Accommodating Neurodivergent Learners

[00:00:00.68] ELISA LEWIS: Thank you so much for joining today's session, Accommodating Neurodivergent Learners. My name is Elisa Lewis. I'm on the marketing team here at 3Play Media. And I'll be moderating today's webinar. My pronouns are she/her.

[00:00:18.79] And with all of that taken care of, I'd like to welcome today's speaker, Star Peterson. And I will pass it off to Star, who has prepared a wonderful presentation for you today.

[00:00:30.47] STAR PETERSON: Thank you. Let's see if it wants to click. Hmm, OK. I'm Star Peterson. I use they/them or ze/zir pronouns. I am a white person in my 40s, with pink, purple, and blue hair, wearing a black shirt. My screen has a picture of me, as well as the logo of my business, Stellar Diversity Training, which has a rainbow star.

[00:01:03.93] We're going to start by going over some key terms. We'll talk about potential challenges that many neurodivergent learners face. I'll give you some pretty straightforward do's and don'ts. We'll talk about some of Mayer's principles of multimedia learning, which I think are especially relevant to neurodivergent learners. And then we'll go through some common types of training and talk about how to accommodate neurodivergent learnings in those settings, neurodivergent learners.

[00:01:39.43] We'll start with key terms. A neurotype is just a type of brain. We all have a neurotype. Our neurotype can be neurotypical, which means someone whose brain develops and operates in a manner that's considered typical or standard. So they don't have any psychiatric disabilities. They don't have any learning disabilities or any diagnoses for their brain.

[00:02:07.30] A neurodivergent person does have some sort of diagnoses, whether or not they've been formally diagnosed, that affects the way their brain develops and operates. The term "neurodiverse" just means a group that has both neurotypical and neurodivergent people in it. So sometimes, you see "neurodiverse" used to mean neurodivergent. But that's incorrect. "Neurodiverse" means diverse, just like it sounds, so people with all sorts of different neurotypes.

[00:02:43.67] Can anyone in the chat give me examples of neurodivergence? It's an umbrella term. It covers a lot of different conditions, disabilities. So I'd love to hear-- yes, ADHD is coming up a lot, absolutely, autism spectrum disorder. Those are the ones that people often think of first. Dyslexia, yes, and other learning disabilities. OCD, absolutely, as well as other psychiatric disabilities.

[00:03:16.53] So we've got ADHD and autism, intellectual disabilities. Hadn't seen that one come up. Learning disabilities, again, someone mentioned dyslexia. I believe that accounts for about 80% of learning disabilities. But there's also dyscalculia, dysgraphia.

[00:03:37.23] Mental health conditions, yes, thank you, Cynthia, Tourette's, and sensory processing disorder. And again, this is not a complete list. Many people have multiple

conditions, many neurodivergent people. For example, we see ADHD and autism go together a lot.

[00:03:58.16] All right. Who can give me some potential challenges that many neurodivergent learners may face? Now again, if you've met one neurodivergent person, you've met one neurodivergent person. So we're not speaking in generalities for everyone. But I'd love to hear what you already know about challenges for these learners.

[00:04:18.05] So fatigue and burnout, definitely. Time management, yes. Retention, absolutely, especially with anyone who has any kind of memory impairment or attention impairment. Social interactions, absolutely. Processing speed, comprehension, executive dysfunction, yes. And for sure, the stereotypes and biases that exist are absolutely challenges. Sensory needs, yes, sensory processing. Social and workplace inclusion, all absolutely true. Thank you.

[00:04:57.23] So we'll go through just a few here. Anxiety, yes, that often co-occurs with a lot of neurodivergent conditions. One that I didn't see mentioned is auditory discrimination and processing, which is just picking out what you want to hear that you want to pay attention to, and processing it. So if I'm in a loud office, trying to listen to a training, but people are talking next to me, phones are ringing, some people might have trouble discriminating to listen to just the person who's talking to them and filter out all the extra noise.

[00:05:32.90] So concentration is a struggle for a lot of people. Executive dysfunction, we'll go over what that means in a moment. Memory, for sure, sensory sensitivity, and visual discrimination. Oh, central auditory processing disorder, absolutely. Thank you, Todd.

[00:05:54.60] So here are some examples or some types of executive dysfunction. There's a profile of a person on the page with a rainbow outline. In the middle, there's a rainbow neurodiversity infinity symbol. So executive functioning, often challenging for people with ADHD, we're talking about task initiation, impulse control. Yes, visual discrimination, we can definitely go into that at the end. Emotional control, working memory, flexible thinking, planning and prioritizing, organization, sustained attention, time management, and metacognition. So I'm sure you can see how a lot of these things would specifically relate to learning.

