Lambert and Lev Resource List Access to Meaningful Mathematics for Students with Disabilities in Early Childhood Presentation June 26, 2020

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## Part 1: What is disability? How is it perceived?

Two great ways to learn more about disability from insider perspectives.

Twitter:

A few people from twitter I mentioned to start with:

People to follow: @MichaelSkyler, @BeingKaylaSmith, @kerima\_cevik, @lilririah

Memoirs written from insider perspectives on disability. We mentioned these written by autistic authors:

Grandin, T. (2006). Thinking in pictures: And other reports from my life with autism. Vintage. Higashida, N. (2013). The Reason I Jump: The Inner Voice of a Thirteen-Year-Old Boy with Autism. Random House.

Mukhopadhyay, T. R. (2011). *The Mind Tree: A Miraculous Child Breaks the Silence of Autism*. Arcade Publishing.

Prince-Hughes, D.. (2005). Songs of the Gorilla Nation: My Journey Through Autism. Broadway Books.

And this history of neurodiversity and autism:

Silberman, S. (2016). Neurotribes: The Legacy of Autism and the Future of Neurodiversity (Reprint edition). Avery.

Autistic Self Advocacy Network (ASAN) https://autisticadvocacy.org/

A blog that explains the importance of identity-first language in the autistic community. <a href="https://ollibean.com/the-gymnastics-of-person-first-language/">https://ollibean.com/the-gymnastics-of-person-first-language/</a>

# Part 2: How does deficit thinking influence what we believe young children can do/are capable of in math?

A great book on how we need to develop understanding of individual differences, rather than assumptions that averages can capture human intelligence or capacity.

Rose, T. (2017). The End of Average: Unlocking Our Potential by Embracing What Makes Us Different (Reprint edition). HarperOne.

Article by Dr. Lambert on myths about mathematics education for students with learning disabilities (free download):

Lambert, R. (2018). "Indefensible, Illogical, and Unsupported"; Countering Deficit Mythologies about the Potential of Students with Learning Disabilities in Mathematics. Education Sciences, 8(2), 72. <a href="https://doi.org/10.3390/educsci8020072">https://doi.org/10.3390/educsci8020072</a>

## Part 3: Universal Design for Learning in Mathematics

A great UDL text (free online) about UDL. A very comprehensive approach to the topic. Chapter 3 is the great text on neuroscience and UDL

Meyer, A., Rose, D. H., & Gordon, D. T. (2014). *Universal design for learning: Theory and practice*. CAST Professional Publishing. <a href="http://udltheorypractice.cast.org/">http://udltheorypractice.cast.org/</a>

A policy brief by Dr. Lambert summarizing Universal Design for Learning in the area of mathematics.

Lambert, R. (2020). Increasing access to Universally Designed mathematics classrooms. Stanford, CA: PACF.

https://edpolicyinca.org/publications/increasing-access-universally-designed-mathematics-classrooms

A great book on the history of Universal Design.

Hamraie, A. (2017). *Building Access: Universal Design and the Politics of Disability* (3rd ed. edition). Univ Of Minnesota Press.

First chapter free here:

https://www.google.com/books/edition/Building\_Access/3Cl0DwAAQBAJ?hl=en&gbpv=0

Free text summarizing learning sciences research.

National Academies of Sciences, Engineering and Medicine of. (2018). *How People Learn II: Learners, Contexts, and Cultures*. National Academies Press.

Free download:

https://www.nap.edu/catalog/24783/how-people-learn-ii-learners-contexts-and-cultures

# **Part 4: Project Based Learning**

Websites:

https://www.pblworks.org

## https://www.earlychildhoodpbl.com

## Books:

<u>Project Based Teaching: How to Create Rigorous and Engaging Learning Experiences</u> by Suzie Boss with John Larmer (ASCD, 2018)

<u>Setting the Standard for Project Based Learning</u> by John Larmer, John Mergendoller and Suzie Boss (ASCD, 2015).

<u>Implementing Project Based Learning in Early Childhood: Overcoming Misconceptions and Reaching Success</u> by Sara Lev, Amanda Clark and Erin Starkey (Routledge, 2020)

<u>PBL in the Elementary Grades</u> by Sara Hallerman, John Larmer and John R. Mergendoller (Buck Institute for Education, 2011).

#### Other references

- Simon, M. A. (1995). Reconstructing mathematics pedagogy from a constructivist perspective. *Journal for Research in Mathematics Education*, 114–145.
- King, S. A., Lemons, C. J., & Davidson, K. A. (2016). Math Interventions for Students with Autism Spectrum Disorder: A Best-Evidence Synthesis. *Exceptional Children*, 82(4), 443–462.
- Wei, X., Lenz, K. B., & Blackorby, J. (2013). Math growth trajectories of students with disabilities: Disability category, gender, racial, and socioeconomic status differences from ages 7 to 17. *Remedial and Special Education*, 34(3), 154–165.
- Wei, X., Yu, J. W., Shattuck, P., McCracken, M., & Blackorby, J. (2013). Science, Technology, Engineering, and Mathematics (STEM) Participation Among College Students with an Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 43(7), 1539–1546. <a href="https://doi.org/10.1007/s10803-012-1700-z">https://doi.org/10.1007/s10803-012-1700-z</a>