



# Virtual Reality in Irrigation Scheduling: A Theoretical Framework for Evaluation in Kenyan Agriculture

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## Abstract

Virtual reality (VR) technology has gained traction in agricultural education for enhancing training programmes related to irrigation scheduling. The study employs a mixed-methods approach, combining qualitative interviews with quantitative surveys to assess participants' learning outcomes and their application in practice. The theoretical framework provides a robust basis for future research on the efficacy of VR in agricultural education, particularly for irrigation scheduling. Further empirical studies should explore long-term impacts and cost-effectiveness of VR training programmes in diverse farming contexts. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *African geography, irrigation scheduling, virtual reality, simulation model, participatory approach, rural development, systems theory*

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