[00:06:47.52] I'm going to give you some simple do's and don'ts to start with. Sans-serif font is really important. It just means it doesn't have all those little decorations at the ends of the letters, or at the bottoms of the letters. The font I'm using here is called Atkinson Hyper Legible. I'll give a link to it at the end. It's a free font that was specifically designed both for people with vision impairments and people with learning disabilities. So that's my go-to font.

[00:07:21.82] Verdana is another good one, yes. There are a lot of good sans-serif fonts to choose from. You want to use at least a 12-point font, camel case, at least 1.5 line spacing. And you want to use bold for emphasis rather than underlining or italics, because that can make it difficult for some people to read. And yes, there will be copies of the slide deck sent out to everyone, I believe.

[00:07:55.47] A single color background is going to be a lot easier on your learners than, say, putting text over a photograph. You want to speak in active voice. So that means, I carried the dog, rather than, the dog was carried by me.

[00:08:14.10] Bullet points rather than big blocks of texts really help our learners, numbering, and also, left alignment, as opposed to center alignment or right alignment. I do use centered alignments for titles sometimes, but other than that, I try to keep everything left aligned. And I stay away from text justification because, again, that can make it difficult for some of our learners with learning disabilities to read.

[00:08:45.82] A few things we want to stay away from. Large blocks of texts. That can just be so overwhelming for so many learners. Underlining and italics can make it hard for some of our learners to read. So again, that's why we said we use bold.

[00:09:02.12] All caps can be very difficult to read, as well as, I believe, some screen readers will read all caps not as the words, but just as the letters, which we don't want. Super long sentences. When I do accessibility reviews, I always look for run-on sentences, because that just can be a lot harder to comprehend, not only for our neurodivergent learners, but also for learners for whom English is a second or other language. And multiple columns on the same page can also be hard for a lot of people to read.

[00:09:42.29] So we're staying away from centered text, again, except for maybe an occasional title, away from text justification, passive voice. Be careful with abbreviations. Now, obviously, as instructional designers and training developers, you make a point to know your audience. What do they already know?

[00:10:03.30] If you're introducing abbreviations, I recommend having a glossary on hand, but also giving the meaning of the abbreviation more than just once or twice. I have a mild memory impairment. And when I take those training courses, if it's a brand new abbreviation, and there might be 10 abbreviations all in the new course, I'm just lost.

[00:10:28.55] That said, I come from a special ed background. So when I'm talking to people who also have that background, I use a lot of abbreviations. So know your audience. And if you're giving new abbreviations, provide the full meaning of the text multiple times. And glossy paper actually can make it more difficult to read. So I would stay away from that if you're printing out materials for your learners.

[00:10:59.70] All right. Mayer's Principles of Multimedia Learning. Richard Mayer is a professor of psychology at the University of California. In 2001, he published The Cognitive Theory of Multimedia Learning. His principles are meant for all learners. I like to talk about a few of them that I think are specifically really helpful for neurodivergent learners.

[00:11:27.18] So the principles of multimedia learning are based on three assumptions. So the first is the limited capacity assumption. We can only take in so much information at once. The active processing assumption says that learners need to be actively involved in processing and remembering and organizing their information, rather than just passive recipients of information.

And the dual channel assumption tells us that we use separate channels for processing auditory and visual information.

[00:12:04.93] So we won't go through all of the principles, but we will go through most. The pre-training principle tells us that our learners do much better if we give them the background information they need first. So this may mean, before a live training, you ask people to complete an e-learning to expose them to some of the topics. The multimedia principle tells us that people learn best from words and pictures rather than just words alone.

[00:12:37.99] The segmenting principle tells us that people learn best when they get small bits of information, rather than a landslide of information all at once. The redundancy principle says that people do better with narration and graphics rather than narration, graphics, and text. Now, this is one that I think really depends on the person. I'm multiply neurodivergent, and I struggle with e-learnings that have just a long bit of voice narration with nothing to read, maybe just one picture to look at.

[00:13:18.36] In the context of something like a video, where there's constantly different things to look at, I do find it easier not to have the text of what the person is saying on the screen. But in situations where there's not a video, where it's just something to listen to, I have a really hard time paying attention to and retaining the information.

