



## 2022-2023 Montana Executive Leadership Academy EXLA Cohort 2 - Unit 7 Course Learning Plan

**Date:** March 16-17, 2023

**Course Title:** Teaching Mathematics for Enjoyment, Engagement, and Equitable-Equality of Outcomes.

**Instructor:** Professor Jo Boaler

### Course Description:

Recent years have seen an explosion of scientific evidence showing that there is a different way to learn, lead and live, available to us all. When people take a limitless approach to learning – in learning and in life – different pathways open up, leading to higher, more equitable and more enjoyable achievement. In this session we will consider what this different approach is, thinking about the ways we can teach students to increase equity, engagement, and achievement.

We will also consider the nature of the content we are teaching. We are in an exciting time in terms of the knowledge we can all access, and the ways knowledge is being communicated. Our world is filled with data and data visualizations and a new, important goal for our teaching is to help students become data literate, learning to make sense of data in their lives and separate fact from fiction. All teachers and leaders can teach with a data perspective, integrating the ideas from data science into their teaching. This session will invite you to think about the ways we can teach and learn with a 21<sup>st</sup> century perspective.

### Course Outcomes:

- Participants will consider the nature of the content being taught and learning to make sense of the data separating fact from fiction.
- Participants will learn ideas, and teaching strategies that they can use in classrooms immediately and they can share with other educators, that are research based.
- Participants will reflect on current teaching practices and ways to teach and learn with a 21<sup>st</sup> century perspective.





**Pre-Readings:**

- <https://www.youcubed.org/resources/modern-high-school-math-should-be-about-data-science-not-algebra-2/>
- <https://www.scientificamerican.com/article/why-math-education-in-the-u-s-doesn-t-add-up/>
- <https://blogs.ams.org/matheducation/2019/02/01/everyone-can-learn-mathematics-to-high-levels-the-evidence-from-neuroscience-that-should-change-our-teaching/#more-2392>

**Course Texts/Articles:**

- Boaler, Jo (2019), *Limitless Mind: Learn, Lead and Live without Barriers*. Harper Collins.
- Boaler, Jo (2022) *Mathematical Mindsets: Unleashing Students' Potential through Creative Mathematics, Inspiring Messages and Innovative Teaching*. Jossey-Bass; 2nd edition.

