Classroom adjustments: Down syndrome

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| Alicia: | 00:00 | There are times where Kura had a really bad lunch time where he hasn't had anyone to play with and he'll come in and the rest of the afternoon at school will be horrible because he's felt rejected. He's felt alone, he's felt like no one cares about him. And there're days where the teachers have... And it's not very much time or effort. Someone said, "Hey, come and hang out, have lunch with Kura today or prepared earlier. Can you sit with Kura for lunch?" He likes handball, maybe you can talk about handball. That's the extent of what an adjustment is or an extra support is and he's come back into the classroom so much more positive and willing to learn for the rest of the afternoon. |
| Serpil Senelmis: | 00:44 | That's Alicia, she's talking about her son Kura who has down syndrome. Hi, I'm Serpil Senelmis and this podcast is part of an NCCD portal series. In this episode we'll discuss some adjustments that could be made in the classroom to enable students with down syndrome to participate on the same basis as their peers. You'll hear more from Alicia and meet Kura. I'll also introduce you to a teacher working with a student who has down syndrome and we'll get some detailed advice on adjustments from the director of the Down Syndrome Research Program at the university of Queensland. |
| Rhonda Faragher: | 01:36 | Hi, I'm Rhonda Faragher. I'm the deputy head of the school of education at the University of Queensland and I'm also the director of the Down Syndrome Research Program. I think most people would consider it to be a chromosomal variation and it's part of the human condition and it's been with us for all time as far as we can be aware. It is caused by a triplication of some or all of chromosome 21. Most people have the garden variety version that my daughter has where there's three copies of chromosome 21 in every cell of the body and there are some rare forms where parts of the chromosome or on other chromosomes and translocation down syndrome has similar effects. And then there's mosaic where only some of the cells in the body have the three chromosomes and so it depends which cells they are, what that manifests like, the outward signs of it. |
| Serpil Senelmis: | 02:37 | There are also some common myths about down syndrome. |
| Rhonda Faragher: | 02:41 | Yes, the common pets. They're all such happy people. Well they haven't met the sassy teenagers that I know of that's the case because they have the full range of emotions that we all enjoy. So that's a myth. |
| Alicia: | 02:56 | Hi, I'm Alicia. I'm the mother of Kura who is 11 years old and he has down syndrome. It's part of who he is. And we talked to him about him having down syndrome, which is something that's throughout his whole body. We describe it to him quite concrete like, and we describe it to him in regards to, it's part of who he is, just like he's a boy and he's 11 and he plays soccer. It's not all of who he is but it's part of who he is. And so he's learning to live with it and has learned to live with it. So that's how we describe it to him. It impacts on everything he does. And also in terms of how people in his direct life relate to him. |
| Serpil Senelmis: | 03:44 | You mentioned he plays soccer. What other interests does he have and what are his strengths? |
| Alicia: | 03:49 | He loves singing and having a microphone, whether it's on or not, and just expressing himself in the lounge room singing songs. He uses that as a way to engage in understanding community and society. So often when things are happening outside of the home or school, he'll often link it back to a movie video or a movie that he's watched and bring out the sameness. He really gets very excited when things are the same for him. |
| Serpil Senelmis: | 04:20 | Kura's mom, Alicia also recommends encouraging other students to work closely with students who have down syndrome. |
| Alicia: | 04:29 | If for some reason people like Kura need a break, a brain break, which they often have, don't let him do it on his own. Do it with a friend, have a friend involved in having mini breaks or maybe the whole class could have a brain break. If there's time for rewards, he's behaved really well at the end of the day, don't let him have a reward on his own. Have a reward with a friend. |
| Serpil Senelmis: | 04:53 | Kura, can you tell me what makes you tired at school? |
| Kura: | 04:56 | Doing lots of work. |
| Serpil Senelmis: | 04:57 | It's hard work, isn't it? Being there all those hours. |
| Kura: | 05:00 | Yeah. |
| Serpil Senelmis: | 05:01 | Does your teacher give you a little break? |
| Kura: | 05:03 | Yes. Good breaks. |
| Alicia: | 05:07 | The hardest times for people like Kura are in the non-structured times of the day, which are transitions from classroom to classroom and food breaks and lunchtime breaks. So strategically work on those. |
| Serpil Senelmis: | 05:21 | Director of the Down Syndrome Research Program at the University of Queensland, Rhonda explains that one of the greatest learning challenges for students with down syndrome relates to memory. |
| Rhonda Faragher: | 05:33 | The issues around memory are interesting. Working memory is a challenge for most and it can be quite short. So there are things that teachers can do to work around that. But long-term memory is probably the same as for other people. So long-term memory once things are in memory, it's quite an extraordinary experience that many parents have noticed that their young people seem to have this vice-like memory. And I talk about my daughter, she's my external memory drive because she will remember names and people and where we've been and it's marvellous thing. So in schools that can be quite an asset. It would seem that learners with down syndrome have a deficit around quantity and understanding of quantity. And it could be that they have dyscalculia which doesn't mean they can't do mathematics. It means that they struggle with number. So we know that that's an issue that we then have to work around. |