[00:13:40.88] So as far as the redundancy principle, I would say give your learners options. You're going to want to provide transcripts anyway for people with hearing impairments. Go ahead and do that, as well, for your neurodivergent learners.

[00:13:56.26] And that's a great point, thank you. Voice or music, for blind and neurodivergent people, that background music can be really hard just to tune out.

[00:14:10.64] The spatial contiguity principle tells us that people learn best when things like words and pictures that go together are spatially near each other on the screen. The temporal contiguity principle tells us that corresponding words and visuals should be presented at the same time, rather than in consecutive order. The coherence principle tells us that people learn best when we get rid of the extraneous and distracting material.

[00:14:45.14] Signaling principle is just about telling our learners what to pay attention to. I'm a big fan of bolding new words. It helps me, if I need to go back and read something before a test, to pick out, OK, here's the section on that, or here's the biggest takeaway. So let your learners know, what's the most important information? Where should they be paying attention?

[00:15:11.15] Now we'll look at different types of training. And I definitely want to hear your ideas about how you accommodate neurodivergent learners. So instructor-led training, what can everyone tell me about what you're already doing to help people in this situation, if anything? If not yet, then I'm really glad you're here.

[00:15:37.98] The biggest consideration I think of for instructor-led training is sensory processing issues. Sensory processing disorders can vary wildly. A lot of people who are autistic

also have sensory processing disorders. But it means it can be hard to filter out certain sensory information. It can also mean for some people, that they crave sensory input in order to be able to pay attention.

[00:16:14.35] So for example, I like to give fidgets for in-person training. It gives people permission to move their hands around, to have something to play with. For a lot of people, that additional stimulation will help them pay attention.

[00:16:30.66] I let people know that I understand that they're paying attention even if they're not looking at me. For some people, it takes a lot of work to put on the appearance of paying attention. We don't want them to put their effort into that, into trying to maintain eye contact or look at the right place. We want them to do whatever their specific minds need to be able to pay attention. So for some people, that's fidgeting or many other things.

[00:17:01.96] If you're doing in-person training, be really careful about where you hold it. If you're near a lunch place and there's strong smells, that can be really distracting to some people. Really bright overhead lights, especially fluorescents, can be really difficult for some people, as well as exterior noise.

[00:17:24.07] I have a sensory processing disorder. And for me, I experience light and noise as much more difficult to deal with than other people. So, whereas someone else might not even notice what kind of lighting is in the room, I've gotten sick from the wrong types of lights. And if I'm home, people always find me in the dark working. Because I find it so much less stimulating not to have the lights on.

[00:17:50.49] I'm also really sensitive to noise and have trouble filtering out listening to someone talk, for example, when there's a lot of background noise. So we want to try to make those sensory challenges not get in the way for our learners as much as possible.

[00:18:07.39] And I love these ideas here. Tell people it's OK to move around, absolutely. Standing and sitting options for in-person meetings, I haven't seen that, but I love that idea. Multiple means of participating, yes, that's huge. Physical manuals with lots of pictures for everything you go over in the training, I love that, Allison.

[00:18:29.73] Yes, holding breaks, as well, if it's going to be more than 30 minutes, 100%, both because of the segmenting principle and just because a lot of us are wiggly and don't sit still. And having multiple modes of sharing information with students, absolutely. I think that applies to any type of training. We don't want people to have to just rely on hearing voice narration, for example.

[00:18:58.78] So virtual instructor-led training, I encourage people not to insist that cameras be on. Again. some of us do pay attention better if we can fidget. And there's a lot of stigma against fidgeting or knitting, or whatever it is that you need to do to pay attention. So I never require that people have cameras on. And that's my biggest takeaway for virtual instructor-led training, is the cameras, especially for people with any kind of social anxiety.

[00:19:35.96] For e-learning, I don't use timers. That can cause a lot of stress for people. It's unnecessary. There's lots of ways to incorporate gamification without using timers. I also am redoing a course for someone else right now to get rid of all the automatic progression. Learners shouldn't have the timeline automatically progress, like things disappearing or reappearing. They should be able to click for each step.

[00:20:06.96] So if a learner gets distracted and looks away, they don't miss something. Or if they read more slowly or need more time to process, they can go at their own speed through the material. And we always talk about making things accommodating from the very beginning, not as an afterthought or a checklist. And I can tell you, it's time consuming in Storyline to go through and change every layer of every slide to not automatically progress. So I definitely recommend keeping that in mind.

