

Equity and Neuroscience in the Year of COVID-19



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In the era of COVID-19, difficult adjustments have been made. The world of education is very different. Many of us aren't able to see our students every day. We monitor student progress and growth but worry that we are not doing enough. We are unable to give morning hugs and high fives. We can't always be there to listen and comfort the way we used to do. As educators, though, we are problem solvers. We did not create this crisis, but we continue to figure out ways to make this challenge work the best we can. Neuroscience can help us do that.

Neuroscience provides a window into the brain. Advances in neuroscience have allowed us to better understand the brain's complexities. In addition, the advances in neuroscience can inform our educational practices in these challenging days. Neuroscience can also help us to ensure equity in times of COVID-19. An equity taxonomy created by the authors of *Building Equity* (Smith, et al., 2017) provides levels of equity practices that we can explore. These equity practices can be connected to neuroscience and can assist us in making sure that all doors are open as we strive to engage our students.

The basic level of the equity taxonomy in *Building Equity* is called physical integration. Physical integration creates opportunities for students to frequently interact with a cross-section of students and reinforces a safe place for learning. This is especially challenging as we implement social distancing and limit student gatherings and groupings. In addition, neuroscience tells us that learning is more difficult for children when they perceive an environment to be unsafe or threaten-

ing. So, whether we are meeting our students face-to-face or remotely, we need to integrate activities that pair students together and allow processing of information prior to large group sharing. As an example in remote learning, breakout rooms for pairs or triads of students may work well. In the classroom, setting up pairs six feet apart would work, also. We can encourage technology-based think/pair/share activities and word-webs that provide a vehicle for new learning and the processing of information in a safe environment. In addition, it may be wise to incorporate more "ice-breaker" activities so that students can get to know each other, develop trust, and feel connected. These activities can take place either in person or using technology such as Google Classroom. Admittedly, this will be much more challenging in a virtual classroom setting, but with effort, it can still be successfully implemented.

To promote equity, it is critical to purposefully address the whole child and arrange for social emotional engagement. To achieve social emotional engagement, we begin with a foundation of culturally responsive teaching. Student conferencing is one practice that may help build that foundation. Student conferencing enables us to get to know each student fully. Children experiencing trauma or stress may exhibit behaviors that are reactions to triggers or perceived threats. If we know our students' circumstances, culture, history, and preferences, we can create a warm and welcoming environment. We can model kindness, joy, and comfort while positively reframing our interactions either in face-to-face classes

or online activities. Also, restorative practices can come into play. Use a restorative approach to teach social skills and coping strategies. Think about integrating virtual or appropriately arranged peace circles to build community. Another strategy championed by teachers who are knowledgeable about trauma informed practices is the two by ten strategy. Get to know your students by devoting two minutes a day for ten days to individual students to talk and share in order to be more aware of their unique talents, preferences, and circumstances.

The next step in the *Building Equity* taxonomy is incorporating opportunities to learn. In spite of the difficulties from COVID-19, we cannot toss aside rigor. An underwhelming curriculum results in lower achievement. Lower expectations do not increase student connectedness and a sense of belonging. Each of the students we serve has an enormous capacity for learning. Neuroscientists would tell us that this is due to neuroplasticity (Hammond, 2015). New neural pathways form through novel problem-solving, critical thinking, and cognitive challenges. These pathways form through guided practice and by reinforcing new skills and concepts. We can foster increases in learning by nurturing a highly challenging, low-threatening environment. We can refer to Vygotsky (1978), once again, and build that zone of proximal development, striking a balance between challenge and guidance. Neuroscience backs this up!

The highest levels in the equity taxonomy are referred to as instructional excellence and engaged and inspired learners. The remote or face-to-face classroom should be

brain-friendly, should welcome mistakes, and turn these experiences into growth opportunities. Learning should not be drudgery. As adults, we know this. We recognize active learning and embrace it. Unfortunately, one of the outcomes of coping with this virus is to push things to the back burner because we cannot carry the weight of so much uncertainty and change. However, let's try to avoid this tendency and focus on igniting the curiosity in our students, the thirst for new information. Use song, use works of art, use powerful quotes, use videos to inspire our learners and create conversation. All of this can be enhanced through purposeful planning and scaffolded instruction. Just like us, our students need to know the context of what they are learning. They need to see that we have prepared. It may lessen the isolation of the current health crisis to create opportunities to co-plan with colleagues and collaborate on lesson planning so we can maintain connection and a sense of camaraderie.

In summary, we are all in this together, but we are managing a lot of it in isolation, and with little experience in such complex world circumstances. Let's use the resources we have as leaders to help us navigate in today's world and ensure an equitable environment for all of our students. One excellent resource is the equity taxonomy created by Dominique Smith, Nancy Frey, Ian Pumpian, and Douglas Fisher in their book, *Building Equity: Policies and Practices to Empower All Learners* (2017). The other resource we have is the field of neuroscience and how advances in that field are helping educators focus on strategies for learning that coincide with the brain's complexities and capabilities. Our classroom practices for distance learning and for face-to-face learning can be enhanced by purposefully planning using neuroscience and equity for all students as points of reference. We can help minimize situational issues and help our transition through COVID-19 to the other side!

REFERENCES

- Hammond, A. (2015). *Culturally responsive teaching and the brain: Promoting authentic engagement and rigor among culturally and linguistically diverse students*. Thousand Oaks, CA: Corwin.
- Smith, D., Frey, N., Pumpian, I., and Fisher, D. (2017). *Building Equity: Policies and practices to empower all learners*. Alexandria, VA: ASCD.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Massachusetts: Harvard University Press.

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