Comparative Analysis of E-learning Platforms and Their Application in Higher Education

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Abstract: The fast development of modern technologies in the field of education has become a challenge for academic institutions to choose the right Learning Management System (LMS) for their use. As part of the current research, an analysis of five selected platforms representing different implementation models: Moodle, Blackboard, Canvas, ATutor, and MS Teams, was performed. The platforms were assessed according to the following criteria: architectural, functional, user-centered, and implementation-based (open-source versus Software as a Service [SaaS] platforms). The analysis indicates that Moodle and ATutor offer considerable flexibility and show a strong documented emphasis on accessibility; however, self-hosted deployment requires substantial support from the institution's IT department. At the same time, commercial platforms such as Blackboard and Canvas provide stable, vendor-managed environments with lower maintenance requirements, but at higher recurring costs. Additionally, the research revealed that MS Teams is a proprietary SaaS platform with extensive integration and communication capabilities, but with fewer specialized pedagogical features than dedicated LMS solutions. In conclusion, it may be stated that there is no one-size-fits-all solution - the decision should be made depending on the trade-off between the institution's technical and financial capacities.

Keywords: e-learning; LMS; higher education; comparative analysis; platform evaluation.