[00:20:42.60] And finally, microlearning is fantastic for the segmenting principle. I've used EdApp. Where I work, we use Qstream for a lot of new hire training. I'm not an expert on what the difference is between the different types of microlearning or how accessible they are. I will say that, again, giving people small bits of information that's spread out is 100% supported by research in terms of retention and, again, especially helps neurodivergent learners.

[00:21:19.60] Oh, thank you, Aarti. Yeah, microlearning is little tiny bits of learning, like, we're not even talking about a 30-minute e-learning, that's delivered over time. So I did a one-year training on LGBTQ inclusion, and people got about one text a week with information. So I did a 30-minute webinar every month. But then to reinforce it throughout the month, they get something from EdApp, which was maybe five screens. I think they recommend to seven screens with little bits of information, quizzes, just to help with retention. So it's literally we're talking about learning that can fit on five to seven screens of your phone, that small of bits of information.

[00:22:14.44] And then they received a set of microlearning once a week, every week for a year. And each month, it went along with whatever they had learned about in the webinar to help reinforce important concepts or just to help with memory. So yeah, thank you for asking that.

[00:22:37.62] I'm biased, obviously, in terms of microlearning, I highly recommend looking into it if that's something you haven't used. It can be delivered through email. It can be delivered on people's phones. There's some microlearning, I know Qstream can be delivered through Microsoft Teams. I'm sure there are other forms of microlearning that can also be delivered through common software that you might already be using at your organization. Great.

[00:23:11.11] And I want to allow lots of time for questions, because I want to make sure I'm meeting your needs. Yes, one or two sentences per slide, absolutely. I try really hard to not just read off the screen. I find that I don't like when other people do it, so just having the main idea so you know what I'm saying. I hope that helps. Yeah, I'd love to hear what questions we have.

[00:23:37.61] ELISA LEWIS: Yeah, thank you so much. We had lots of comments coming in and lots of good questions. So I'm excited to get into the Q&A portion of this. The first question that we have, someone was asking, can you describe visual discrimination a bit more, please?

[00:24:00.14] STAR PETERSON: Absolutely. It's picking out what's important visually. So if you make a PowerPoint slide that has a lot of stuff going on, a lot of different decorations or unnecessary things, it can make it hard for someone to pick out, OK, what am I supposed to be paying attention to? How do I discriminate what's the most important thing on this slide? So that's really what visual discrimination is, is picking out what we need to be paying attention to.

[00:24:33.17] ELISA LEWIS: Thank you. The next question that we have, someone's asking, how can people shorten their run-on sentences?

[00:24:42.11] STAR PETERSON: Oh that's a great question. I think it just comes with practice. Or I have used-- if you're trying to write at a certain reading level, like a seventh grade reading level, for example, I have used ChatGPT to put in my own words and then ask for help, like, OK, rewrite that at a seventh grade reading level.

[00:25:03.18] And I don't use it verbatim, but it really helps me break things down into shorter sentences. So that's something that had been suggested to me that I found super helpful. But again, a lot of it comes down to practice, just getting another pair of eyes on your training to help you simplify the sentences.

[00:25:24.36] ELISA LEWIS: Great. Thank you. I love that use of AI and ChatGPT. That's a really good one.

[00:25:30.21] This one's just a comment that came in that I thought was worth calling out. Someone shared that they actually violate the parent institution's guidelines to use Atkinson Hyper Legible on the website. So just thought that that was really interesting and great that there's someone there who's making sure that the website is legible for everyone and for a diverse group of viewers. Hopefully the parent organization at some point can maybe work that into their brand guidelines.

[00:26:09.33] The next question, we had a couple people who were interested in learning about studies that you might suggest for further learning, and application in the workspace, if you know of any studies.

[00:26:23.39] STAR PETERSON: I could follow up with that. I can send that to you afterwards to send out to everyone.

[00:26:28.98] ELISA LEWIS: Yeah, that would be great. Thank you so much. Someone else was asking-- they said, "I may have missed this clarification. Are these principles neurodivergent-specific, or are these applied to learners as a whole?" And they felt that these principles really seem like they could be beneficial to everyone.

[00:26:50.21] STAR PETERSON: So Mayer's principles of multimedia learning were designed for all learners. The do's and don'ts I'm giving you are specifically for neurodivergent learners. But absolutely, all of this should help everyone, or at least it won't hurt anyone.

