

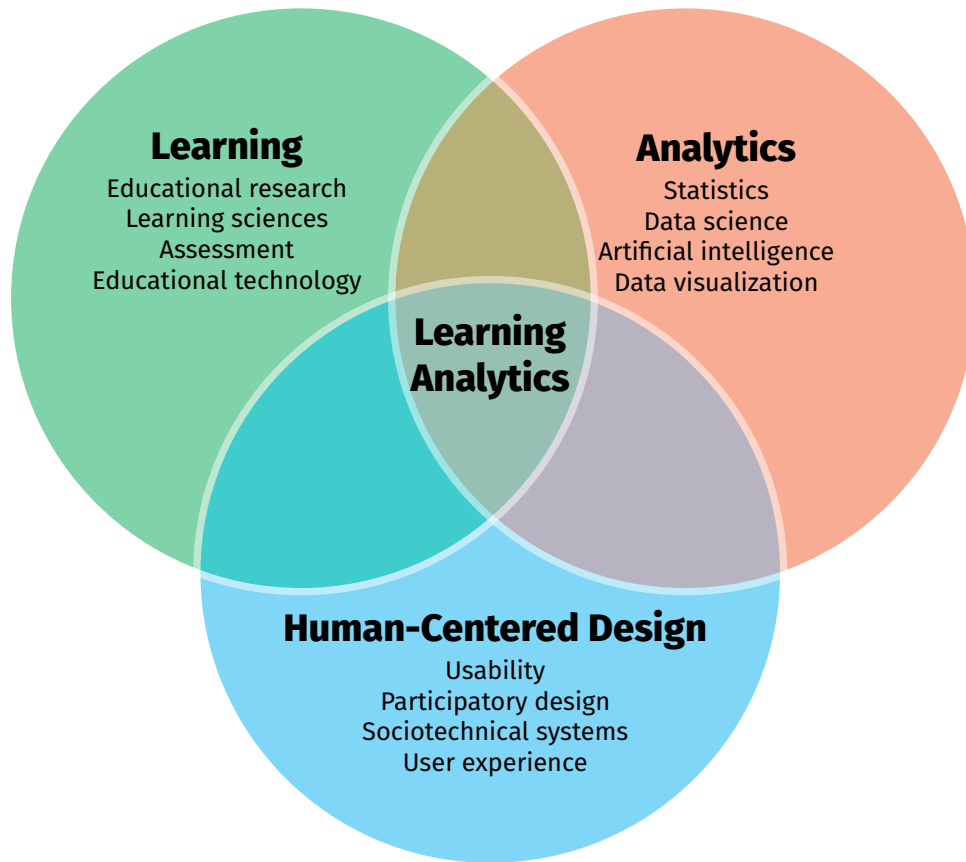


Reimagining Learning Analytics: Final Report to the SoLAR Community

Society for Learning Analytics Research LA Task Force

Catherine Manly (chair), Blaženka Divjak, Maurice Boothe Jr., Rebecca Ferguson, Nicole Hoover, Ioana Jivet, Rogers Kaliisa, Mohammad Khalil, Grace Lynch, Mladen Raković

Background



An interdisciplinary field that combines learning sciences, analytics, and human-centered design to improve learning.

Learning analytics is both an academic field and a commercial marketplace which has taken rapid shape over the last decade. As a research and teaching field, learning analytics sits at the convergence of **Learning** (e.g. educational research, learning sciences and assessment, educational technology), **Analytics** (e.g. statistics, visualization, computer/data sciences, artificial intelligence), and **Human-Centered Design** (e.g. usability, participatory design, sociotechnical systems thinking).

The original definition, written in 2011, was:

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

After 15 years, it was timely to revisit the definition to ensure that it was accurate following the growth of the field and other advancements. This check was necessary because it had become increasingly difficult for authors and reviewers of the *Journal of Learning Analytics* (JLA) and the International Learning Analytics and Knowledge Conference (LAK) to agree on what was in or out of scope for submissions.

In March 2025 the Executive Committee of the Society for Learning Analytics Research (SoLAR) formed an LA Task Force to take stock and reimagine the definition of Learning Analytics. The initial outcome of this work informed the call for papers and submission scope for the LAK26 conference. This report is the culmination of the Task Force mission.

