopefully those questions are still relevant to your viewing.

[Slide 3 – Welcome and Introductions]: Before we get started with the content, I'd like to introduce the team who is joining me today. First before we leave this slide though, I'd like you to notice or look at the bottom left-hand corner where there's ways to engage with us. This is for Project STAIR. We have a Twitter handle that you can follow, and then also we would welcome you to subscribe to the Project STAIR YouTube channel. And I will be referencing these as well as my colleagues will be referencing these throughout the presentation today. So, please just jot those down we'll also show them again at the end of the webinar. These are great ways to stay connected with us and if you don't get your questions answered today you can certainly connect with us through Twitter. And then also learn more about the project as well as about data-based individualization and mathematics from our YouTube videos.

[Slide 4 – Session Outcomes]: Our goal for today is for you to learn about the types of assessments that are used within the data-based individualization framework or DBI framework. Our talk today is going to be specific to mathematics and focused on middle school mathematics, but many of these still apply outside of middle school mathematics. So, that's one of the goals for today's webinar. The other is that you will learn tips and strategies for assessing students during synchronous and asynchronous learning. So, this is in a virtual environment. What are some ways that you can actively engage with your students in those assessments?

[Slide 5 – Webinar Presenters]: Our team today who you'll be hearing from includes the four of us. My name is Leanne Ketterlin-Geller and I'm a Professor at Southern Methodist University in Dallas, Texas. And I'm joined by three other colleagues. Two are from the University of Missouri; Elizabeth Thomas will speak, as well as Jiyung Hwang. And then Tessa Arsenault is from the University of Texas at Austin and she will be speaking as well. So, we are delighted

that you've joined us today. And you'll be hearing from each of my colleagues throughout this webinar.

[Slide 6 – We want to meet you!]: Now that you've met us, we would like to take a minute to see who you are and who's joined us today. If you wouldn't mind in the question pod, if you could type in the state that you're listening from and what your role within education is, and then if you attended the first webinar in the DBI series. So, we'll take just a second to allow you to type in your responses to these questions.

Thank you all for responding. I'm seeing lots of states: Ohio, Minnesota, North Carolina, Connecticut, California, Georgia and Virginia. Wow, this is really great to hear. And Math Specialists, Teachers, Assistant Principals and Instructional Coaches. Wow, Hawaii. Thank you all very much for joining us. We are really delighted to have you here today and we're excited to connect with you.

I do want to mention that this is the second webinar in a series of three. So, hopefully if you didn't get a chance to listen to the first webinar, hopefully you'll be able to connect and watch that webinar once it's posted on the NCII website. And then also we'll share with you the date and time of the next webinar that's coming up. Again, these are all focused on data-based individualization or DBI in mathematics. So, we'll go ahead and get started.

[Slide 7 – Project STAIR]: I'd like to share with you about the project from which many of these resources were developed. And this is Project STAIR and STAIR stands for Supporting Teaching of Algebra: Individual Readiness. And this is funded by the U.S. Department Office of Special Education Programs and it represents a team from three universities. As we've already seen University of Missouri, Southern Methodist University which is the university I'm at, and the University of Texas at Austin. And so, we are our team members as we move to the next slide.

[Slide 8 – Teams]: Leading each of those organizations is myself, as well Sarah Powell from the University of Texas at Austin (and she will be leading the next webinar in November), and then Erica Lembke who is the lead from the University of Missouri, and she hosted the previous webinar. So, again this is a team from the Project STAIR group and hopefully you'll be able to listen to the webinars across the different project teams throughout this series.

[Slide 9 – Goals and Description of Project STAIR]: The goals for Project STAIR are really focused on supporting student's readiness for algebra. And the intention is that through early intervention in middle schools, we can support student's individual readiness for algebra once they enter high school. So, we all know the importance of algebra for both high school outcomes as well as post-secondary outcomes. And so, our focus is on building and supporting students' algebra or students' outcomes related to algebra. Through that model or through that goal, we develop a model. And this model is based on the data-based individualization framework. And as you can see in the image on the left, this is the conceptual framework that we are employing.

As we provide this support to teachers, it comes in a couple of ways. One is through targeted professional development and ongoing support to help teachers support students who need

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intensive intervention in middle school mathematics. The focus is on providing evidence-based instructional strategies, as well as formative assessments.

