

Overview of Taxonomy of Intervention Intensity

Transcript

[Slide 1 – Overview of Taxonomy of Intervention Intensity]: Presenter: Hi, my name is Meagan Walsh. I am a Doctoral Student in the Special Education Department at Vanderbilt University and during this brief presentation today, I'm going to be giving you an overview of the Taxonomy of Intervention Intensity. I'll be explaining what the taxonomy is and then how it can be used to help meet the needs of students with severe and persistent learning and behavior challenges in the context of data-based individualization or DBI.

[Slide 2 – What is Data-Based Individualization (DBI)?]: Before we get into the taxonomy though, I want to back up for a second and talk about the last thing that I just said which was DBI. Simply put, DBI or data-based individualization is a systematic method for using data to determine when and how to provide more intensive interventions for students. This isn't a brand-new approach or anything. DBI had its origin in data-based program modification and experimental teaching. It was first developed at the University of Minnesota by Stan Deno and Phyliss Mirkin in nineteen seventy-seven. And what DBI is; is it's a process.

What it's not and this is very important to note. It's not a single intervention program or strategy. It's not ever a one-time fix but an ongoing process that practitioners engage in that comprises interventions and assessments and uses data for the purposes of making adjustments over time. Also known as individualization.

[Slide 3 – Data-Based Individualization (DBI): PHASE A: Setting Up the Intensive Intervention]: DBI is a process and that process comprises two main phases. The set-up phase and the implementation phase. In the set-up phase, practitioners are going to select a validated, best matched Tier Two program to serve as the platform for intensive intervention. When I say validated, what I mean is that the intervention has evidence of efficacy with students in need of intervention. Best match means that it is the most clearly aligned with the needs of an individual student.

Typically, the students with whom you're using a DBI approach are those who have already failed to respond to a validated Tier Two intervention. So, these are students with severe and persistent and I emphasize that persistent part in learning challenges. These might be students in Tier Three or Tier Four, they might be students with disabilities or however your school classifies as. These students are those whom something more intense than a validated Tier Two intervention will be necessary.

So, in the set-up phase we select the best available; with the knowledge that adjustments are probably and definitely are going to be needed. Okay and so we might even want to make some of the adjustments at the onset of intervention and make it more intensive right from the go. So, in that set-up phase we're going to select that best available and then we're also going to select a validated progress monitoring system. Sometimes, a Tier Two intervention will include a

progress monitoring measure. But most of them won't. So, we're going to need to identify a progress monitoring tool that's going to be aligned to the student's goals, be sensitive to growth and has good psychometric qualities.

That's what we're going to be doing in the set-up phase of the DBI process. And remember, this is a process. It's not a single intensive intervention. So, we're not just going to find something. We're identifying something and from there, we're going to move into the implementation phase.

[Slide 4 – Data-Based Individualization (DBI): PHASE B: Setting Up the Intensive Intervention]: In the implementation phase, we're going to engage in the process of individualization. And that process means that we're slowly intensifying that Tier Two intervention that we identified in the set-up phase, in an attempt to get closer and closer to meeting the needs of our students. Okay, the implementation phase is a cyclical process of analyzing data, formulating adjustments based on that data. Implementing the adjustments and collecting more data. And then analyzing the data.

You get the picture. We're going to keep going back and forth through these steps. And on an ongoing basis, we're going to take a systematic look at the data that we're collecting through progress monitoring to determine if the student is making adequate progress. Okay, we're going to ask ourselves "is this student progressing?" Are they on track to meet their goal?

If the answer to those questions when we check in is yes. We're just going to continue to implement that intervention just the same way that we did; we have been for a given number of weeks. And again, we're going to analyze our data. And say okay, is the student now progressing? Are they continuing to be on track to meet their goals?

At some point, if the answer to those questions is no. We're going to take a second. We're going to collect additional diagnostic data to help us better understand why that student isn't progressing and we're going to use that data to formulate an adjustment to the intervention platform that we're using to make it more intense for that student. Okay, and then we'll implement that adjusted intervention with that new adjustment in it and we're going to begin that process of collecting and analyzing the data anew.

This cycle is going to continue over and over until the student meets their goal. At which point, essentially, we're going to return back to the set-up phase actually and continue the cycle again. By selecting a new intervention that meets students with their new needs wherever they are now that they've met their goal. And we will continue this process of data-based individualization until we get the student's up to where we want them to be.

