

Category	Capability	Definition
Data	Data usage	This capability describes in what way data analysis is used to improve education. It contains data aggregation, different kinds of analysis, the goals of the analysis, and the interventions performed based on the outcomes of the analysis.
	Quality	This capability describes what the characteristics of ‘high-quality data’ are and in what way the quality of data is secured.
	Reporting	This capability describes in what way the outcomes of data analysis are presented to the various stakeholders and what the requirements of the presentation are. Reporting comprises all one-way flows of learning analytics outcomes.
	Sourcing & integration	This capability describes what data sources are used to get the data and in what way different sources are integrated.
	Feedback on analytics	This capability describes the need for feedback from users.
Management	Identifying benefits	This capability describes in what way learning (process, environment, or student performance) is improved, i.e., with what goal is an intervention performed?
	Capability management	This capability describes in what way existing organizational capabilities are managed, reconfigured, and developed. This includes the growth of existing resources and capabilities into new ones.
	Culture & readiness	This capability describes characteristics of a data-driven culture and the readiness factors necessary for the adoption of learning analytics.
	Funding & investment	This capability describes what kind of funding and investment is necessary (time, people, money) and the role of executives to secure the proper funding and investment.
	External environment	This capability describes all influences from outside the organization. This includes the use of material and tools from external parties, the hiring of external personnel, requests and demands from external (governmental) bodies, and sharing materials, knowledge, and experiences with other (higher) educational institutions.
	Performance monitoring	This capability describes in what way the performance of analytical processes and applications are measured.
	Responsibility & accountability	This capability describes how the responsibility and accountability regarding learning analytics are managed. That is, decide on who is responsible and accountable for what task and the leadership structure should be. This capability can relate to the responsibility and accountability for activities and tasks at either stakeholder group level (e.g., the learning analytics team) or individual level (e.g., the data scientist from the learning analytics team).
	Strategy	This capability describes how to align learning analytics with the (long-term) organizational vision, strategy, and policy.
	Policies & CoP	This capability describes in what way to design and maintain learning analytics policies and codes-of-practice.

	Implementation Deployment & Application	This capability describes in what way to plan the use of learning analytics, i.e., what activities to deploy before the implementation of learning analytics (systems), and what factors to consider when implementing and deploying analytics.
	Evidence-based & theory-driven	This capability describes how to include evidence and theory in the design of learning analytics and the performance measurement of learning analytics interventions.
People	Collaboration	This capability describes the active cooperation between parties - either within a group of stakeholders or between different groups of stakeholders, and either internal or external. This capability also includes the mechanisms via which collaboration is achieved.
	Combined skills and knowledge	This capability describes the combined skills and knowledge stakeholders need to have to perform learning analytics activities and act on them accordingly.
	Communication	This capability describes the flow of information between stakeholders (groups). This includes communication between users and the party delivering the learning analytics about the needs and possibilities ('demand and supply'), the communication mechanisms, and the types of information that are shared between different stakeholders (groups).
	Stakeholder Identification & Engagement	This capability describes the identification of different (types of) stakeholders who should be involved, and for what purposes stakeholders should be involved in the design, implementation, and use of learning analytics.
	Training	This capability describes what training stakeholders should get to perform learning analytics activities and act on the outcomes.
Technology	Automation	This capability describes the role and mechanisms of automation to perform learning analytics activities.
	Connectivity	This capability describes in what way systems can be connected
	Infrastructure	This capability describes the required IT infrastructure for learning analytics
	System characteristics	This capability describes both the quantitative and qualitative requirements for the systems used to perform learning analytics activities
Privacy & Ethics	Ethics	This capability describes in what way ethical issues should be considered
	Human decision-making	This capability describes the role of humans in decision-making based on data.
	Security	This capability describes how to secure data and information
	Transparency	This capability describes being transparent about the used definitions, decisions made during the process and context in which learning analytics was used.
	Legal compliance	This capability describes how to comply with the law