And so, at the last webinar you learned a lot about data-based individualization and the process of data-based individualization. In this webinar, we're going to be focusing on the formative assessments that are used to support data-based individualization; we'll focus on universal screeners, diagnostic assessments and progress monitoring. And then in the next webinar, we'll focus in on those evidence-based instructional strategies and how to intensify instruction to support the needs of students who have intensive needs in middle school mathematics. And the goal, as you can see from this diagram, is that we're really focused on student success in these algebra readiness concepts and skills in middle school.

[Slide 10 – What is DBI?]: If you missed the first webinar or just need a refresher, I'll just briefly go through what data-based individualization or DBI is. I do highly recommend that you watch the webinar with Dr. Lembke and the team and to get a much more nuanced understanding of data-based individualization, but we'll refer to this as DBI throughout the rest of the webinar. And so, DBI is a systematic process that really relies on data that's captured in an ongoing process throughout the instruction that helps teachers make individualized decisions for students. So, to really support students' understanding of algebraic readiness concepts that's really targeted into the areas in which they need that additional support.

[Slide 11 – Define DBI]: DBI, we're going to reference this framework. I'm going to walk through the framework first and then we'll reference it throughout the webinar. So, there's two primary components of DBI. One is assessments, as we've talked about, and the other is instruction. And we've kind of color coded those here so we can point out point them out to you as we talk.

DBI is focused on, as I mentioned, using data in an ongoing process of better understanding how students are responding to instruction, and then also to design instruction to meet their learning needs.

[Slide 12 – Define DBI]: As students receive validated interventions, we monitor their progress to see how they are learning and if they're making progress towards their goals. And on the righthand side you can see a plus and that's an arrow that circles back to monitoring progress. And what it says is it says responsive. So, what this means is that the student is responsive to the instruction, to the intervention that they've received, and that they are making the progress that we would anticipate. So, it's circling back because this means that you should keep doing what you're doing because it's going well. On the left side you'll see a minus sign, and it says non-responsive. What this means is that the intervention that you have provided to a student is not meeting their needs. And so, they're, as you're collecting progress monitoring data, they're not making progress at the rate that we would expect them to where they would be on track for meeting their goals. This indicates that we haven't found the right solution for this student yet. So, we need to identify what might be some changes we need to make to the instruction that would support their growth and their learning. So, you can see that moves into diagnostic assessment.

And so, the goal of diagnostic assessment within this process is to better understand what the student needs in their learning to support their growth. And we'll hear about diagnostic from Elizabeth in a little bit. But the purpose of the diagnostic assessment is to help you design your instruction again to really intensify and provide more targeted support or individualized support for those students. So, you can see diagnostic assessment leads to intervention adaptations which is going to come in in the third webinar in November. Where Dr. Powell and team will share more information about how do you adapt your intervention to provide that more intensive need. And of course, once we have adapted our instruction or intervention, we need to continue to monitor progress. We monitor progress on continual basis and then we go through the same decision-making cycle where you can see there's on the right. There's the plus, we're going to be tracking and evaluating whether or not these students are responsive to the instruction. And then on the left there might be instances where we still haven't gotten this right. And so, we still need to think about how we can support these students. So, those are students who are not making progress as we would anticipate. And so, that we need additional information.

The cycle continues with gathering additional data from diagnostic assessments to adapt our instruction. So, this is the DBI that you were introduced to in the last webinar and that we'll be referencing today. We'll be talking through each one of these different pieces as we talk through the assessments. And we'll talk about the roles that those assessments play in the DBI process. Then as you come back for the next webinar, the third webinar, we will spend the focus of that webinar on instructional adaptations. So, you'll again learn there about how instruction fits within this cycle.

[Slide 13 – Evidence Supporting Assessment]: I'm going to turn this over to Jiyung who's going to speak about the evidence for supporting assessment. For supporting the use of formative assessments.

[Slide 14 – The Role of Formative Assessment]: Jiyung Hwang: Yes, I am going to share how effective using assessment data for improving teacher's instruction and student learning is, and how it is supported by the research. This table is from Gersten's Meta-Analysis Research. Meta-Analysis is a method for systematically combining multiple studies that address the same research question to develop a single conclusion.

Gersten's Meta-Analysis synthesized findings from forty-two interventions on instructional approaches that enhance the mathematics proficiency of students with learning disabilities. And it nicely shows the evidence of effectiveness of instructional approaches that are used in multiple studies. And the red box highlighted represent the effectiveness of instruction which is related to using ongoing formative assessment data to provide feedback on student progress to teachers to help them fine-tune instruction to meet the needs of their students or to provide students with information regarding their performance or effort.