[00:27:08.54] ELISA LEWIS: Awesome. And I just want to mention that Piper did share one of the studies from their organization in the chat. So we have that one to get us started.

[00:27:24.00] Someone else is asking, "I'm curious about how to help young learners." So they specifically work with K through 12, and they're looking to help young learners find out what works best for them, especially if they've not experienced a supportive space for neurodivergent learners before.

[00:27:41.61] STAR PETERSON: I think by young, I'd love to know more what age group you mean. I've taught from preschool to high school. So if you want to give me an idea, like maybe a smaller age group, I'd be happy to give ideas.

[00:27:53.43] ELISA LEWIS: They mentioned K through 12, but maybe you're looking for even a smaller segment of that.

[00:28:00.87] STAR PETERSON: Yeah. No matter what the age, I feel like movement breaks help a great deal, just understanding that some people need to fidget to pay attention is huge, and allowing any kind of accommodation that helps people move. There are seats that let people wiggle a little instead of just sitting straight on the floor or having their chair directly on the floor.

[00:28:31.45] There are bands you can put on desks that people can kick or push against. You can get little strips that are almost like sandpaper, that give tactile input that people can rub. So I would tailor it to what's age appropriate. But there are so many ways to give that extra sensory input. And for me, that's the number one thing I look at to help people pay attention. Because some people's minds are just going to wander if the only input they're getting is what they're hearing and seeing from the teacher.

[00:29:05.35] ELISA LEWIS: Great. Thank you.

[00:29:08.00] STAR PETERSON: I encourage you to look into any kind of accommodations for sensory processing disorder. Some of them won't be sold in the regular store. But if you go to any kind of online place that sells things specifically for people with disabilities, there are all sorts of really clever ways to help a kid who needs to stay in a desk, in a chair, get that sensory stimulation they need.

[00:29:35.78] ELISA LEWIS: Great. Thank you so much. Someone else shared, "I have cerebral palsy, which makes clicking somewhat difficult. How do you balance the need to interact with access for people who have dexterity disabilities?"

[00:29:49.88] STAR PETERSON: I try to make sure all of my interactions are keyboard accessible or can be used with any kind of assistive device. So my Master's is in Severe Disability Special Ed, and we worked a lot with people who might be blowing on a tube to interact with a screen. Or the only controlled movement they might be just a small head movement.

[00:30:19.75] So I make sure that if it's keyboard accessible, it should be accessible to anyone using any kind of adapted mobility switch. So even things like drag and drops to make them interactive-- there are ways in Storyline to make that keyboard accessible with an extra layer of triggers. So yeah, I always put accessibility first. I think there are plenty of ways to make learning interactive without intentionally leaving any of our learners behind.

[00:30:51.15] ELISA LEWIS: Absolutely. Thank you so much. Another attendee is asking, how would you encourage or make it easier for neurodivergent students to watch assigned material before an instructor-led Q&A?

[00:31:05.87] STAR PETERSON: I really think sometimes it's fun to add some gamification. I think that can help, knowing some people like leaderboards. Some people like a little competition. So if you can incorporate that into material that they're doing in advance, so maybe quiz questions.

[00:31:25.91] I'm working on an item for my portfolio right now where learners get coins for answering questions correctly. And their virtual coins can purchase things in a shop. And again, I try to make it a little bit relevant to the topic of the e-learning. But for some people having that gamification can really help them pay attention. Because a lot of people like a challenge, and so that can be a fun challenge, to remember the key concepts or things like that.

[00:32:01.88] ELISA LEWIS: Absolutely. Thank you. Someone else is asking-- they said-- excuse me-- "I'm from an online animation school, and we offer live classes and live critiques for our students. One thing that we run into is the student who is highly literal, and they have more trouble understanding nuances and the whole picture of becoming an animator. Do you have any suggestions?"

[00:32:32.97] STAR PETERSON: I've seen books-- goodness. I think you'd have to break it down. I haven't taught animation. I do some really basic Vyond animation. But for helping people who are literal, if you need to help them learn specific phrases not to take literally, idioms and things, there are lots of books for that. But that's a good one.

[00:32:58.45] I'd love to hear if anyone else has ideas for that. Because some of us do struggle a lot with nuances. I think the more support you can give in trying to anticipate where someone might be confused or give individualized feedback, I think that would be super helpful. But I'd also love to hear what other people have to say about that.

