

Learning Analytics for Improved Education

Data-driven decision making & Equity for students

What, exactly, is learning analytics in an educational setting?

- ◆ Simply put, learning analytics is the collection, analysis, and reporting of big data. In education, it focuses on learners and their contexts; it is used to understand and optimize learning and the environment in which it occurs.
- ◆ Learning analytics is used to inform data-driven education systems from the student-to state-level, creating the most efficient path to personalizing instruction, evidence-based learning, and continuous innovation.

How can this benefit students, teachers, and district administrators?

- ◆ **Equity.** Without learning analytics and readily accessible data, many educators are still designing instruction for the average student, which is often at the expense of the more urgent needs of underserved learners. Learning analytics has the potential to contribute to more equitable and socially just educational outcomes.
- ◆ **Enhanced Instruction.** Research shows that teachers who consult dashboards more often tend to engage in more diverse pedagogical actions, improving student experiences and academic achievement for all.
- ◆ **DDI Efficiency.** Big data has the potential to streamline evidence-based decision-making processes and to provide timely and actionable information. This directly supports effective responses to student needs and quickly advancing teaching methodology.

What are the challenges?

- ◆ One of the biggest current challenges in learner analytics is **finding value** from datasets with massive scale, diverse types, and hasty generation.

What has already been learned?

- ◆ Learning analytics design processes must consider a range of **human factors**, including why and how data will be used. For example, research indicates teachers prefer data dashboards with **detailed information** about each student, task, and response that they can easily consult, understand, and leverage to enhance their own instruction.

What are the core values and interests driving this work?

- ◆ **Equity.** The purpose that undergirds this project is to empower educators to make strategic decisions to best serve all learners, especially those experiencing the pervasive opportunity gap.
- ◆ **Collaboration.** Co-creation of learning analytics tools builds trust and usability. A co-design process with educators, researchers, and developers holds the most potential to create a tool that is practical, helpful, and ultimately drives enhances instruction and student outcomes.
- ◆ **Delight.** If we want to encourage teachers and learners to make use of analytics, then those analytics should provide delight.