[Slide 5 – The Taxonomy of Intensive Intervention]: The taxonomy of intensive intervention is a tool to support practitioners in this process of the DBI process. It's a system for describing intervention in terms of the seven dimensions along which intensity can vary. I kind of like to think of it like a sound board. Okay, we can run an intervention through the taxonomy and use the dimensions like knobs or sliders to kind of tighten or intensify our intervention at different points to help meet the needs of individual students.

The taxonomy can support the DBI process both in the set-phase and in the implementation phase. In the set-up phase, the taxonomy can help the practitioners identify the validated Tier Two program that they want to use and the best match for an individual student. And then, in the implementation phase, they can use the taxonomy to help them formulate smart and targeted adjustments.

[Slide 6]: The taxonomy comprises seven dimensions and here's an example of a form that you could use to rate an intervention platform on those seven dimensions of intervention intensity. We've provided a DRAFT of this form in the handout section of this webinar. So, feel free to access that as we talk about this and move through this webinar.

Using this form what you're going to do ideally in the set-up phase rate an intervention or hopefully seven or more. Or however many interventions you have, to determine the best match for a student. And you're going to rate it on these seven dimensions. These are listed on the left side of this form. Those are strengths, dosage, alignment, attention to transfer, comprehensiveness, behavioral support and individualization. I'm going to explain what each of those dimensions are in just a second.

But, using this ratings form. What we would do is rate each of the components that kind of make up those dimensions and give an intervention a score. Usually we give a rating of zero to three. Three meaning there's lots of good evidence that this intervention platform would meet that component. Zero means that there is no evidence of that. And ideally what we would do is would kind of rate each of these components, rate each of the dimensions and then compare several different intervention platforms ratings to each other to kind of find the right one for us.

[Slide 6]: During the implementation phase at each of our designated check points. And maybe we decided that every two weeks we're going to review our progress monitoring data. Or ever three or every six, it depends on kind of what area you're working on. And the student and when you would expect to see changes. But, when we look at our data and we get to a point where we say nope, this student is not progressing. They're not meeting their goals, they're not on track.

We would then fill out one column on this right side of the form. And then we would analyze that progress monitoring data, analyze our diagnostic data. And then decide kind of which dimension can we do something to? Can we intensify to make this intervention more intense for this student? And hopefully, get them to progress more quickly.

[Slide 7 – Seven Dimensions of Intervention Intensity]: Alright, so I hope at this point that you're beginning to see how the taxonomy of intervention intensity fits within the DBI framework. So, for the remainder of this session I'm going to review those seven dimensions that I just talked about along which intensity can vary.

[Slide 8 – Dimension 1: Strength]: The first dimension is strength. And when I say strength I mean how well this intervention could be expected to work for students in need of intensive intervention? To determine the strength, you're going to want to consider if this intervention produces good results for students who require intensive intervention. It's important to note here that most interventions and the way that research is conducted are connected with students at risk.

And some of the students at risk are those that are in need of intensive intervention, right? Those students who have extremely low scores or have not responded very well. But students at risk can also include Tier Two students or students who are maybe just below the fiftieth percentile or maybe in that low average range. So, most research is going to report an effect size for students; kind of in that whole broad area. Anybody below the fiftieth percentile generally.

If you're looking at the strength of an intervention for a student needing intensive intervention, you're wanting to know what are the effects that I can expect for students in the twentieth percentile or below. Those students who are likely not to respond to a Tier Two intervention right away. And so, typically we; the research isn't going to typically report these directly in the findings. Some of them will but you might have to look a little bit closer and dig a little deeper.

I encourage you to use the NCII website intensiveintervention.org to use their tools chart. And on their tools chart, they've kind of done some of that digging and ground work for you. To help find the disaggregated effect sizes for students below the twentieth percentile. When those effect sizes aren't available whether on the NCII website on the tools chart or in the research reports themselves, you may want to reach out to researchers or intervention developers for more information. And if they have it, they will probably provide it to you.

