# AI-DRIVEN TEACHING-LEARNING IN HIGHER EDUCATION - A CONCEPTUAL TYPOLOGY

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**Abstract**

The increasing availability of educational data, combined with the rapid advancement of artificial intelligence (AI) methods, is reshaping decision-making processes within higher education institutions. Data-driven approaches facilitate the systematic analysis of student-related data to support prediction, classification, and strategic management. Nevertheless, despite the growing body of research in this domain, the conceptualization of decision-making processes in higher education remains fragmented and insufficiently systematized. The objective of this study is to develop a conceptual typology of decision-making domains in higher education, derived from a structured review of the extant literature. The analysis concentrates on research in educational data mining, learning analytics, and the application of AI in higher education contexts. The study employs a structured review of peer-reviewed publications retrieved from major academic databases. The literature is examined with the aim of identifying key analytical categories and organizing them into a coherent framework of decision-making areas. The findings result in the identification of core decision-making domains associated with academic processes, organizational management, and digital transformation. The proposed typology elucidates the interrelationships among these domains and reveals persistent gaps in the integration of data-driven approaches into institutional decision-making practices. This study contributes to the conceptual development of higher education as a data-driven ecosystem and provides a foundation for subsequent empirical research focused on the prioritization of decision-making areas and the design and implementation of decision support systems.

**Key words:** artificial intelligence, higher education, educational data mining, learning analytics, intelligent systems, decision-making processes, conceptual framework