Generally, in meta-analysis research by looking at effect size you could see effectiveness of the instruction. So, the effect size in the second column of this table, where it says random effects means, show that using formative assessment data is one of the effective instructional components for learning disabilities.

[Slide 15 – What is effect size?]: Then what is the effect size? So, the green line represents the control group and the purple line represents the experimental group. So, it is the difference between two groups: between experimental group that receives a treatment and a control group that does not receive a treatment. So, it tells us how substantially different the both groups are. In other words, how strong the relationship between treatment and the outcomes are. So, this could tell us how effective the treatment is.

 [Slide 16 – The Role of Formative Assessment]: As you can see in this figure, when the mean difference of both groups are, it gets larger and the area of overlap decreases then the effect size gets larger.

[Slide 17 – The Role of Formative Assessment]: Now we are going to do a sorting activity since we have just learned what effect size is. So, let's sort the statements in each box from the smallest effect size to the largest. Oh, from the largest effect size to the smallest. So, which means most effect instruction to the least effective. So, just giving you a tip, first two and the last two statements are differentiated according to what type of assessment data were used and whom you provide feedback to. So, now please share in the question and answer pod the number that corresponds with your answer.

[Slide 18 – The Role of Formative Assessment]: Yeah so, here's the answer. I see your responses, that most of you put the second one as having the highest effect size. Yes so, based on the effect size reported in Gersten study, number two second statement which was providing ongoing formative assessment data and feedback to teachers on students' process plus options for addressing instructional needs was the most effective way to use formative assessment data. Which is just what we, our team are doing in our Project STAIR.

For example, teachers may look at the student's ongoing formative assessment data, such as progress monitoring data, and think, such as, to what extent on what skill has the student improved compared to the previous two-week period or what is the student's trend rate of growth over two weeks? And how will I attempt to improve student performance on the targeted skills?

Likewise, ongoing assessment and evaluation of students progress in mathematics can help teachers measure the pulse and rhythm of their student's growth in mathematics and also help them fine-tune instruction to meet the needs to their students. And the second most effective instruction was number three statement, which is related to providing formative assessment data and feedback to students with their performance. And number one and four statements were followed by the third one. Actually, the effect size of all the instructional components one to four are pretty similar to each other right. But the key point is that math instruction that includes using formative assessment data and providing feedback proved to be an effective approach when teaching students with learning disabilities.

[Slide 19 – Assessments for DBI]: Now we are going to hear from Elizabeth who will talk about the assessment for DBI.

Elizabeth Thomas: Thank you. As Leanne explained earlier, the DBI framework really has these two major components: assessment and instruction, and they work together. Assessment

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data and forming instructional decisions. So, what kinds of assessment types are we talking about?

Well if we look at the DBI framework, first we want to figure out which students require DBI and establish their present level of mathematics performance and use this information to set ambitious goals. And so, for that first step we would use a universal screener. Once we have a validated Tier 2 instructional program in place and then we want to monitor the student's progress toward that goal. And for that we would use a progress monitoring measure. And so, as Leanne reviewed with those plus and minus signs there, if a student is responsive that's great, we'll keep doing that. But if they're non-responsive; if that intervention is not effective, then we might want to diagnose the student's persistent misconceptions and errors to pinpoint what's going on with that student. And so, we'd use a diagnostic assessment.

Once we make an intervention adaptation using that information, we would continue to monitor the student's progress toward that goal. Now that was a lot of jargon. I understand, don't worry. We're going to go through each of those individually, how you would use them in a DBI framework, and explain each of those components. And I bet you're going to be more familiar with them than you think you are.

[Slide 20 – School Level Experience]: First I'd like to know what universal screeners you're familiar with. What are you using in your school? So, go ahead and put in your question and answer pod the letter that corresponds with the tool that you use, or if you're not using one that's fine, go ahead and put F. And if you're watching this as a recorded webinar, just take a moment to see if some of these looks familiar to you. It looks like we have some familiarity with some of these tools and some schools that aren't using one. That's okay. Let's look at where you can find out more about universal screening tools.

[Slide 21 – Technically Sound Assessment Leads to Sound Data-Based Decisions]: On the NCII website you'll find this tools chart to help evaluate universal screening tools, including ratings on technical rigor of the tools. You can see there's a QR code there in the corner that will take you right to that. And that's important to consider because assessment is an essential part of a data-based individualization process or DBI, or really any Multi-Tiered System of Support. Without technically sound assessment, which provides accurate meaningful information, a teacher has no objective method for determining what a student needs or how to intensify an intervention to meet those needs.