A note about effect sizes. When I say effect sizes, an effect size is just a standardized measure that we use to describe how much higher intervention students performed at the end of the intervention when compared with students who didn't get the intervention. It's usually given in standard deviation units. I know that's just a little bit confusing. But, it's just kind of a way that we can objectively compare intervention strengths to one another. Typically, an intervention that reports an effect size of point three five or point four would be considered a moderate effect size.

So, you might give it a score of two for strength; right? If they give you an effect size of point five and above, that would be a very strong effect. And it would probably get a score of three. Scores below point three five are actually considered small effects. It's important to note though that those are rules of thumb.

So, in some academic areas for example reading comprehension, you're going to kind of expect actually smaller effect sizes. Especially if they're talking about or using standardized measures. The effect sizes tend to be much smaller. So, you have to kind of take that with a grain of salt and recognize that those are just rules of thumb. But they give us a sense of how strong an intervention is. Older students also tend to have smaller effect sizes. So, research with older students is going to have smaller effect sizes too.

When you're rating the strength of an intervention, the higher the effect size for students at or below the twentieth percentile, the more intense that intervention is. Effect sizes are generated from the experimental studies themselves, from the research. So, this is one dimension of the taxonomy that won't change. So, as I am intensifying the intervention and I am working through the implementation phase of DBI.

I'm not going to be able to go back and change the strength of the underlying Tier Two platform. This is just something that we use in the set-up phase when we're rating and ranking the different intervention platforms against each other.

[Slide 9 – Dimension 2: Dosage]: The second dimension of the taxonomy is dosage. And it's easy to think of dosage in basic quantitative terms like the number of sessions that are provided or frequency. The number of minutes per session or the duration. And then the ratio of students to teachers. But, dosage can also be thought of more broadly as referring to the number of opportunities that a student has to respond and receive corrective feedback during the interventions lessons.

So, in a Math intervention for example. The number of word problems that a student solves would be the number of opportunities that they have to respond. Okay and in a phonics intervention, it might be the number of words that they get to decode. Group size, frequency and duration are factors that impact the number of opportunities that the student has to respond.

But, it's important to look more closely at each of the intervention platforms to determine how often would an individual student have the opportunity to practice and respond and receive feedback. Okay, the more opportunities that they have the more intense than that intervention platform is. During the DBI set-up phase, you're going to try to decide what the average number of opportunities to respond is. In some pieces it's going to be really easy to see. You're going to be able to look at the manual and it will tell you right off the bat.

But, often you're going to have to look at a few sample lessons. And I suggest that you look at some lessons from the beginning of a program, some lessons from the middle and some lessons from the end. So, this will give you a sense of how often are students given the opportunity to respond and will there be opportunities for the Interventionist or the teacher or the tutor to provide support.

During the implementation phase, you might decide to increase the interventions intensity by increasing this dosage dimension. Right, you might add additional sessions. You might make the sessions longer. You might reduce the group size. You can give more individual support. Or you might make more practice opportunities within the lesson so that the students have more opportunities to respond and receive feedback.

[Slide 10 – Dimension 3: Alignment]: The third dimension of the taxonomy is alignment. Alignment refers to the extent to which an intervention platform number one, address the student's full set of academic needs. Number two, does not address skills the student has already mastered. And number three, also incorporates a focus on grade level appropriate curricular standards. The more aligned the intervention is to the individual student that you're thinking about, the more intense.

Alignment is really important because many academic interventions address a restrictive set of skills. For example, you might be choosing a Math intervention. And the intervention that you find that seems to work well includes only calculation skills. But, this student also has difficulty with word problems. So, this intervention would not be perfectly aligned to the student's needs because it only addresses one of their deficits in the area of Math.

On the other hand, some interventions are very comprehensive and include a lot of skills that the student has already mastered. So, for example, a Literacy intervention might include things like phonics, decoding, sight words, fluency, comprehension, vocabulary, writing and all of these things. Right, but maybe the student only has a comprehension deficit. So, all that time that you spend in the intervention on phonics and decoding and fluency is actually making it less intense because it's less aligned to the student's skills.

Also, remember that the whole point of the interventions that we're doing to help students to progress towards a level where they're able to receive benefit from Tier One instruction. So, we want to get them as close as we can to their peers who are Tier One right? So, the more that an intervention includes links to the grade appropriate curriculum standards, the more aligned and the more intense this intervention will be.

