

Immersive Simulation-Based Learning Improves Motivation and Experiential Learning

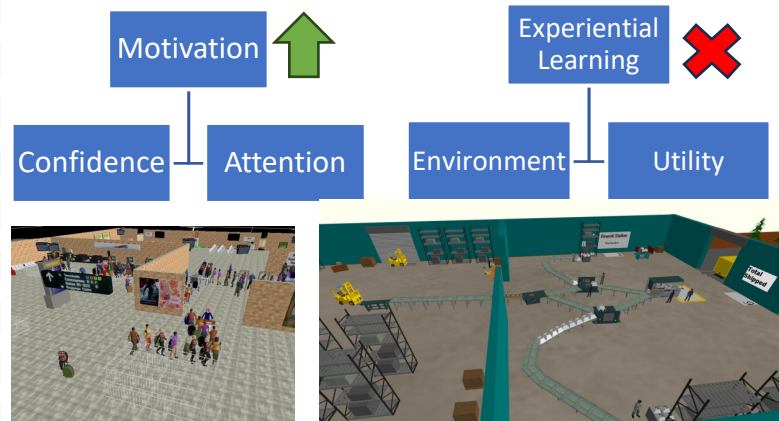
#2000599: *Overcoming critical skill gaps in residential and online STEM education via novel immersive, industry-aligned simulated environments*

Motivation and Experiential Learning Improvements



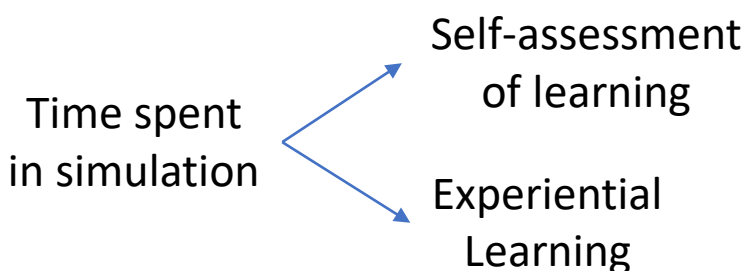
Motivation and experiential learning **improved** by using ISBL modules.

Choice Has Mixed Findings

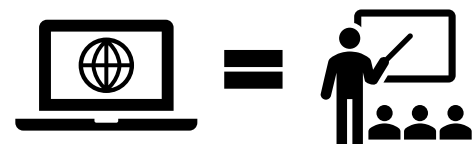


Limited context choice affected motivation but not experiential learning.

Impact of Time Allocation within Simulation Environment



Remote vs In Person



ISBL is **equally effective** in both remote and in-person instruction modes.

Methods

Surveys

Video Analytics

- Collected demographics, motivation, experiential learning, usability surveys from over 500 undergraduate and graduate students over 4 years
- Predictive analytics, machine learning

Challenge Overcome

COVID19

- Hiring research assistants
- Switching to remote learning
- Conducting experiments in desktop and VR modes



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