Perceived Accessibility and Expertise Concerns as Factors of Online Learning Barriers: A Disciplinary and Academic Year-Based Study among Engineering Students in Kerala

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Abstract

This study examines barriers to online learning among engineering students of Kerala, India, by exploring the role of Perceived Accessibility Concerns (PAC) and Perceived Expertise Concerns (PEC), which contribute to the higher-order construct of Perceived Adversities of Barriers (PAB). A quantitative method was used with responses from 4034 students across academic years and disciplines. Differences across student groups were identified through descriptive statistics and General Linear Models (GLM) with robust standard errors.

Results indicated that many participants reported that PAC differed significantly across academic years, with second-year students expressing more concern than others about PAC. PEC differed quite a bit in discipline, especially for Mechanical-Civil students. PAB perceptions, however, were relatively consistent across subgroups. Findings confirm that PAC and PEC are crucial constituents of PAB and suggest implications for adequate and equitable digital education from a constructivist learning perspective.

Keywords

Accessibility Concern, Engineering Education, Barriers Expertise Concerns, Online Learning.