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Enhancing Supply Chain Decision-Making: A Hierarchical Linear Modeling Analysis of Quantitative Reasoning Interventions in Business Education

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Abstract

Supply chain disruptions due to the COVID-19 pandemic, natural disasters, and cyber-attacks have heightened the need for critical thinking and quantitative reasoning (QR) in business decision-making. This study examined how business students' QR and decision-making skills developed through a multi-week online supply chain simulation. A control group participated in standard lectures, while a test group also received QR interventions on purchasing and contracts. Hierarchical Linear Modeling (HLM) was used to assess individual and group-level impacts, showing that QR interventions significantly improved students' decision-making, demonstrating the value of targeted instruction for enhancing critical supply chain skills.

Conference Track

Innovative Education