| Serpil Senelmis: | 06:40 | Speaking of school, what's your favourite subject? |
| Kura: | 06:43 | Maths and writing. |
| Serpil Senelmis: | 06:44 | I was really terrible at Maths. What do you love about Maths? |
| Kura: | 06:47 | I like numbers. |
| Serpil Senelmis: | 06:48 | And what is it about numbers that you like? |
| Kura: | 06:50 | I like one, two, three and 0 to 10. And 11 one is 12. |
| Rhonda Faragher: | 06:59 | We also know that there are challenges with question words so they might know what you're trying to say but they don't know which part that you want to know. So they'll mix up when where, how, why sorts of words. And so if you're asking when did this happen? They might tell you where it happened and so they get confused about what is it you actually want to know. That's a real problem in classrooms because that's how we find out what a learner knows, we ask questions. And if they're not sure of what it is that you want to know, they can appear not to know very much, which is a challenge. |
|  |  | There are some issues around just understanding what happens in a class, what the routines are, but once a person knows those routines, then they can often settle in. So sometimes learners will exhibit behaviours that don't help their learning and it takes them a little while to understand the routines of the classroom to be able to work out what has to happen in a certain space. Sometimes they can't seem to follow long instructions and they will remember just the end of the sentence or paragraph. Sometimes when people give long winded instruction so they are some of the challenges. |
| Janine McGrath: | 08:19 | My name is Janine McGrath and I'm a teacher of year 12 pre vocational Maths. In a mainstream school there are so many different problems that the child encounters or throughout the day. |
| Serpil Senelmis: | 08:30 | Given your experience with your student, how important would you say it is to individualize the adjustments specific to the child? Getting to know the child. |
| Janine McGrath: | 08:41 | That is very important. There is no way that he would be able to do the mainstream course if it was just left as is because I modify it for a lot of other students in the class in a different way. But if there is modifications and scaffolding right there and he was just left to his own devices using a textbook, which is most of the time what is meant to happen in these classes. There no way that he would be able to complete the course for the textbook worksheets. I pretty much just get rid of the waffle that's on it and I'd take out or rewrite the bits that I want him to focus on. |
|  |  | It's also checking in and making sure that he tries to understand these concepts so it's okay to rote learn things and practice them over and over. But it's very important taking them out of context and delivering it in a different way, which I try to do to check his understanding. |
| Serpil Senelmis: | 09:32 | High school teacher, Janine recommends using consistent language and visuals that support instructions. |
| Janine McGrath: | 09:38 | So it's very consistent. I highlight specific words and the same colour all the way through. So he knows that if it's the perimeter, then I'm going to look for the green, for example, and all of the bits that he has to work out to do with perimeter, a green. And then if he's got to work out costings, then that might be yellows. And so he's got to follow the yellow part. So visuals work very well. He's working extremely independently in the class and he's following all of those visual prompts. He has a double bench when he's in class and everything is there laid out in front of him. So the laminated visual images of things that he might need to remember, like direction North, South, East, West, any little thing that he might need to remember or a formula or what perimeter means. It's just a picture. They're all pictures. So we point to it and say, "Okay, what's this picture mean?" That's around all the outside. So that's perimeter. |
| Rhonda Faragher: | 10:32 | It's a particular type of memory and we think that the visual spatial memory is intact or mostly intact. And that's a part of the memory that sees things in diagrams and images. And that's one of the other reasons why visuals are so important. The verbal, short term memory is where the challenge is. So being able to hear things and remember more than a few items and they will be lost. |
| Alicia: | 11:01 | Well, they may be given verbal instructions, his teacher will then come over or have something prepared that explains the same thing in a visual way. Now, whether that's through writing or having written something or perhaps it's through pictures. They ask me questions about what he's interested in and wanting to then link that into reading materials. They'll often modify instructions for an activity or an experience. |
| Rhonda Faragher: | 11:30 | So what a teacher can do is to think about making the sentences shorter. So instead of long sentences with lots of different ideas, short sentences and in something that a student has to read instead of a compound sentence with lots of phrases and clauses in it. Very simple short sentences that are on different lines so that even if they don't notice the full stop because it's very tiny, they realize that's the end of an idea. And then they've got time to think about it and process it before then they move on to the next line. They think about that and process it. The powerful thing is once a student learns these things, it will be there. Sometimes retrieval's not good, but it will be there. And so what we need to do is allow that learner to learn things, small sentences, few ideas at a time, and then repeat them. So have lots of opportunities for consolidation and practice. |