So, there's a close connection between assessment and intervention, and that's the foundation of DBI. This connection is what drives teacher decision-making. With the right assessment tools and guidance on how to use them teachers can make sound data-based decisions about who needs intensive intervention, when to make instructional changes, and what skills to focus on. So, what is universal screening and how does it fit in the DBI framework?

[Slide 22 – Universal Screening]:   Yeah, go ahead to the next slide please.

[Slide 23 – What is Universal Screening?]:Thank you. So, these are examples of universal screening tools that you might be more familiar with. A well-baby checkup, tune up for your car, or annual health screenings. You'll notice that they all have certain things in common and

that holds true for universal screening tools in mathematics. They all happen before there's a problem. They help us understand the extent of the problem. They're recommended for everyone and the screener is specific to the age or the decisions that need to be made with it. So, for example what you do during a well-baby checkup isn't exactly what you do during, say, a sports physical, right. And these characteristics hold true for universal screening measures as well.

[Slide 24]: This is an excerpt from an IES Practice Guide for supporting struggling math students, and it shows there's considerable evidence for using universal screening. I would point out that they encourage screeners are administered to all students. They're used to identify risk status to determine if interventions are needed and it's not a diagnostic. So, this isn't going to tell you exactly what to do to meet that student's needs, just that there is a need that this has been identified.

[Slide 25 – Interpreting Results from Universal Screeners]: Using a universal screening assessment to screen all students helps identify students who are at risk or underperforming so that appropriate Tier 2 interventions can be put into place. The students who are the lowest performing on the screener may have intensive needs and therefore, it would be appropriate to use the DBI framework with those students to support your decision making.

When interpreting the results from a universal screener, you can learn which students are at risk or underperforming, who needs intervention, and what degree of intensity of intervention is needed? So, universal screener helps us identify who's at risk for underperforming in mathematics so that we know who has needs that need to be addressed using intensive intervention.

[Slide 26 – Examine Universal Screening Report]: Here's an example of a universal screening report. This one is an example from a STAR Universal Screening Assessment by Renaissance Learning. So, if you use that this may look familiar to you. It gives you this really nice graph where you can see in green those are students we're not concerned about. But let's look closer at those students at the end there. The students in blue are below the 40th percentile, so they're on watch. We're keeping an eye on them. The students in yellow are below the 25th percentile, and so they need intervention. And then the students in red, those are the students below the 10th percentile and they need urgent intervention.

And so, you can see by that red circle those are the students that DBI is appropriate for. They've been identified by the universal screener as high risk and needing intensive and urgent intervention. So, the higher the risk, the higher the intensity of the intervention. If the student is at high risk, then the intensity of the intervention should match.

[Slide 27 – How so you used screening data within a DBI framework?]: Let's look back at that DBI framework and where universal screening fits here. So, first we're going to screen, do that universal screener to figure out which students are appropriate to use the DBI framework with. We want to establish that we've got a Tier 2 validated intervention in place, and then what comes next is that progress monitoring piece.

[Slide 28 – Progress Monitoring]: So, let's talk about progress monitoring.

[Slide 29 – What do you think?]: What progress monitoring measures do it's right there in the name right. We're monitoring the progress of the student towards their goal. So, why don't you; we'll do a quick quiz. Go ahead and put in your question and answer pod your answer to this question. Which students should you progress monitor? A, all students. B, students performing as expected. C, students at risk or underperforming. D, B and C. E, none or F, you don't know. Looks like we got it. Yeah, C students at risk or underperforming should be progress monitored. Good job.

[Slide 30 – Technically Sound Assessments and Data-Based Decisions]: So, again you'll see this QR code. It will take you to a Progress Monitoring Tools Chart on the NCII website where you can learn about specific examples of progress monitoring tools and about the rigor and evidence base of them. So, let's go ahead and look at the specifics of what progress monitoring is.

[Slide 31 – What is Progress Monitoring?]: So, again these are examples of progress monitoring tools that you are likely more familiar with. I know my Apple watch gives me graphs like these for my steps. I'm never meeting my goals. But there's also like a baby growth chart or average monthly electricity prices. And so, all of these, what they have in common is that they track the same unit of measure over time, so like your steps or your weight.

And then we use those to monitor and make decisions, right. That encourages me to be more active during the day. Characteristics of progress monitoring tools for math are that they should be quick and easy to administer. They should have multiple parallel forms so that we're assessing the same thing they have the same difficulty format and content. And then they should have a standardized administration scoring so that we're using the same timing, the same settings and the same scoring rules for every measure. And in that way, they measure the same thing in the same way consistently and that allows us to compare scores over time. If I looked at my steps one day and my weight the next day, it doesn't give me a whole lot of information about my improvement. So, the same holds true for academic progress monitoring.