Methodology

The LA Task Force invited feedback from the learning analytics community in developing and refining the LA Definition and LA Scope. Inputs included:

- LAK25 Workshop and Poster
- LAK25 Plenary Session
- LAK25 SoLAR Institutional Members Roundtable
- LAK25 Annual General Meeting
- May 2025 Group Concept Mapping – 82 people generated items; 25 people sorted and rated the 340 items
- May 2025 Surveys – 242 community responses
- May 2025 Document analysis with feedback
- May 2025 Document review with annotation
- February-April 2026 Survey – 83 community responses
- LAK26 Poster – 38 community sticky notes written
- LAK26 Plenary Session – 162 community Slido participants

On the basis of early consultation work, the LA Task Force developed six definitions of learning analytics and shared those with the members of the oversight group consisting of institutional members and current and former members of the SoLAR Executive Committee. After receiving feedback from the oversight group, two definitions were retained for further examination. The LA Task Force shared those two definitions with the members of the SoLAR community who voted for their preferred definition and, optionally, offered comments on the definitions. After this stage, elements of both options were brought together in a single definition.

During this process, the LA Task Force reviewed all inputs intensively. This review was based on the premise that, while learning analytics is a field, the definition should be about learning analytics as a concept. The new definition views learning analytics as a human-centred, multidisciplinary field that takes into account data from different sources and stakeholders.

The LA Task Force presented this definition of learning analytics, together with a statement of what could be considered in and out of scope for the learning analytics community, in May 2025 in order to guide practice around learning analytics.

Input from the community was sought over the subsequent year about how the initial definition and in/out of scope statement worked in practice. The LAK26 call for papers used the new definition. Authors and reviewers for the conference were surveyed to gather their opinions on the new version. In addition, LAK26 attendees had opportunities to provide feedback at the poster session and the plenary session.

Outcome

Based on a review of all feedback received from the community, the LA Task Force decided not to alter the definition presented in May 2025, but to make minor adjustments to the in/out of scope statement in response to community questions and input. Here, the LA Task Force presents the final definition and in-/out-of-scope statement to the community to guide future practice around learning analytics (as of August 2026).

2026 Definition

Learning analytics is the collection, analysis, interpretation and communication of data about learners and their learning that provides theoretically relevant and actionable insights to enhance learning and teaching.

Overall Scope

The following statement of scope is intended to help people wondering whether their work falls within the field of learning analytics when submitting to either the International Learning Analytics and Knowledge (LAK) conference or the *Journal of Learning Analytics* (JLA).

Learning analytics (LA) is a human-centred, multidisciplinary field focused on the intersection of data and learning. The learning analytics community undertakes theory-informed investigation of learning processes relevant for stakeholders (students, teachers, learning designers, advisors, and others) that informs feedback and offers actionable insights to improve learning, learners' wellbeing and quality of education. Learning analytics has a fundamentally applied nature. It approaches use of data from a holistic perspective, including data collection, analysis, communication, visualization, interpretation, and closing the loop to bring insights back to stakeholders to impact actions such as implementation of educational interventions. Responsibility, sustainability, and ethical and equitable use of data are key principles that underpin trust in learning analytics and are incorporated in learning analytics work.

Learning analytics offers a contextually aware, data-informed analysis of educational technology. This can be used to support evidence-based strategic and operational decisions that help learners, teachers, or other practitioners involved in education. Besides quantitative analysis based on mathematical approaches, machine learning and other methods based on artificial intelligence (AI), this work often involves descriptive

methods for analysis, and frequently uses data visualization, dashboards, or data storytelling to communicate insights. Qualitative approaches, mixed methods, action research, case studies, and approaches from the learning sciences are also utilized when oriented toward insights enhancing learning.

The learning analytics field frequently pushes methodological boundaries, including through the use of advanced AI and other statistical modeling or data science methods. In 2026, AI was one of the fastest growing areas of interest for the global learning analytics community. Subfields within learning analytics dynamically emerge and evolve over time. These include areas such as multimodal learning analytics; support for self-regulated learning; human-centered learning analytics; and analysis of teaching and learning in AI-supported learning environments. Learning analytics empowers people with insights derived from data, often using co-design processes that connect learners, researchers, and practitioners to enable responsive action that catalyzes educational imagination from a human-centered perspective.