| Serpil Senelmis: | 12:37 | Other than as a memory aid. One of the reasons that visuals are so effective is because many students with downs syndrome experience hearing loss. |
| Rhonda Faragher: | 12:47 | When we talk about instruction and long instructions, the challenge with that is that they're given in an oral format. And so if a student has difficulty hearing and many young people with down syndrome, maybe 80% have conductive hearing loss. That can be a challenge for them just to hear the consonants or even to hear it all. And so when we have auditory information it can be lost. Then you've also got the memory. Do you remember that that's what you were being told? So visuals are really a powerful strategy and for lots of kids, not just kids with down syndrome and a visual doesn't have to be a picture. A visual could be a picture, but lots of our kids with down syndrome learn to read very early and many will come into school being able to read and they will then be able to follow the written text. |
|  |  | But sometimes in a PowerPoint it can just be keywords that go through. So if a teacher is in the secondary school, having the keywords that they talk to can be a helpful way. In a primary classroom the tasks can be put there with keywords. |
| Serpil Senelmis: | 14:04 | In addition to consistent, simplified language in visuals, students with downs syndrome benefit from additional processing time. |
| Rhonda Faragher: | 14:14 | Response time is a really important one. Allowing processing time, allowing a person to have time to think about things is a really important step. And sometimes it can be that you need to explain things in different ways and be aware that a person may well be understanding more than they can convey back. So they might be able to understand the language, but then finding the words to respond can be a difficulty. So expressive language is often lower than receptive language. If we are with a student and we're not sure whether they're understanding or not, then simple things like wait time can be useful. A strategy that I've found very effective is if for example you've got a Maths task or you've got some other activity where there's a fair bit of descriptive text, you can draw a cartoon diagram to simplify it. You're drawing a diagram, you're drawing a picture as you go to explain something that's happening. |
| Alicia: | 15:30 | So let's say there's a page worth of questions the class need to do. That page will be modified where he'll do three or four of the questions. So the outcome is still the same, it's just he's doing a different or a modified version to get to that outcome. |
| Serpil Senelmis: | 15:47 | Other than instructional adjustments, making modifications to the classroom environment can also be helpful for students with downs syndrome. |
| Rhonda Faragher: | 15:57 | Classrooms can be very noisy places and they can be very exciting places. But in terms of the sound, when you've got wet areas where you've got lots of tiles or vinyl liner or you've got windows and it can be very echoey places. And so having carpets or mats or other things that absorb the sound can be very helpful for a learner who has a hearing impairment. |
| Serpil Senelmis: | 16:24 | Do teachers need to consider any other environmental adjustments other than just their teaching style and their teaching methods? |
| Rhonda Faragher: | 16:32 | Well, many young people with downs syndrome love to run away and so many will. Yes, they're the fastest kids in the West. Some of them... |
| Serpil Senelmis: | 16:43 | So they're going to be playing chasey. Is that what you're telling me? |
| Rhonda Faragher: | 16:46 | Well, let's... Right. And so when things get a bit tough or sometimes they want to go somewhere else and they'll just up and leave. So having a student positioned right next to the doors, probably not a good move. And having a way to be able to just keep your eye out for when that's happening because teachers are busy and having other kids perhaps also keeping their eye out just to make sure that the escape artists aren't escaping. If they're finding it all a bit challenging, if they've got a place where they can go, maybe there's a bean bag or there's a space in the classroom that's not near the door, but they can go to and sit if they just need a little bit of time to themselves. And so often the solutions are really quite simple. Sometimes it can be a buddy child in the class who's the one who is the friend that the other one wants to impress. So they say, "No, we're not going anywhere. We're staying here." |
| Serpil Senelmis: | 17:48 | Do you have buddy system where you pair him up with someone who has the confidence to help him but also not be distracted in their own work? |
| Janine McGrath: | 17:56 | Not just one person. There's a number of people in the class and they're all very different personalities and they all know him very well and will have their own ways of working with him. So there's not one that I would particularly buddy him up with at all. I just give him a variety of different people to work with rather than as a whole class doing activities. I definitely think the smaller group activities, even just pairing is definitely the way to go. So he has that practice talking with different people, not just that one person. Obviously the teachers are the same for him every day, but it is nice for him to interact and have a chat with some other people. |
| Serpil Senelmis: | 18:34 | With so many options for adjustments. There's a risk of over support. So how do you assess your adjustments? The need and effectiveness? |