[Slide 11 – Dimension 4: Attention to Transfer]: The fourth dimension on intervention intensity is attention to transfer. When I say transfer, I'm referring to generalization. And intense intervention is one that specifically considers the conduits by which the skills, strategies and knowledge taught in the intervention are going to move into other context. Right, transfer is a major; I repeat a major, major obstacle for students with severe learning challenges. You may have noticed that one of the foundational concepts in the justification statement on an IEP is that the student needs pull out services because they're failing to use observational learning.

In other words, they're not generalizing what they're learning to other contexts. So, this is just a fundamental part of why we say a student is in need of more intensive intervention. I bring that up to reiterate that students in need of intensive intervention generally are those who have shown extreme difficulty with transfer. So, interventions that recognize this and that are; that provide direct and explicit instruction to help students to transfer their skills other contexts and other settings. Those are going to be more intense.

Interventions that do not address this that just you know, teach students about this skill but don't have any connection to context. Those are going to be interventions that are less intense. When rating this dimension of the Taxonomy, you're going to consider whether the intervention explicitly teaches the students how to apply the skills taught in other contexts. And also, if it helps them link the skills that are being taught to skills that they're already mastered. To help them see how they can apply what they're learning to solve new novel complex problems.

Okay, it's important to note though that just because an intervention scores low on this dimension in the set-up phase. You might still just choose this intervention for a student. So, that in the implementation phase you would know that this is just something that you might want to do to intensify the intervention down the road. So, for example, if I am implementing a decoding intervention. Right and in tutoring sessions or in intervention sessions I'm noticing that this student is really mastering the decoding skills that I'm teaching them.

However, they're still not making progress on their progress monitoring data. So, something is not transferring. They're not moving it to a new context. So, I might add transfer instructions to help them see that they should apply this decoding skill that I am teaching them in tutoring to other settings like a progress monitoring just for an example.

[Slide 12 – Dimension 5: Comprehensiveness]: The fifth dimension of intervention taxonomy; intervention intensity is comprehensiveness. When we say comprehensive, we're referring to the number of explicit instruction principles that are included in the intervention platform. Research indicates and has indicated over and over that students with severe and persistent learning challenges require explicit strategy instruction. The more explicit instructional principles founded in an intervention platform the more intense it is.

The explicit principles include providing explanations in simple and direct language. Modeling efficient strategies. Ensuring that students have sufficient background knowledge skills to succeed with those strategies. Ensuring that students have the; that there is gradual fading of support provided for students to show and demonstrate correct execution of those strategies. And that the intervention provides sufficient amounts of practice.

Another thing that makes it comprehensive is that it incorporates systematic and cumulative review. All of these different principles that comprise explicit instruction should be a part of any intensive intervention. So, when you're rating an intervention in the set-up phase, use this part of the taxonomy. To see in a sample lesson, can you find all of these different principles exemplified? You're going to note how many of them and how well these principles are included.

And later in the implementation phase, you may decide to intensify by adding more of something. So, maybe there's not enough practice when they're not making enough progress later on and we have to make an adjustment. Maybe one of the adjustments that we're going to make is to add additional practice opportunities. Or, maybe we need to do more direct modeling of efficient strategies. These might be areas that we can use to intensify the intervention down the road in the set-up phase of DBI.

[Slide 13 – Dimension 6: Behavioral Support]: The sixth dimension is behavioral support. Behavioral supports is the extent to which the intervention incorporates different strategies to promote self-regulation and executive function. And to support the or to reduce or minimize nonproductive behavior within the intervention. When I say that is promotes self-regulation and executive functioning, this means that we are encouraging students with a history of academic failure to one persevere with challenging academic content. Which is something that they struggle with. And an intense intervention would also help support students to develop a mindset that involves perseverance, hard work and high standards.

Okay, an intense intervention would incorporate more of that. It might focus on self-regulation. It might focus on different areas of executive function like attention or working memory to help students to learn how to develop that concept. You're going to want to examine an intervention protocol and the extent to which you see these behavioral principles represented.

Don't be surprised however when you do that if you notice when you're rating in the set-up phase of an intervention that the behavioral support provided is pretty minimal. A lot of time you're going to be looking at an intervention that was developed as an academic intervention or maybe you're looking at just a behavior intervention. In which case, it's designed to remediate that specific deficit right? But in the real world, we know that our students usually have co-morbid challenges.