The following are examples of topics considered in and out of scope for learning analytics. These examples may be modified in the future by LAK program chairs and JLA editors. The topics of interest identified here combine suggestions from community input with areas identified as in scope in LAK calls for papers.

In Scope

Tracing Learning & Teaching:

- **Finding evidence of learning:** Studies that identify and explain useful data for analyzing, understanding and enhancing learning and teaching. The collected data can include – but is not limited to – sampling frames; software interfaces for tracing learning and affective events; sensors for recording physiological indicators of learning and other processes; properties of archival data; utterances exchanged with chatbots; artificially intelligent agents for soliciting learners' on-the-fly accounts of learning processes and affect/emotions; teacher observation methods; and experience sampling methods. This work may include the measurement and interpretation of learner engagement, participation, collaboration, and other indicators that help explain learning processes in context.
- **Assessing student learning:** Studies that assess learning progress through the computational analysis of learner actions or artifacts, as well as social interactions with peers and teachers that might support the attainment of intended learning outcomes.
- **Analytical and methodological approaches:** Studies that introduce analytical techniques, methods, and tools for modeling student learning with the goal of empowering learners or other educational stakeholders and enhancing learning. Methods could include artificial intelligence, machine learning, natural language processing, social network analysis, text mining, and knowledge tracing among

others, if targeted toward questions oriented towards learning analytics. These approaches may include the use of multimodal learning analytics as well as flexible approaches to learning and teaching that support learning processes, learner achievements, and learner well-being. Studies should demonstrate how methodological or analytical innovations have the potential to contribute to actionable understanding, intervention, feedback, or decision-making for learners, teachers, or other stakeholders.

- **Technological infrastructures for data storage and sharing:** Proposals of technical and methodological procedures to store, share and preserve learning and teaching traces, taking appropriate ethical considerations into account and involving feedback loops to stakeholders.

Understanding Learning & Teaching:

- **Data-informed learning theories:** Proposals of new learning/teaching theories or revisions to / reinterpretations of / support for existing theories based on or related to large-scale data analysis.
- **Insights into specific learning processes:** Studies to understand particular aspects of a learning/teaching process through a learning-theory-informed use of data science methods and techniques, *including negative results*.
- **Learning and teaching modeling:** Creating mathematical, statistical or computational models of a learning/teaching process, including its actors and context, when targeted toward learning-analytics-oriented questions. Note that this is in contrast to work focused on comparing algorithms or prediction models, which may be better targeted toward educational data mining (EDM).
- **Understanding learning and teaching with artificial intelligence (AI):** Studies that analyze environments that aim to enrich learning by using artificial intelligence that might change the role of teachers in all stages of the learning process, starting with learning design via facilitating learners to supporting learner-centered decision making, and the learning paths of learners. This includes research examining how AI systems and AI-supported learning environments generate, use, or communicate learning analytics to support learning, teaching, reflection, or institutional decision-making.
- **Systematic reviews:** Studies that provide a systematic and methodological synthesis of the available evidence in an area of learning analytics.

Impacting Learning & Teaching:

- **Human-centered design processes:** Research that documents practices of giving an active voice to learners, teachers, and other educational stakeholders in the design process of learning analytics initiatives and enabling technologies.
- **Providing decision support and feedback:** Studies that evaluate the use and impact of feedback or decision-support systems based on learning analytics (dashboards, early-alert systems, automated messages, etc.). This includes data visualization and data storytelling with learning-related data.
- **Data-informed decision-making:** Studies that examine how teachers, students or other educational stakeholders come to, work with, and make changes using learning analytics information. This includes use of AI as a tool for automating analysis of learning-related data to provide insight, predictions, and recommendations that enhance decision making for stakeholders at any level. It also includes action research and qualitative investigation of how stakeholders understand and make use of data in educational contexts.
- **Personalized and adaptive learning:** Studies that evaluate the effectiveness and impact of adaptive technologies based on learning analytics.
- **Practical evaluations of learning analytics efforts:** Empirical evidence about the effectiveness of learning analytics implementations or educational initiatives guided by learning analytics. This may include studies of implementation challenges, stakeholder data literacy, organizational readiness, and factors influencing the successful adoption and sustainable use of learning analytics in practice.