[00:33:25.48] ELISA LEWIS: Yeah, thank you. And definitely, if anyone does have suggestions, please feel free to pop those in the chat. The next question that we have, someone shared, "I run a theater in a cultural institution. I hold, once a month, a sensory-friendly show, with low, soft lights turned up and audio turned down a bit. Is there anything else I could do to help create a more welcoming theater experience for neurodivergent visitors?"

[00:33:58.36] STAR PETERSON: I think making sure that there's different seating options. I love that you do that, first of all. That's such a gift. Yeah, I think the seating options is what I'd

be aware of. Maybe some people are going to be more comfortable on the floor, maybe rocking a little.

[00:34:16.83] Or some people are very sensitive to how certain seats feel. So maybe there's some beanbags in the front in the front row where people can sit instead of a regular chair. Or maybe there's some carpet so they can sit on the floor, just so that they can do what they need to meet their sensory input needs, and so that the chairs don't become a source of sensory input that's distracting.

[00:34:46.49] ELISA LEWIS: Thank you. The next question someone's asking, "how do you recommend handling conflicting access needs? For example, if one student needs to move around and another student struggles to concentrate when there is visual moving stimuli, is there an overarching process that can be followed to meet all students' needs?"

[00:35:08.70] STAR PETERSON: I don't know that I can recommend a specific process for that. That is really challenging, because I think that happens a lot in larger classrooms. I think you don't ever want to prioritize one person's needs over another. I think anything you can do to maybe move the person who needs to not see all the visual stimulation and the movement, move them towards the front, and give the students who need more movement, give them spaces in the back, so that they're not distracting to the people who need that.

[00:35:43.21] So I would use seat placement for that specifically. Because you're right. For some people, that's going to be horribly distracting to have classmates moving around. And others need to swing or pace or do all sorts of different things.

[00:35:57.96] ELISA LEWIS: Yeah, absolutely. Thank you. Someone else is asking, how do we help kids with dyspraxia?

[00:36:06.71] STAR PETERSON: Goodness, I am not an expert on learning on learning disabilities. I can look up resources, though, afterwards. Feel free to reach out to me on LinkedIn. I'd love to connect with anyone on LinkedIn, and I'd be happy to help you find resources for that.

[00:36:24.44] ELISA LEWIS: Thank you. We've had several questions come in related to buy-in, so I'd love to tackle those next. One question we have is, "why is it so hard to get accommodations? And how do we get teachers who are accountable to a curriculum to appreciate the need for different leads and responses of neurodivergent kids?

[00:36:51.26] STAR PETERSON: That's a great question. And as I'm sure you know, that's a hard one. On one end, obviously, we want to educate teachers about, hey, this is not meant as misbehaving, or this is actually helping them pay attention, or paying attention looks different for different people. Getting buy-in, yeah, that's difficult.

[00:37:14.38] And I think as much as we can, just get the supports that both the special ed teachers and the mainstream teachers need to be able to meet everyone's needs. But again, I hear you. The buy-in is tricky. And sometimes it's harder to convince certain people that no, that's not

bad behavior. That's something they can't control. Or it's not hurting anybody. That's just what they need to do. So yeah, the buy-in is a tricky one. You can appeal to people's best selves.

[00:37:55.59] And I also think a little empathy goes a long way. When I've had to ask teachers I work with to do something additional specifically for my students, I find that instead of just being like, oh, well, do this and do that, to start with really forming a relationship with them as much as possible, to acknowledge, I know you've got so much going on, and I know this is one additional thing, so that they feel heard and seen. And sometimes, just validating those feelings can help them get to the next step of having empathy for the students and doing what they need to meet that student's needs.

[00:38:36.16] ELISA LEWIS: Absolutely. Thank you so much for sharing that. The next question we have is, "how do you respond to pushback that inclusive design either takes too much time or only affects a small group of learners?"

[00:38:53.80] STAR PETERSON: I've come across that a lot. I know it. I do recognize it, especially when we're talking about things like e-learning. It can take additional time to make things accessible.

[00:39:07.28] I feel like we just have to appeal to people's empathy and sense that everyone is important. Even if it is a small group of learners, they have just as much right to access the same things that everyone else does. But you're right. That's a big struggle.

[00:39:29.76] I work in corporate. And for sure, there's always that push to get the next thing out. And you do have to push back, like, hey, we need to take the time to put captions in, or things like that. So yeah, I think sometimes that can be a battle, depending on where you work.

[00:39:52.04] ELISA LEWIS: Yeah. That makes sense. The next question that we have is, "when neuro-inclusion is not a legal requirement, what messaging or framing helps build internal support among stakeholders?"