[Slide 32]: Here's another excerpt from that IES Practice Guide for assisting students struggling with mathematics. And I'd point out that they encourage that progress monitoring measures are administered to only students at risk receiving intervention, and that they're used to track the progress of that student while they're engaged in the intervention. And so, this shows us that progress monitoring is supported by evidence.

[Slide 33 – Interpreting Results from Progress Monitoring Measures]: This is an example of what a progress monitoring graph can look like. Students current level of performance is established by collecting and graphing baseline data before an intervention is put into place. So, that's what you see in this first section there. The baseline data where a student is scoring before any intervention is in place. And from this baseline data, we then set a long-range goal for the student across time that you'll monitor the student's progress towards.

[Slide 34 – Interpreting Results from Progress Monitoring Measures]: There's a lot here. So, focus in on that green line going up that's the goal line. That's where we want students to be performing, the student to be performing. And then for each intervention phase the student's trend of performance can be compared to that long-term goal line. So, you can see in the first

intervention, the specific data points are there in red. That's where the student's performing on each of those progress monitoring measures.

But then the gray line that shows us the trend overall which helps us interpret this a little bit easier. So, if we compare that trend to that green goal line and intervention one, we see that the student is definitely not on track to meet that goal. In fact, they're going down, which tells us that that intervention was not effective, and an instructional change was necessary, which was implemented for this student. So, that would be intervention two. If we look over at that data you can see again those red data points and the gray or white trend line going up there. It's right on track with the goal line. So, we can see that this intervention is effective, and that student is on track to meet their goal. This is a very specific and clear evidence that can help you inform your instructional decision.

[Slide 35 – Make Decisions from Progress Monitoring Results]: When looking at progress monitoring data, like that graph, we can learn if a student is making adequate progress toward his or her goals by looking at the trend line. In other words, we're comparing the student's expected rate of growth with their actual rate of growth. So, the trend line and the goal line are really pivotal for us when we're looking at those graphs.

The image on this slide shows you some decision rules that can help you make decisions when you're examining that trend line. So, you'll want to ask yourself is the trend line deeper or above the goal line. If so, that students on track to exceed their goal. That's wonderful. So, you should just keep doing what you're doing, maybe consider even increasing their goal. Maybe we set that expectation too low.

You can also ask yourself is the trend line even with the goal line? Which would show that the student is exactly on track to meet their goal. So, we want to keep going, continue as is, but of course, we're going to reapply that trendline rule. Look at that data frequently to make sure that we're maintaining that. Or if the trend line is below or flatter than the goal line, that tells us that the intervention is not effective for that student. They're not being responsive. And so, an intervention change or adaptation might be needed.

[Slide 36 – Using Progress Monitoring Assessments Within a DBI Framework]: Right, so let's look back at that DBI framework. So, we see that based on the student's lack of responsiveness on those progress monitoring measures, we may need more information to determine what specific support content or intensification that student may need if they were not responsive. Which leads us to our next type of assessment, which is a diagnostic assessment.

[Slide 37 – Diagnostic Assessments]: Thank you.

[Slide 38 – Previous Experience]: Here are some types of diagnostic assessments that you may have seen before. Some are more formal, some are more informal, but I want you to go ahead and put in the question and answer pod which of these diagnostic assessments you've used before. And if you're not joining us live, you could request a letter from Alex like you're on Jeopardy. Great. It looks like we have a range of experiences. So, let's get into the specifics of what is a diagnostic assessment.

[Slide 39 – What is a Diagnostic Assessment?]: Here are some real-world examples of diagnostic assessments that you might be more familiar with. Sometimes a mechanic may do a diagnostic assessment on your car to find out what's wrong. Or maybe you have a diagnostic test done medically at the doctor's office. But in general, a diagnostic assessment helps pinpoint the cause of an issue. They provide data to assist educators in designing individualized instruction and intensifying intervention for students who are not responding to validated intervention programs. Diagnostic tools can be informal which are like easy to use tools that can be administered with very little training or more formal standardized tools which would be delivered in a standard way by trained staff.

[Slide 40 – Interpreting Results and Making Decisions from a Diagnostic Assessment]: Diagnostic assessment results can help you understand why a student is underperforming. They can tell you whether the student's correct conceptualizations or understandings of the content. What are the students' persistent misconceptions and errors? And they can help you determine what content was appropriate to target with the intervention that you're selecting.