Implementing Change in Learning & Teaching:

- **Ethical issues around learning analytics:** Analysis of issues and approaches to the lawful and ethical capture, protection, and use of educational data traces, including data privacy; tackling unintended bias and value judgements in the selection of data and algorithms; and perspectives and methods that empower stakeholders.
- **Equity, fairness and transparency in learning analytics:** Consideration of how certain practices of data collection, analysis and subsequent action impact particular populations and affect human well-being, specifically groups that have been previously disadvantaged. Discussions of how learning analytics may impact (positively or negatively) social change and transformative social justice.
- **Learning analytics adoption:** Discussions and evaluations of strategies to promote and embed learning analytics initiatives in educational institutions and learning organizations. Studies that examine processes of organizational change and practices of professional development that support impactful learning analytics use. This includes work focused on building stakeholder capacity, data literacy, and shared understanding needed for effective and ethical learning analytics practice.
- **Learning analytics strategies for scalability:** Discussions and evaluations of strategies for scaling the capture and analysis of information in useful and ethical ways at the program, institution or national level; critical reflections

on organizational structures that promote analytics innovation and impact in an institution; use of artificial intelligence to increase the scale of educational interventions using learning analytics approaches.

- **Strategic planning of learning & teaching:** Consideration and application of trustworthy learning analytics in all phases of strategic planning, including needs analysis for change, decision-making, implementation and monitoring, as well as evaluation of strategic decisions, taking into account the complexity and context of the strategic decision-making domain.

Out of Scope

- Work focused solely on aspects of methodology and data manipulation that does not discuss, work towards or include closing the loop to stakeholders, for example, by empowering learners, teachers, or other educational stakeholders.
- Work without any data or evidence that relates to learners, educators, or learning processes.
- Work introducing analytical techniques, methods, and/or tools without connecting to learners or learning processes.
- Work focused on comparisons of different approaches to predictive modelling or algorithm accuracy is likely to be a better fit for educational data mining (EDM).
- Work that evaluates the effectiveness and impact of adaptive/personalized learning technologies that are not explicitly grounded in learning analytics.
- Classic ed-tech research is better suited for the International Society of the Learning Sciences (ISLS) or similar venues in the education sciences. This includes quantitative, qualitative and mixed-methods studies that use data related to education and learning but do not make strong connections to learning analytics in their research questions or findings.
- Work that focuses on comparisons between departments, institutions, regions or countries (for example management dashboards or work using PISA data) is usually classed as academic analytics.
- Studies involving AI may be in or out of scope, depending on the context and intention of the work. For example, work on how AI is deployed in primary classrooms might be a better fit for AI-Ed, but using analytics in evaluations of the effectiveness of AI-supported learning environments is in scope for learning analytics.
- Studies that focus primarily on AI system performance, technical optimization, benchmarking, or general-purpose AI applications without meaningful connection to learning processes, stakeholder action, or learning analytics questions are likely to be out of scope.
- Work without a sound theoretical foundation in learning theory or that does not use sound methodologies when collecting and analysing data.
- Studies that do not situate themselves in relation to previous work in LA. This might involve building on, extending, supporting, or revising that work, or identifying a gap

that should be filled. A paper that does not mention ‘learning analytics’ in its text or references is highly likely to be out of scope.

- Studies that do not articulate how their findings, methods, or interventions contribute to learning analytics theory, practice, or stakeholder impact are unlikely to be considered within scope.

Suggested Citation:

Manly, C., Divjak, B., Boothe Jr., M., Ferguson, R., Hoover, N., Jivet, I., Kaliisa, R., Khalil, M., Lynch, G., Raković, M. (2026). *Reimagining Learning Analytics: Final Report to the SoLAR Community*. Society for Learning Analytics Research.

Updated: 3 June 2026



SOCIETY for LEARNING ANALYTICS RESEARCH