| Rhonda Faragher: | 18:44 | I was talking with a teacher just yesterday and one of the guides that she has is when the student starts to make some mistakes then she knows she's got the adjustment right. So if it's too easy, he'll just go through when he won't have any problems. If it's too hard, he won't be able to start at all. But if he's underway, but he makes some mistakes, she thinks that she's got the level of scaffolding about right. |
| Serpil Senelmis: | 19:12 | Hey Kura, when you're having trouble with any of the subjects, do you ask your teacher for help? |
| Kura: | 19:28 | Yes. I put my hand up. |
| Serpil Senelmis: | 19:30 | You put your hand up? |
| Kura: | 19:31 | Yeah. |
| Serpil Senelmis: | 19:31 | That's good. And when the teacher has tried to help you and you don't think it's helping, do you tell them as well? Do you say, "No, I need to try something else." |
| Kura: | 19:44 | Yes. I was bored or tired. |
| Serpil Senelmis: | 19:49 | So you tell them that you're bored and you're tired? |
| Kura: | 20:01 | Yeah. |
| Rhonda Faragher: | 20:01 | I would suggest that a teacher who has a student coming with down syndrome into their class meets the parent as soon as they can and be open to listen to what the parent has to say. I like to reassure teachers, we don't expect you to know about down syndrome, but we expect you to want to know. |
| Janine McGrath: | 20:25 | So the parents would know him the best. So you get a lot of adjustments and different things that you can do, strategies from them. So I email weekly to his parents and not so much to communicate and discuss matters with them, but just to let them know this is the weekly work, this is the way that he will be completing some of these worksheets or whatever tasks they are. And often all of those things go home too. So anything he's working on in class goes home and the parents see that and they work with him at home. |
| Serpil Senelmis: | 20:55 | Another area where students with down syndrome can use support is handwriting. |
| Rhonda Faragher: | 21:00 | Fine motor skills is a challenge for many learners with down syndrome. There's different devices that a student can use that can help them with their development of their handwriting. They can have slope boards, whole lots of things. So having a person using all their fingers to type is probably as important as handwriting. And it is something that is one of those accessible devices that will allow a student to become more and more independent in their learning. |
| Janine McGrath: | 21:35 | So in terms of creative writing, use your learning aid there. For example, there's a picture of a dog and they're needed to come up with a story for this dog, so he would engage in a verbal conversation with the learning aid. The learning aid would write down what he's saying or key words from that and then he would write those words as part of his creative writing story and then they would put it into a sentence. |
| Serpil Senelmis: | 22:00 | There's also a range of technology that can provide support in many different areas. |
| Rhonda Faragher: | 22:07 | I've watched students who've got text to voice software on their machines so that when they have a word that they don't know the laptop will read it for them. They will also be able to learn to use the software that's already built in word process for example, where you can get a synonym for the word and you can find all of the different words that are there. You can also find definitions. So we are in an age now where so many features are just built into the devices that we have and these are really wonderful for our learners with down syndrome because they just make things so much more accessible for them. |
|  |  | Another aspect is where you can just enlarge the text. Many learners with down syndrome will have vision acuity issues, and that's not about things that can be corrected by glasses. It's actually just about how bright text appears on a page. If something's fuzzy, we might be able to read it but it's hard work. If we have it prepared digitally, the learner themselves, if they're shown how to adjust the font and the size, whether it's bold or not, what colour it is, they can adjust it that it's easier for them to read. And that takes away the strain that can be there. |
| Janine McGrath: | 23:34 | He does use a graphics calculator in Maths. So with his little tiny calculator, it was hard for him to do any fine motor skills, especially with a small calculator and small buttons. So we got rid of that and we looked into the graphics calculators. So he was navigating himself with some instructions that were written down to start with exactly how to use a graphics calculator. |
| Serpil Senelmis: | 24:06 | So some of the key adjustments for students with down syndrome are visual aids, adequate response time, and patiently using repetition. Kura's mom, Alicia also recommends taking an inclusive approach. |
| Alicia: | 24:21 | So be honest and open and be prepared that you want to work with the family and work with the students so that they are a capable student like the rest. Know that the student's sense of wanting to be involved and wanting to be part of the group is their biggest desire when it comes to learning. |
| Serpil Senelmis: | 24:52 | This podcast is part of a series that highlights adjustments that can be made in the classroom to enable students with disability to access and participate in education on the same basis as their peers. You can find all episodes on the NCCD portal. I'm Serpil Senelmis. Thanks for listening. |
| James: | 25:19 | This podcast is supported by the Australian Government Department of Education for the Nationally Consistent Collection of Data on School Students with Disability, or NCCD, Portal. Copyright 2019 Education Services Australia Ltd, unless otherwise indicated. Licensed under Creative Commons Attribution 4.0, unless otherwise indicated. |