This is an example of an algebra diagnostic from the DOMA that we use for Project STAIR. This is an image of the results page. So, you can see those colored circles tell us if the student has mastered, has partial mastery or is missing mastery of that content. And we use that to inform which content areas we should focus on in our intervention. And so, there are lots of kinds of diagnostic assessments out there, but the general idea is that they help you pinpoint the cause of an issue and design an intervention specific to the student.

[Slide 41 – Using Diagnostic Assessments with a DBI Framework]: If we look back at the DBI framework you can see that orange arrow there on the side when a student is not responsive. We can collect diagnostic data, and that helps us make an instructional change based on our hypotheses. Making hypotheses and instructional adaptations will be covered in the next webinar. So, make sure you come back for that. But let's go through this full framework one more time and where all of the assessments fit within it.

First, we want to identify students who it's appropriate to use DBI with. So, we use a universal screening measure. We establish that there's a Tier 2 validated intervention program in place. And then we monitor their progress to ensure that that intervention is effective. We look at that data and use our decision rules to determine if the student is responsive or not responsive. If the student's responsive, great. We're going to keep going with that intervention and keep monitoring their progress. If the student is not responsive, we may use a diagnostic assessment tool to pinpoint the cause of that and to help us intensify their intervention. Then we would make that instructional change based on our hypotheses from the diagnostic data and we would continue to monitor their progress and determine if they're responsive or not.

[Slide 42 – Assessment in the Virtual Classroom]: From here Tessa will give us some tips for engaging in assessment practices in a virtual environment.

Tessa Arsenault: Great, thank you. Our next section is on tips for assessments in the virtual classroom. These suggestions can be useful for both synchronous and asynchronous assessments for the virtual classroom. Before we get started on our suggestions, I want to recommend that you check out the assessment publisher websites for the assessments you use. Right now, many

assessment publishers have specific guidelines for conducting their assessments virtually. I recommend that you check them out before assessing.

[Slide 43 – Know Your Students' IEP Accommodations]: The first tip for assessing in the virtual classroom is to know your student's IEP accommodations. For virtual assessments, teachers must keep in mind how to appropriately support accessibility, accommodations and equity. In this section, we discuss supporting accommodations. Teachers need to ensure that they are meeting the needs of students with IEPs. Teachers need to reference the IEP of each student with an IEP to ensure that all appropriate accommodations are met for each assessment.

The accommodations in a student's IEP have been created by the IEP Team to best fit the strengths and needs of that particular student. To ensure that all accommodations are in place, this may take collaboration between the General Education teachers, the Special Education teacher, other building specialists, guardians and the student. Providing and supporting access to accommodations will vary based on the student. While the child may be independent in utilizing one accommodation, they mean may need more support in taking advantage of another accommodation.

Teachers need to consider assistive technology, ADA accessibility, executive functioning supports along with any other appropriate accommodations. Teachers need to ensure that students who need assistive technology have it available at home and know how to access it. For example, teachers need to make sure that the digital content has various technology supports, such as built-in speech to text or text-to-speech. Additionally, teachers need to ensure that they are considering ADA accessibility when appropriate. Are the students with physical disabilities able to take the assessment at home? Such students need to have access to the full range of test taking accommodations. They would have had taken an assessment in school. Last, teachers need to make sure that the demands of executive functioning skills are supported during the virtual assessment.

[Slide 44 – Awareness of Inequities]: Tip number two is awareness of inequities. Again, teachers need to consider accessibility, accommodations and equity when conducting assessments in the virtual classroom. In this section, we consider accessibility and equity. Just like when we're in the school building, in the virtual classroom not all students have access to the same resources. Teachers must keep this in mind when making decisions for assessments.

When teachers are considering accessibility, there are a few questions to ask before proceeding to the assessment. Do all students have sufficient technology capacity? For example, Internet bandwidth and a computer or laptop that meets the needs for completing the assessments. Are students familiar with the online testing platform or with remote proctoring? And can students operate the technology independently? Teachers must also consider comparability in results. Are results obtained from an at-home test administration and remote proctoring comparable to those from a traditional in-school test administration? Are there variations due to the platform or other factors not related to the student understanding of the content.

[Slide 45 – Know Your Purpose for Assessing]: Tip number three is to know your purpose for assessing. The purpose of the assessments needs to be cleared to the teacher, the family and the students. The focus of virtual assessments should be on formative assessments. Formative

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assessments are valuable for finding out more about the students learning and how to support their growth. With formative assessments. you'll be able to monitor student progress and make changes to the curriculum based on student needs.

