

How Learning Analytics Can Improve Student Outcomes

Learning analytics is the measurement, collection, analysis, and reporting of data regarding learners and their contexts for the purposes of understanding and optimizing learning and the environment in which it occurs.

According to the **Journal of Learning Analytics: Synergies of Learning Analytics and Learning Design**, published by the Society of Learning Analytics Research (SoLAR), learning analytics helps educators analyze their students' current reality, set goals, identify what student outcomes are not being met, and provides a visual representation of what support students may need to meet their learning goals.

Learning analytics has been used for years to improve the academic performance of students and to gauge if students are meeting desired outcomes. Key stakeholders such as leadership and administration, educators, instructional coaches, curriculum designers, and even students benefit from learning analytics to analyze and transform data into meaningful and actionable information.

Everyone involved in a child's education (families, educators, administrators, curriculum designers, etc.) should understand performance indicators and recognize when student outcomes have been met or exceeded. In addition, students should be empowered to set goals and monitor their progress as they work toward their established learning goals. Examining data from learning analytics assists in setting clear expectations of student learning outcomes detailing precisely what students should know, be able to do, or be able to demonstrate.



SoLAR lists four most common goals of learning analytics

1. Supporting student development of lifelong learning skills and strategies intentionally involving student agency, voice, and choice

Authentic student agency, voice, and choice are lifelong skills that empower students to make decisions. When students make choices in their own learning, they are more engaged in the learning process. It's important for students to learn how to use learning analytics to help guide choosing strategies, asking productive questions, and, most importantly, self-assessment of their own work and learning.



2. Providing an ongoing flow of personalized and timely feedback to students regarding their learning.

Whether students are working in an in-person, remote, or hybrid environment, they need to regularly receive and provide feedback that is authentic, actionable, and occurs throughout the learning process to empower them to monitor their own work and adjust their plans in order to achieve their learning goals. The feedback loop may include: discussion responses; written or participatory activities; quizzes; and verbal or written responses. While exit tickets help educators determine mastery or a deepened understanding of content at the end of a class session, a variety of digital tools (such as Google Forms, Formative, and Seesaw) can provide real-time feedback during instruction.

3. Supporting development of important skills such as collaboration, critical thinking, communication, and creativity.

Sharing ideas and resources, and the iteration process are anchors to support student work. Communication, critical thinking, and creativity are useful lenses to examine goals, strategies, and outcomes. Opportunities for collaboration are important whether in an in-person learning environment or in a virtual breakout room. Positive and purposeful collaborative interactions allow students to engage in learning with thought partners.

4. Developing student awareness by supporting self-reflection.

Students should have the opportunity to engage in reflection and deeper metacognition—thinking about their thinking. Learning experiences should provide students opportunities to engage in new learning and deeper understanding of prior knowledge. When students track their own progress or self-reflect, they are able to appreciate their growth while simultaneously identifying areas and strategies for subsequent growth and improvement. Success criteria should always be aligned to learning goals and focus on what students should be able to do, say, write, or show in terms of meeting those goals.

Learning analytics works best when outcomes, expectations, and key learnings are established from the very beginning, with real-time data being used to adjust instruction and determine interventions, enrichment, and support.