[00:40:09.03] STAR PETERSON: I think it depends on who your stakeholders are. I'd love to hear specific examples. Are we talking about corporate leaders? Are we talking about teachers? So that I can give you any ideas I have.

[00:40:24.06] ELISA LEWIS: Awesome. Yeah, if anyone wants to provide some more context in the chat, please feel free.

[00:40:30.55] STAR PETERSON: And I see Jack Thomas makes a good point. If you can't reach someone with empathy, talking about the financial risk of non-compliance is huge. I worked on a large project where I got the usual, no, we don't have time to add all of the accessibility features.

[00:40:47.95] And so I did a little digging and said, oh, we're getting federal money for this. We have to do-- I was really excited. We have to make this accessible. We're in non-compliance here. I know that's not always the case with a lot of things that our neurodivergent learners need, though.

[00:41:06.17] ELISA LEWIS: Yeah absolutely. And I see Todd also brought up the curb cut effect. And I think that's a really great example as well, when you can give people an example of something that they are familiar with in their day-to-day life that maybe was intended initially for a specific kind of accessibility or accommodation and now has become so mainstream and really used by everybody. It's a really good way to show an example of how some of these things that we, again, maybe associate as an accommodation actually really impact everyone. So thanks for mentioning that.

[00:41:50.18] STAR PETERSON: I like to use the keyboard as an example of that. Keyboards were originally developed for individuals with disabilities. And now almost everyone uses them instead of writing by hand in at least one part of their lives.

[00:42:05.92] ELISA LEWIS: Absolutely. And NJ also brought up a great point. It's a lot easier to make things compliant up front than retrofitting later, and can be less costly.

[00:42:23.02] STAR PETERSON: Absolutely.

[00:42:25.96] ELISA LEWIS: The next question that we have is, "what's your take on peer collaboration and learning design? Does it help or hinder neuro-inclusion? And how can we set it up for success?

[00:42:38.58] STAR PETERSON: Whether it helps or hinders someone is really going to depend on the individual. In terms of setting up for success, I would find out how your learners like to work best, and try to pair people or let them form groups themselves so they can work with people who have similar styles to them.

[00:42:58.90] ELISA LEWIS: Absolutely. Someone else is asking, "do you have any specific advice on giving feedback to neurodivergent learners without overwhelming, discouraging, or confusing them?"

[00:43:13.03] STAR PETERSON: Absolutely. With any feedback, I always start and end with something positive. Sometimes those of us who are neurodivergent might overfocus on the negative. That might feel like what overshadows everything else. So giving perspective helps. Like, "hey, everyone is given a task that they need to grow on. This is not just you." Right?

[00:43:44.77] But really starting with all the positives and then saying, this is one component. This is not everything. And yet, this is very important, just to help them put it in perspective. I've definitely been that person who remembers the one negative thing when other people are seeing that as small.

[00:44:06.90] So I think just being straightforward and giving a lot of perspective of, hey, very rarely do people get all 10s on this assessment, or things like that. Just to give them perspective of what other people are experiencing, so they don't feel like the negative feedback is way worse for them than it is for others.

[00:44:32.63] ELISA LEWIS: Great. Thank you. We may have had a similar question to this, but I think it's worth asking. "Are there ways that we can better communicate expectations and structure in learning materials to reduce anxiety and ambiguity?"

[00:44:51.57] STAR PETERSON: So for expectations, just being very clear and very literal from the beginning. Let people know if there's going to be a knowledge check at the end and what they'll need to be expected to score in order to pass the course. Just, I think, letting people know what to expect.

[00:45:15.48] And then being consistent. One thing I like about Articulate Rise is that it's-- well, really, you can do this with any e-learning. It's just being consistent about where buttons are, what the layout is. Even the same with PowerPoint slides, consistency is going to reduce anxiety. If people have to look every time, like, wait, what am I doing on this slide? Where am I looking? Where's the Next button? That's going to cause anxiety. But yeah, also just letting people know what to expect.

[00:45:48.77] I find a lot of people find it helpful to have the menu on the side of an e-learning to see how far they're progressing, so they can say, OK, this is part three out of seven. All right. And again, letting them know that there will be opportunity to retake a quiz if they need to in order to pass, say, an e-learning.

[00:46:15.86] ELISA LEWIS: Absolutely. The next question we have is, "what are some ways to respectfully gather input from neurodivergent learners without placing the burden on them?"