Formative assessments have a clear and straightforward purpose for virtual assessments. It is also valuable to use self-assessment during remote learning to encourage students to self-monitor their growth. This can generate student engagement in their own learning progress. The purpose of virtual assessment should not be summative accountability. With remote learning summative assessments to evaluate student learning at the end of a unit are not going to benefit the student or provide the teacher with useful information.

Last of all, teachers need to consider security around online assessments. Safeguards need to be in place to prevent testing improprieties such as cheating by the students and their guardians and test question sharing. Teachers can work to decrease cheating by making the purpose of the assessment clear to the families and the students. If families and students know that the purpose of assessment is primarily to support student learning, the likelihood of cheating may decrease. Cheating most often happens under high stakes environments. So, if the stakes are low, which we recommend here, cheating should be less likely to happen.

[Slide 46 – Preparedness and Communication are Key]: Tip number four is preparedness and communication are key. Clarity and repetition are essential for virtual assessments. Direct teacher to family communication is a key driver for quality of data. Before the assessments, it is the teacher's responsibility to get ahead of the technology hurdles. The teacher should practice using the assessment platform before providing the assessment. The teacher should also make it available to students and families so they can practice using the assessment platform before taking the assessment.

It is also important that teachers have a communication plan for students and families before, during and after the assessments. Teachers need to set up a standard for collaboration around the assessment with families and students. This can be through email, messaging, Google Classroom, Class DOJO or another online communication system. Whatever system a teacher uses it must be clear, consistent and a reliable form for communication. Families and students should be able to have resources available and a clear way for them to ask in informal questions.

Teachers should also set up a space for information about the assessment. This may include how-to videos or step-by-step written instructions about the assessment procedures. It will be more accessible to families if they can receive all of this information and the information about the purpose of the assessment from the same place. Consistency and simplicity is very important for easing the transition to online assessments.

[Slide 47 – How are you?]: I hope these tips are helpful for you as you venture into the virtual assessments this school year. As you are assessing, it is important to remember that virtual assessments are not equivalent to in-person assessments. Remember the goal of your assessment and a plan accordingly. We want to do one more check-in to see how you are feeling about conducting assessments virtually. Please type in the chat which option represents how you feel right now about conducting assessments virtually. Okay, great. I see we have some B's. Hopefully, our tips have helped some of you move away from option D.

[Slide 48 – Assessment with Purpose]: **Dr. Leanne Ketterlin Geller:** Thank you very much. And as I see some of the options come in, you know I think that we're really hoping that some of the information that we shared with you today will help you move forward in your practice and supporting students who need intensive intervention in mathematics, especially with regard to assessment in the virtual environment. So, we hope today that we reached our session goals by providing information about the types of assessments within the DBI framework and that we also helped provide some information about how to assess students in this the virtual environment both synchronously and asynchronously. So, at this point we would like to open this up to questions that you might have.

[Slide 49 – Questions]: I've been monitoring the chat as our session has gone through. Please take a minute to write some questions in the question pod. But as those come up, I will share with you some questions that have already come up. One of them was which assessments would you recommend in the virtual environment? And I'll take this and then if anyone wants to chime in that would be great.

Lizzy mentioned some of the tool's charts from the NCII website on both screeners and progress monitoring measures. And I would recommend that you look at those assessments that have already been reviewed and vetted. And there's additional information about the quality of those assessments as you're thinking about what is available. There's a number of those assessments that are available in online environments. And as Tessa mentioned, there are several of them that have already put out guidelines and frameworks for how to administer them in a virtual environment. So, I would recommend that you look at some of those. And then also look at which of the vendors are supporting online assessment. There was a question that came in about accommodations related to the virtual administration of some of those specifically a screen reader. I would again recommend that you go to the vendor's websites and look at which ones are amenable to accommodations.

Some may also have embedded accommodations which can make it seamlessly much more accessible for students. So, some assessments; some of the mathematics assessments might already have a read aloud option in them. They may have some additional supports. Some of the assessments have highlighter features, built in workspaces or electronic workspaces. So, it's worth looking at the vendors websites, contacting the assessment vendors themselves and finding out what is available, what accommodations are already embedded in the system.

Of course, as Tessa already mentioned, if the accommodations are new, if the version of the accommodation in the assessment is new to the student, that student will need practice using those assessments before using those accommodations. And those support features before it becomes into an assessment environment where those data are going to be used for your decision making. Okay so, let me check the chat.

