Adaptive Lessons Featuring Virtual Reality Experiences that Simulate On-the-Job Learning

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The ASN (Artisan's Social Network) system consists of software and training materials that simulate the unique difficulties small businesses experience by designing activities that are responsive to the unique needs of small businesses. This system consists of software and training materials that simulate the unique difficulties small businesses experience by providing opportunities for remedial learning and helping small businesses stay in business. The purpose of this study is to determine if an online training designed using adaptive and situated learning strategies (i.e., case study, simulation, and virtual reality) has a significant impact on adult learners’ knowledge, attitudes, norms, personal agency, intentions, and behaviors. Specifically, do artisan dairy manufacturers successfully develop and implement an environmental monitoring program in their facilities after completing this course?

Experimental Design

Pre-eval.
- Knowledge, Attitudes, Norms, Personal Agency, Intentions
- Social & Environmental Engagement

Group A: (Control Group - Traditional Programmed Instruction)

- Post-eval. 1: Knowledge, Attitudes, Norms, Personal Agency, Intentions
- Social & Environmental Engagement

Group B: (Intervention Group - Situated and Adaptive Learning)

- Post-eval. 2: Knowledge, Attitudes, Norms, Personal Agency, Self-Efficacy

Experimental Design

Research Questions

1. How effective is the online training course, designed using situated and adaptive learning strategies, in increasing adult learners in the workplaces’ knowledge of training topics, specifically environmental monitoring in artisan dairy facilities?
2. Were the adult learners able to effectively apply the training content at the dairy facility in which they work?

Significance

If it is successful, the approach used to design and develop the environmental monitoring training can serve as a model for trainers in any industry which requires students to learn complex material in the setting in which the material will be applied. This design approach has the ability to make training more accessible and (potentially) more effective, especially for small businesses, by reducing training costs, providing flexibility, and adapting to the unique needs of individual users. This approach to online training can help users by providing them with the knowledge and skills required to maintain regulatory compliance thereby keeping our food system safe and helping small businesses stay in business.

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