



Introduction

Trainees are increasingly required to attain a minimum competence prior to providing patient care, and many accreditation bodies now mandate demonstration of competence prior to licensure or board certification.

The opposing forces of increased expectations and reduced resources have greatly impacted the training of health care professionals. A hybrid of new technologies may offer one step towards the reconciling of this paradox.

Purpose

The purpose of this education project is to prepare neonatal nurse practitioners (NNPs) within a virtual world. Providing clinical learning experiences in the virtual NICU will enhance students' opportunities to learn to care for the culturally diverse populations they will serve as NNPs.

Methods

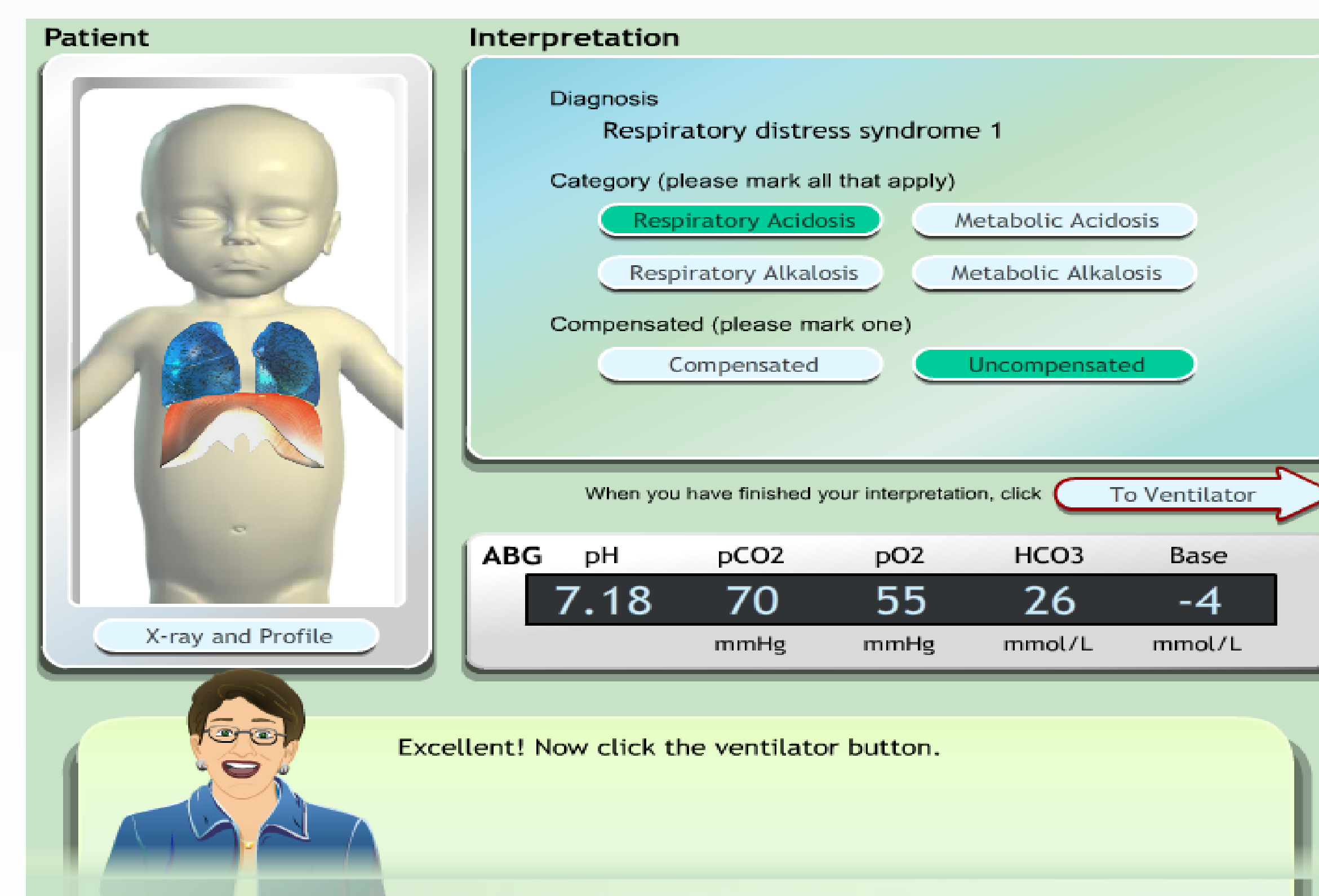
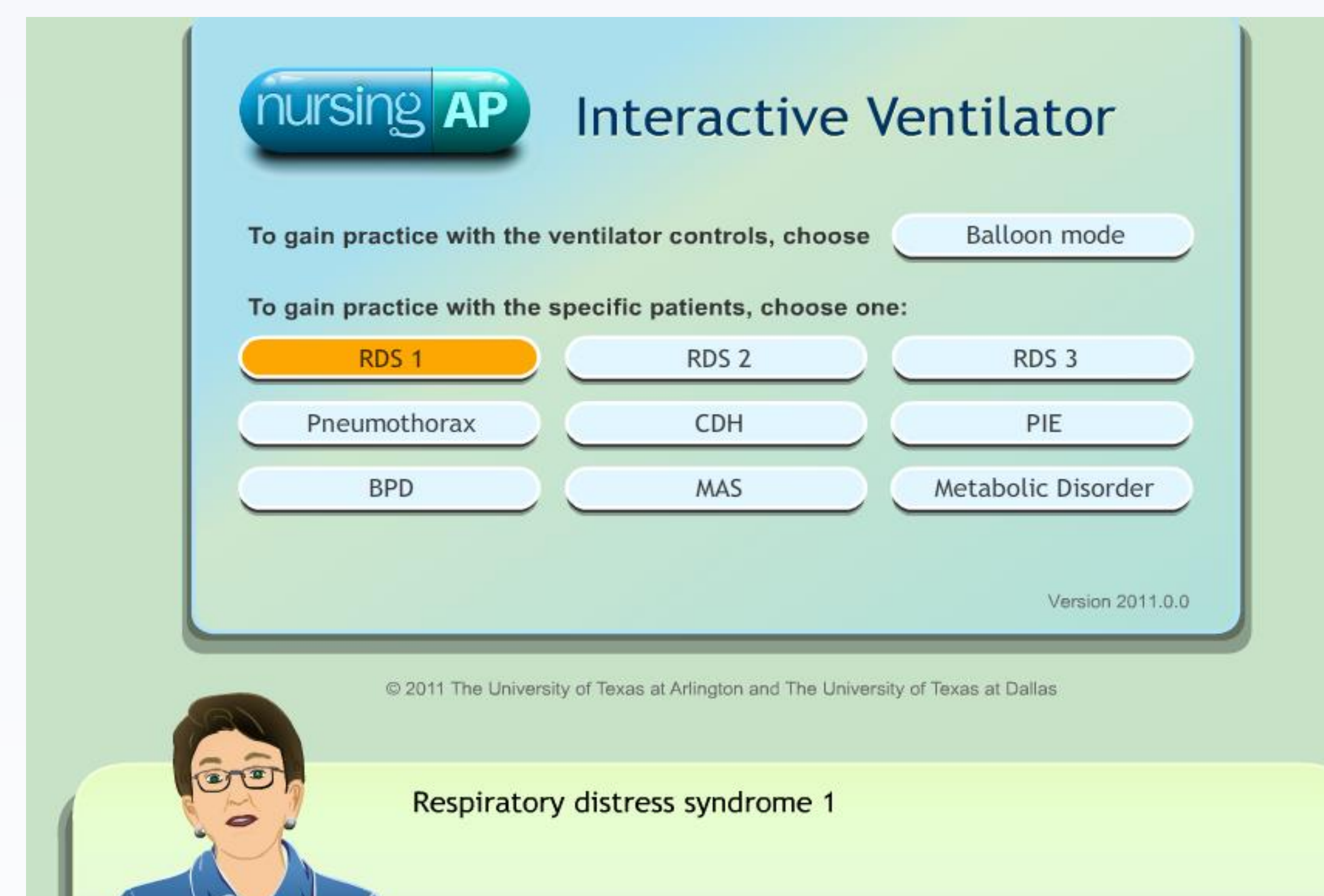
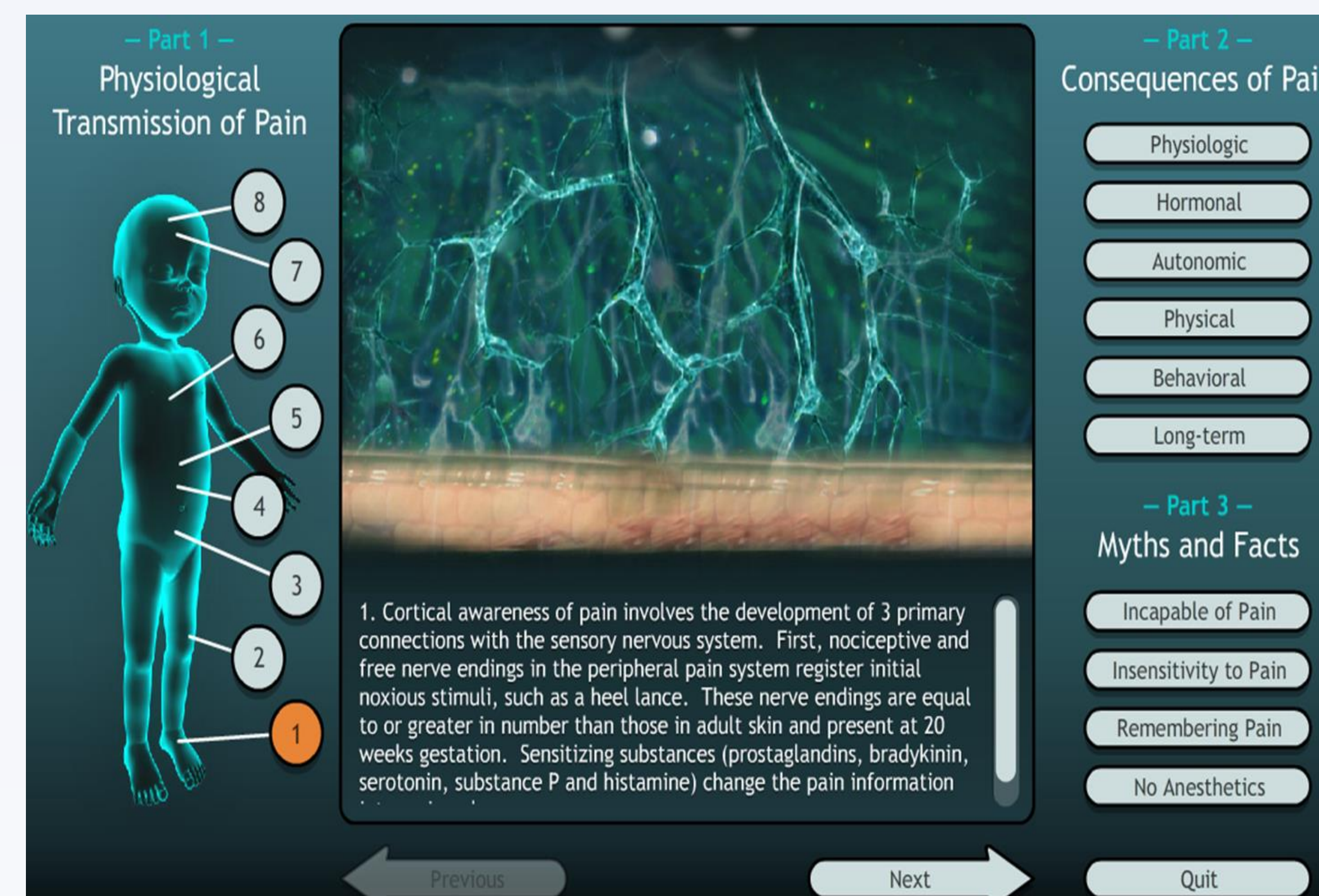
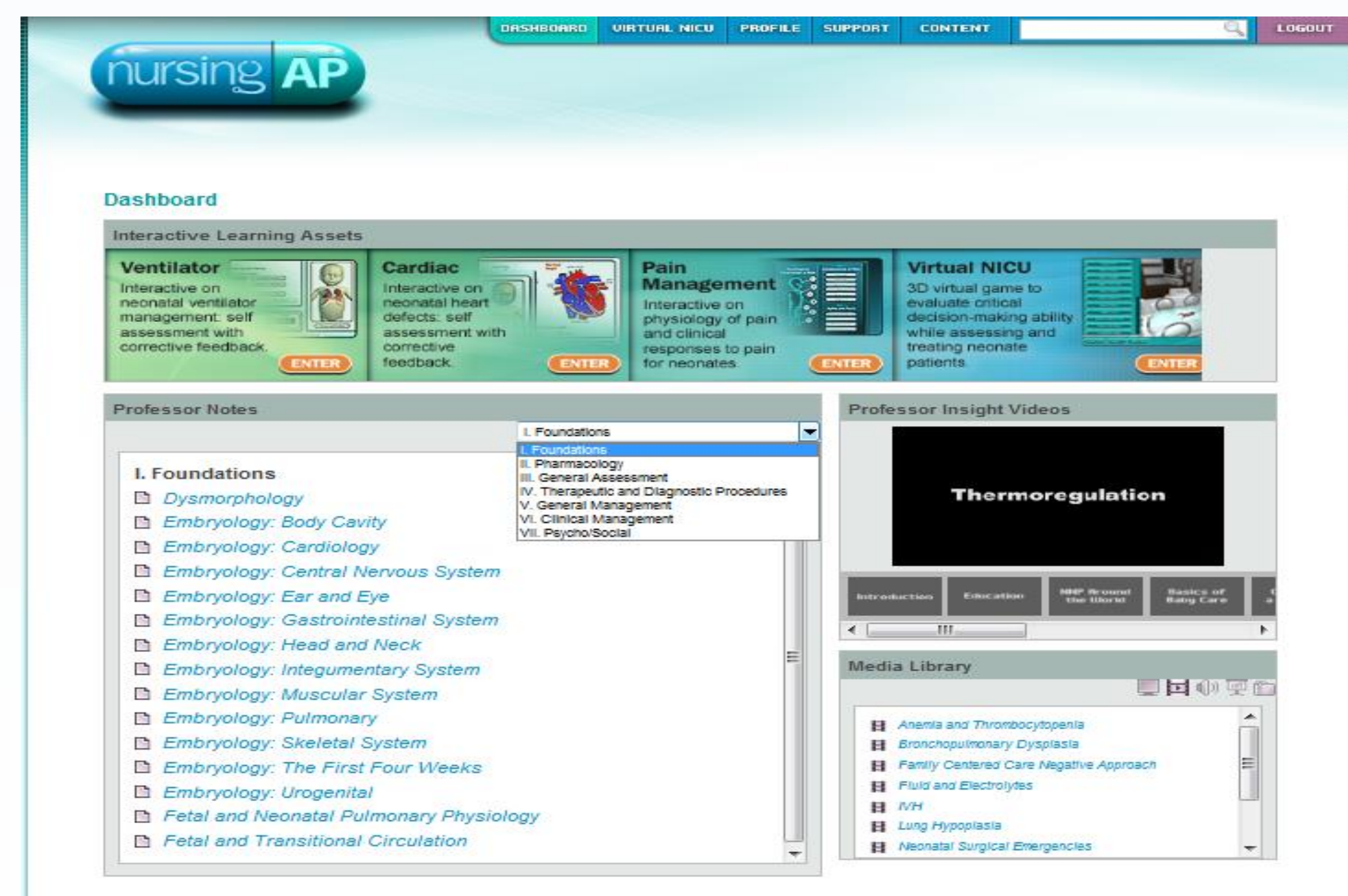
This is a longitudinal, observational study comparing traditional method of education to non-linear asynchronous, internet based portal.

Neonatal experts developed multi-media learning modules for NNPs. Students enrolled in the University of Texas at Arlington College of Nursing and Stony Brook University are participating.

Neonatal Nurse Practitioner Program

An interactive, non-linear, asynchronous website

- Professor notes
 - Multimedia lectures
 - Simple interactives
 - Videos
 - Xrays
 - Audio files
- Simple interactives
- Complex interactives
- Multimedia library
- 3-D Neonatal Intensive Care Unit (Virtual NICU)



Evaluation and Implications for Practice

Assessment/evaluation is "built into" the virtual NICU and the simulation lab experiences.

Data is being collected throughout student experiences.

Preliminary data suggest computer-based learning, gaming technology, and the use of virtual patients can enhance knowledge acquisition and knowledge application.

Asynchronous learning system allows students to complete the training at a pace that suits their learning style.

It also allows them to train as often and as long as they desire.

No educator is required to be present while students are working through the content.

Evidence suggests that the clinical reasoning of experts emphasizes pattern recognition or 'deliberate practice' over logic.

Our research with high-fidelity simulation has found that students who experience opportunities to apply knowledge transition to practice quicker.

Therefore, increasing virtual simulated clinical opportunities may decrease the time to transition from novice to expert.

References on request.

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