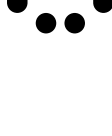


RxReality[®]

UX Research Report

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RxReality[®]

Abstract

This study evaluates the effectiveness of a 3D virtual reality module designed to enhance critical care pharmacy decision-making skills. We measured changes in student confidence, accuracy, and self-awareness to assess learning outcomes. Findings suggest that the product improved clinical decision-making skills and helped students calibrate their confidence to their actual performance.

Background

RxReality is a desktop virtual reality (dVR) learning module designed to bridge the gap between classroom education and real-world critical care pharmacy practice. Our platform enables pharmacy students to practice making authentic clinical decisions in a risk-free virtual environment that mirrors the complexity and uncertainty of intensive care units.

Hypothesis

If pharmacy students engage with RxReality, they will develop a more accurate self-assessment of their clinical decision-making abilities, as measured by the alignment between confidence ratings and performance outcomes.

Research Goals

01

Prepares students for the ill-structured decision-making required in intensive care settings.

02

Ensure the platform promotes accurate self-assessment, not overconfidence

03

Validate the product's educational value

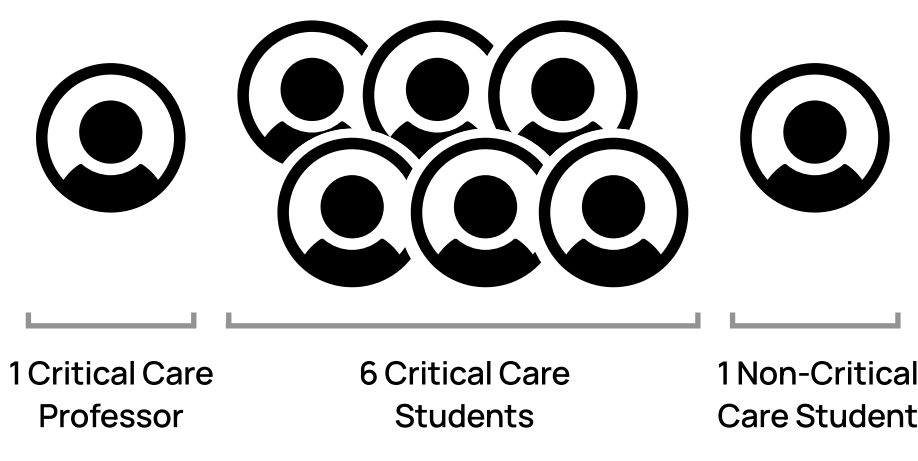


Population

RxReality will be used by mainly students within the Critical Care Pharmacy elective at UGA. Outside of students, faculty members will also interact with the product and facilitate sessions in class where students will use the product.

Sample

To ensure a diversified audience, we wanted to pull from mostly the student-base population, but also include a critical care professor and a non critical-care student. By including non traditional users, it allows us to get new perspectives on features and different angles for feedback.



Student Demographics

01

Have varying degrees of experience in a clinical ICU setting as most are in their 3rd year

02

Mostly rely on traditional study methods such as textbooks and didactic learning structures

03

Have varying levels of personal experience using keyboard commands, typically for gaming



Methods

We conducted a pre-test and post-test survey with our sample testers. Participants completed the pre-test before interacting with the module and the post-test immediately after, as well as selecting five adjectives from product reaction cards. Additionally, the system generated an objective accuracy score (1-10) based on participants' recommendations.

Metrics

User reactions were measured through a series of questions that contained a Likert scale for responses ranging from 1 to 10. Sample questions include:

- How well do you now understand the risks associated with medication errors in critical care?
- How confident are you in your ability to select appropriate medications for a critical care patient after using the module?
- How confident are you now in articulating your clinical reasoning to others?
- How confident are you in locating critical patient information in an ICU setting after using the module?

Initial Findings

100%

Of interviewed users reported that they would find value in repeated use of the product

42%

Of interviewed users used the word "engaging" when asked to describe their experience with the product



Quantitative Analysis

26%

Decrease in calibration error between confidence and accuracy.

36%

Increase in confidence in locating critical patient information in an ICU setting

17%

Increase in confidence in their ability to select appropriate medications for a patient

6%

Increase in understanding of the risks associated with medication errors in critical care

5%

Increase in confidence in articulating clinical reasoning to others

15%

Increase in ability to anticipate the speed of decision making

Qualitative Feedback

Users reported feeling more confident in...

"Taking the necessary steps before making a final decision."

"Navigating a patient chart and pulling out the relevant patient information."

"Choosing the right antibiotic."

"Picking the right medication, because the module corrects you"

"Defending reasoning for clinical recommendations"

"Interacting with different medical devices"