

Data Analytics for Decision Making in Higher Education

Prof. Dr. Raquel Itzel Molina Rodriguez, Norma Candolfi Arballo

Universidad Autónoma de Baja California, Mexico

Abstract

Currently, organizations face changes in a globalized market where the tools of digital technologies, which are fundamental tools that provide us with services in almost all areas, whether personal, organizational, social, economic, etc.

The relevance of incorporating data analysis in a higher education organization lies in the importance of offering organizational roles responsible for making competitive decisions advantages such as: 1) Analyzing the data generated in the university to make decisions about the monitoring and evaluation of students, teachers, and courses. 2) Possess supporting reports that support the decisions. 3) Due to the health contingency of the SARS-Covid19 virus, the activities of the organizations migrated everything remotely using digital platforms, such as LMS, where thousands of data are stored that are not used for analysis.

The objective is to design, develop and implement a data analysis tool for decision-making in higher education about the services of the Blackboard platform offered to teachers and students of programs and courses in blended or distance modality.

A structure based on the visual analytics process in e-learning is proposed, which uses temporality variables, semantic content analysis and statistical metrics. Within this framework, it's necessary to implement a project design adapted to a software methodology, preserving essential variables such as requirements and modeling.

There're initiatives in the academic field where trading wisdom techniques are applied to track students on educational platforms. For this intervention, the result was the creation of dashboards using the Quicksight tool, which allows the extraction, transformation, analysis and visualization of data.

Keywords: analytics framework, data-driven, digital transformation, decision-making, learning analytics