One other question which I'm actually going to ask Lizzy to answer. And that came in during your discussion about progress monitoring. So, you asked a question about who should be administered progress monitoring measures? And you said that it was C, which was only students who are at risk. And there was a question of why should progress monitoring assessments only be administered to students who are at risk or underperforming?

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Elizabeth Thomas: Sure, that's a great question. Well I would say that students in general are kind of overwhelmed with assessments. Teachers are giving lots of assessments to find out how students are performing. And once you've determined requires intensive intervention you want to make sure that those students are being tracked a little more closely so that you can see if that intervention is effective. Not that it's necessarily harmful to be monitoring the progress of students who aren't receiving intervention, it's just not necessary. So, students who are on track we don't need specific weekly data to make sure that they're receiving what they need.

Dr. Leanne Ketterlin Geller: Thank you.

Elizabeth Thomas: Leanne would you add anything to that?

Dr. Leanne Ketterlin Geller: I think that's great. Thank you. Another question that's just come in is what would you recommend for assessments for students who may be multiple grade levels behind? This is a really important question and it really will vary depending upon the specific assessment. So, universal screeners will have different answers for universal screeners versus diagnostic progress monitoring. A good universal screener should be able to assess a range of students and across the ability spectrum or across the ability distribution. So, as Lizzy was showing in the distribution of the scores from Renaissance Star, we were able to see students who were on track as well as students who were, I think it was called, on watch. And then students who needed intervention and students who needed intensive intervention.

So, universal screener, it would be helpful to administer the same universal screener to all students so that you can make comparable decisions across all students. However, when we talk about progress monitoring, we want to make sure because we're looking at each individual on their own and we're not comparing them to other students. We're looking at each individual on their own. We want to get sufficient data to where we can monitor progress. And as Lizzie said, if we see that that a student is outperforming the goal, we can increase the goal. So, in those cases we want to find a progress monitoring measure that is at the instructional level of the student. So, I would really recommend that you work toward finding or selecting that progress monitoring measure that was going to provide you with meaningful information about how students are progressing in their learning. If it's an out of grade level progress monitoring, you're not going to get the data that you need to be able to change instruction and monitor and change and provide the resources and the support that that student needs.

Now diagnostic assessments are different. And again, as Lizzie mentioned, there's a variety of different approaches to diagnostic assessment. And the whole goal of administering diagnostic assessment is to get enough information to help you identify how to intensify your instruction or what instructional adaptations you may need and in what content areas you may need. So, this again, is very individualized at the specific student level. So, you can use samples of work, class work that students are already doing and you can use error analysis or you can evaluate kind of their work where they're making some persistent errors. Again, we all know that they're slips and sometimes we make random errors, but what we're looking for is those persistent errors. So, that might lead us to thinking that there's a misconception, which then is what we would want to target in our intervention. So, thinking for progress monitoring and diagnostic assessments, it's not as important that those be on be administered on the grade level.

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Okay, I think there's a few other questions coming in the chat. So, I appreciate you answering those and we will try to answer those offline. I want to make sure that we end this on time. So, again please, if you're in the middle of writing a question go ahead and write that question and we will capture that and try to respond. I wanted to go to the next slide.

[Slide 50 – Remember Our Next Webinar]: Which is to remind you that we have another webinar coming up. So, you've learned a lot about the process of DBI in webinar one, you've learned about assessments in this webinar, and importantly to complete the DBI framework we have the third webinar, which is on November fourth, which focuses on interventions and adaptations within the DBI framework. So, please join us for that webinar.

There is the same link that you use to register for this one, you can use to register for that one. Also, please if you, I saw in the chat that not everybody was able to watch the first one. Please do watch that to get the full range of understanding of the DBI framework. And then we wanted to share a few additional resources on the next slide with you.

[Slide 51 – Use Project STAIR Videos]: About the videos I mentioned at the beginning where we have our YouTube channel. Hopefully, you can use this QR code to get a list of the videos. We have a number of resources, you know over one hundred and fifty videos that are meant to provide information to support your practice. You can share these with other people. They're organized into playlists. So, please feel free to use these.

[Slide 52]: Again, this is just more information about our project. This QR code will take you to our website where again we have a variety of resources available to you. I'd like to thank our funder which is the Office of Special Education Programs and also all of my colleagues at the University of Missouri, at the University of Texas at Austin and again at SMU. And then very importantly AIR and the National Center on Intensive Intervention for hosting this webinar. So, thank you all very much and enjoy the rest of your day.