

# Neuroscience and education

with Dr Agatha Lenartowicz and Dr Jennie Grammer

## Talking points

What strategies and methods do you use for supporting students' attention control in a classroom? Which are most effective, and why do you think this is?

Agatha and Jennie found that most teacher training programmes in the US do not teach attention control. Thinking back to your own teacher training, did you have guidance on this? Or, if you are training currently, how much is attention control being addressed? How do you think teacher training programmes could be improved in this regard?

Some of Jennie's research has shown that girls persist at challenging tasks, but boys are less likely to do so. Reflect on your own teaching experiences and think about observations you have made about students. Are there any variables that are consistent between individuals who persist at tasks?

What benefits does EEG monitoring have over previous methods of in-class attention assessment, according to Agatha and Jennie? Can you think of any other advantages or disadvantages that were not mentioned?

"One recent study of over 1,000 educators revealed that only 17% felt very well prepared to teach students with learning differences," says Jennie. How confident do you feel supporting students with learning difficulties? What further support or training would you benefit from, and from whom?

## More resources

- Read one of Agatha and Jennie's papers: [reporter.nih.gov/search/SZR642FLCkiG9SFpiK5LA/project-details/9904763](https://reporter.nih.gov/search/SZR642FLCkiG9SFpiK5LA/project-details/9904763)
- Have a look through Agatha's lab website: [agathalenartowicz.com](https://agathalenartowicz.com)

## Reflection

1. "In visual attention, sudden/unexpected events are more likely to distract the brain than constant events," explains Agatha. "A classroom window onto a constant and repetitive flow of traffic isn't likely to be very distracting. However, a classroom window facing a sidewalk and occasional 'surprise' events (such as a parent or a dog walking by) will be." Reflect on your own teaching space. Are there areas where you see students systematically distracted? In what way could you adjust them to reduce distractions?
2. "Other research has also focused on classroom displays," says Jennie. "The key recommendation for educators is to consider the 'visual noise' of displays, as well as the functional role of displays." In what way do your displays aid students in understanding what they need to? To what extent do they provide information that is useful for lessons? How 'noisy' are they – for example, how helpful is the colour variability?
3. Agatha and Jennie found that active engagement is stronger when younger students are working independently vs. watching a video or listening to a lecture. How might you use this information to plan lessons and activities for your own students? What types of behaviours would you look for signs of engagement and attention?

- The UC|CSU Collaborative, which Jennie is the faculty director for, provides resources for educators on student's cognitive development and learning: [www.ca-diverse-learning.org](https://www.ca-diverse-learning.org)
- Read the Teacher's Guide to ADHD in the Classroom from The Child Mind Institute: [childmind.org/guide/teachers-guide-to-adhd-in-the-classroom/#block\\_d9a83d66-e556-49e8-b4c9-85135732f1b8](https://childmind.org/guide/teachers-guide-to-adhd-in-the-classroom/#block_d9a83d66-e556-49e8-b4c9-85135732f1b8)
- The Centers for Disease Control and Prevention has some useful resources and information on teaching students with ADHD ([www.cdc.gov/adhd/treatment/classroom.html](https://www.cdc.gov/adhd/treatment/classroom.html)) and other free materials on ADHD ([www.cdc.gov/adhd/communication-resources/index.html](https://www.cdc.gov/adhd/communication-resources/index.html)).
- The ADHD foundation provides a very in-depth PDF guide for teachers: [www.adhdfoundation.org.uk/wp-content/uploads/2022/03/EPIC-Strategy-Booklet-a-guide-for-teachers.pdf](https://www.adhdfoundation.org.uk/wp-content/uploads/2022/03/EPIC-Strategy-Booklet-a-guide-for-teachers.pdf)
- Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) offers extensive resources for parents and teachers: [chadd.org](https://chadd.org)