Right, they're working against a lot more different factors. And so, we may note that an intervention doesn't have enough behavioral supports when we're rating it in the set-up phase. So, that might be something that we modify right at the beginning to do it with another student. You know, maybe we're going to use what they have in their behavior plan or something like that right from the beginning.

This is also something that we can adjust later on if the student isn't progressing. Maybe we need to do some things to help that student self-regulate or attend to task. Or, we need to do some things to help them learn to stay in their seat. Or to do things that do not take away from instructional time. So, we can intensify this dimension as we go to help individualize our intervention for student's needs.

[Slide 14 – Dimension 7: Individualization]: And the final dimension in the taxonomy is individualization. Individualization refers to the progress monitoring system that we're using. When we're selecting an intervention platform in the set-up phase you're not going to rate this particular dimension. Instead you're going to note whether or not a validated progress monitoring tool is provided.

And, it's important to note that things like Running Records, informal checks for understanding and end of unit tests. While these are great diagnostic tools, these are not validated measures for progress monitoring. Okay, they're not going to work to help us to make the instructional decision of when and if we need to make an instructional adjustment and individualize that intervention. They're going to help us figure out how to make those changes but, they're not necessarily going to be the thing that helps us do it.

If you visit the National Center on Intensive Intervention's website and look at their tools chart. You can use that to help you to compare progress monitoring instruments. And you can look at the individual psychometric data for each of the measures. You can look for the students for whom that has been used. You can look at details about how much time you can expect to use; implementing that. How much time it's going to take out of your instruction. The cost of you know, purchasing any of those things. Some of the descriptions of how the measure works so that you can identify the best match for the students that you're working with.

Sometimes like I mentioned much earlier in the webinar, there's going to be a progress monitoring tool provided in the intervention but very often, that's not the case. So, it's important that you really do think about this part of the tool that you're going to use. Because, it's going to be the foundation from which you're going to make your instructional decisions.

So, it's really important that it be aligned to student's needs. That it be validated and that you know that it's going to be sensitive to change. And it's going to tell you if the intervention that you're using is working or not.

[Slide 15 – When is the Taxonomy of Intervention Intensity Used in the DBI Process?]: So, as we wrap up. I hope that this has been helpful to help you see how the taxonomy of intervention intensity can help you in both the set-up phase and in the implementation phase of the DBI cycle. In the set-up phase, you can use the taxonomy to rate the intervention platforms strength, its dosage, its alignment, its attention to transfer, its comprehensiveness and its

behavioral support. And you're going to use that rating to compare hopefully more than one intervention platform to decide which one is going to be best for your students. The taxonomy can help you do that in a more systematic way.

In the set-up phase of the taxonomy; you're using the taxonomy in the DBI set-up phase to help you identify the best match. And then, you might also use it to help you make some additional adjustments prior to beginning an intervention.

[Slide 16 – When is the Taxonomy of Intervention Intensity Used in the DBI Process?]:

During the implementation phase the Taxonomy can be a useful tool to help you design an instructional adjustment to an intervention. To intensify that intervention to meet the student's needs.

[Slide 17 – References]: I've gone through all of this pretty quickly today. And if you'd like to know more about the DBI process or about the taxonomy. I really encourage you to access some of these readings and read a little more. These are some of the helpful articles that can give you lots of additional information. The National Center on Intensive Intervention website is also a wonderful resource. On it, you can find additional webinars and presentations. Reading resources and those tools charts that I mentioned.

One resource that you may find to be especially helpful is our recent webinar that was completed that shares a Math case study. The webinar gives a real-world example of how the taxonomy can be used in practice in Math. We'll provide a link to that archived webinar in the handouts section. Moreover, if you are curious about how the taxonomy could be applied to other context, we'll be presenting a webinar highlighting a reading comprehension example on July twenty-fifth and a behavioral case study Webinar is also in production. So, stay tuned.

[Slide 18 – Disclaimer]: If you have any additional questions

[Slide 19 – National Center on Intensive Intervention]: I really encourage you to e-mail NCII or visit intensiveintervention.org to learn more. I want to thank all of you for joining us today. Best wishes as you implement data-based individualization. And I hope the taxonomy can be a useful tool as you meet the needs of your students. Thank you.

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