

# **INTERACTIVE DEBRIEFING APPLICATION**

## **GOAL**

To develop a tablet application that turns the simulation observer experience from a passive to an active engagement through both real-time interaction and archived activities. IDA will enhance nursing students' competencies in cognitive, technical, and behavior skills that improve clinical judgment and patient safety.

## **ABSTRACT**

Health Information Technology & Simulation Lab (HITS Lab) is an interprofessional effort aimed at enhancing consumer and professional health education through the advancement of health information technology. The HITS Lab brings together expertise from multiple disciplines to promote active simulated learning and the development and testing of new health technology. The lab's latest development is the Interactive Debriefing Application (IDA). This tablet application will engage students as they observe medical simulations. The IDA will transform students from passive to active observers as they engage with what they are seeing in the simulation. The application will also enhance the face-to-face debriefing session by allowing teachers to breakdown the aggregated result of the student's involvement. All the data from this will be accessible through the student's dashboard. Furthermore, by visually reforming the way students engage in this kind of educational environment, teachers can cultivate a more productive and efficient learning experience.

## **DESIGN**

The IDA was designed as a welcomed departure from the sterility of medical apps in the market today. Its appearance is welcoming and simplistic while still retaining a strong sense of professionalism. The dashboard section allows nursing students and their faculty access to log-in and view their simulation performance over their time in the nursing program. The data capture section provides them with a real-time interface that exhibits the video stream of an active simulation while allowing the capture of individual annotations, observations, and understanding. Finally, the debriefing section gives faculty and students a robust interface for retrieving annotations and observations in a face-to-face debriefing session.

## CODE

After the iterative process of designing and testing the app screen by screen, there was a strong foundation for coding the front end of the IDA. Approaching this with a design mindset helped us bring our vision to life in the development process. It also helped us continue to critique the design on a more minute scale and cultivate a stronger user flow throughout the app.

## USER EXPERIENCE

The user experience for the IDA is designed to be both intuitive and efficient. Through the use of established patterns, we designed an experience that builds upon cognitive responses and visual connections. For example, swiping up on the sidebar in the data capture section indicates a positive response, while swiping down indicates the opposite. This comes from the connotation of moving upwards as good and downwards as bad. All of this cultivates in a simple gesture that minimizes the need for additional steps that hinder the user's ability to engage with the simulation. The attention put into patterns such as these make the IDA a much more user-friendly app.

## HOW DOES IT WORK?

The IDA works by incorporating a collection of educational concepts. These reinforce what students learn throughout each of the sections in the app. The student's dashboard uses the concept of **critical reflection** as defined by Jack Mezirow, a sociologist who developed theories in adult learning. It is a self-reflective process that takes place after an experience. It happens when you evaluate your actions through different perspectives and attempt to see them from an objective viewpoint. The teacher's dashboard uses the concept of **scaffolding** to provide students with information in a progressive manner, which leads towards stronger understanding across time. The heart of the IDA experience, the data capture section, provides students with an **active learning environment**. This concept is one in which the desire to learn is triggered through active participation. It provides autonomy to the student to contribute to the overall learning environment thus leading to greater accountability. Finally, the data capture and data visualization of the dashboard incorporate the model of **Bloom's taxonomy**. This places importance on forms of thinking such as analyzing and evaluating over remembering. It is structured around the three domains of 1) cognitive- knowledge; 2) Behavioral- feelings and attitude; and 3) technical- manual or physical skills. By reinforcing the design with these pedagogical concepts, the IDA is able to resonate with students on a more meaningful level.

## **OUR NAMES**

Quentin Eastridge  
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## **DEPARTMENTS**

College of Arts & Sciences  
College of Nursing  
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### *Notes from meeting with Sarah*

1. Make sure the poster is no bigger than 36" X 42"
2. Check leading and margins of text blocks at the bottom of the poster.
3. Spacing between other text sections.
4. Make icons smaller along with a small clarification of why they are there (we are not sponsored haha!).