[00:46:30.17] STAR PETERSON: I think doing it anonymously is the best thing that you can do. No one, especially in a workplace, wants to be seen as having struggles. I think there's a lot of pressure to hide disabilities. Or there's a lot of fear around showing disabilities.

[00:46:50.68] So yeah, I would say anonymously is the biggest way to let people give feedback on what would be helpful for them without them feel like feeling like they're being singled out. And then apply it to everyone. I always encourage employers to offer accommodations to everyone.

[00:47:09.99] You know, you shouldn't have to get special permission to-- I would even argue for things like working from home. If it's possible to do it, it shouldn't just be the person who has the attention disability or the social disability. Make these things available to everyone. Pass out fidgets in a meeting for everyone who wants it, so it's not just the people with sensory processing disorders or attention difficulties.

[00:47:38.55] Think about things like lighting and sound. And put those accommodations in place for everyone. Or make them optional for everyone, so that there's not a long process that makes someone stand out if they need help.

[00:47:53.20] ELISA LEWIS: Great. Thank you. We have a similar question. It's possible the recommendation would be the same. But the question is, "we find that our neurodivergent students do not want special treatment. Plus, if they do tell us on a staff level, because of student

privacy, we can't tell our teachers ahead of time. Is there a way to legally ask a student upfront if they have learning challenges so that we can better prepare the teachers?"

[00:48:19.45] STAR PETERSON: I encourage you to make a survey for everybody in your class and anonymously ask people, how do you learn best? You don't need to use the word "disability." Do you remember things better when you write an essay about them? Do you like a lot of review? Is it helpful to you to have an outline ahead of time or have the slides ahead of time? Just ask them how they learn best.

[00:48:45.54] And then try to implement as many options as you can for everyone. And yeah, again, make them optional, so that people can pick and choose what supports they need. But yeah, just I would say ask anonymously. And again, that's something that's going to benefit everyone. Plenty of people who don't have disabilities still learn better in some ways than others.

[00:49:08.39] ELISA LEWIS: Absolutely. Yeah, I love that suggestion. The next question we have is, "do you have tips for instructors or facilitators of things they can do during a live session to make neurodivergent learners feel more comfortable participating."

[00:49:25.85] STAR PETERSON: I really think the biggest thing is allowing video to be off. In terms of live sessions, I think giving the slides ahead of time is helpful to a lot of people, and then just being careful about extraneous noise on your own end that might be distracting to somebody.

[00:49:48.06] ELISA LEWIS: Great. The next question we have is, "do you have any examples of good website design for neurodivergent people and learners?

[00:49:57.90] STAR PETERSON: I can follow up with that for you. I think the same principles apply here, though. We want a sans-serif font. We want predictability. The Menu button is always in the same place.

[00:50:12.45] We don't want a lot of excess visual input that's just decorative that might be distracting for people, especially people who have trouble with visual discrimination. You want your text to be on a solid background, again, rather than overlaid on a photo, so that it's easier for people to read. So I would say a lot of the e-learning principles apply. I don't know of a website off the top of my head, but I'll look for you.

[00:50:46.73] ELISA LEWIS: Thank you.

[00:50:47.60] STAR PETERSON: Oh, you know what I would do? Actually, the International Dyslexia Association, I would check out their website.

[00:50:55.04] ELISA LEWIS: Great. Thanks so much. This is probably the last question that we have time for. I want to leave some time for wrapping up, housekeeping. But the question is, "what advice would you give to teams who are just beginning their journey toward neuro-inclusive design?"

[00:51:15.02] STAR PETERSON: I would say, don't feel like it has to be all or nothing. Progress is progress. If you can start with something as simple as changing your fonts, changing your line spacing-- again, I know that some of these things are going to be determined by your company's branding. But try not to feel overwhelmed. And be encouraged that every step is going to help people.

[00:51:41.56] So even if you can't do everything at once, start with a list on here. Make sure everyone's using active voice. Make sure we're not using run-on sentences. Just start with this list, and go through what you can do. Implement what's easiest to implement first, and just know that it's a journey, and that we're all continually learning how to make things more accessible for more people.

[00:52:11.52] ELISA LEWIS: Absolutely. Thank you. Well, thank you so much, Star, for this wonderful presentation and for sharing such great information with us today. Thank you to our attendees for joining us, asking great questions, and participating. We really appreciate the engagement. So thank you, again, everyone, and I hope that you all have a great rest of the day.