

Blended learning pedagogy and its implementation in the tertiary education: Bangladesh perspectives

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Abstract

This paper reviews the theoretical foundations and components of blended learning (BL) in higher education globally, analyzing six articles from five countries published between January 2016 and December 2020. The study identified challenges faced by instructors, including workload, timeliness, and lack of academic and technical skills to manage BL. Balancing face-to-face and online learning was also challenging. To address these issues, the importance of staff training, support, and networking was emphasized, proposing a modified BL model for tertiary education in Bangladesh, which could be implemented post-pandemic using a machine-learning approach. The mixed BL model was recommended for Bangladeshi institutions, utilizing machine learning algorithms to facilitate outcome-based learning through technological applications. A preliminary survey of 120 students from BGC Trust University in Bangladesh was conducted using statistical data obtained from machine learning algorithms to explore the applicability of the mixed-learning approach. Machine learning proved beneficial for data analysis, drawing valuable insights for educators and policymakers seeking effective teaching strategies that incorporate technology. This research underscores the potential of machine learning in conducting surveys and analyzing data related to blended learning in tertiary education, offering significant contributions to the field.