

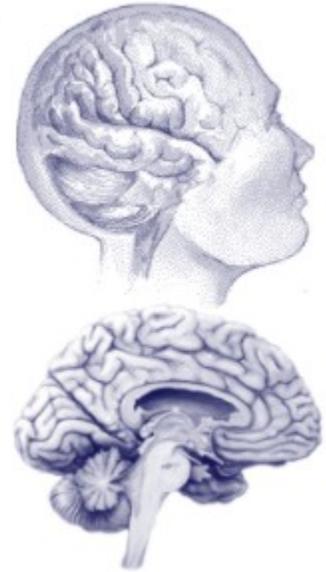
Pathophysiology: Teaching and tools

A. Using technology to teach pathophysiology to different audiences

Pathophysiology has traditionally been a topic that utilizes verbal, textual and visual approaches to teaching. Since the beginning when didactic lectures were primarily used to teach this complex subject, visuals such as slides, specimens, and hands-on laboratory experiences were included to afford a multi-sensory learning experience. Pathophysiology is a topic that is studied by most health care professional students, including nursing, medicine and other allied health professionals. Increasingly, this study has been enriched and enhanced through the use of computer applications of various kinds.

Historically, nurses studied pathophysiology in a superficial way, through means such as lectures, some hands-on lab activity, and visual slides or photographs. Medicine has also been taught in this manner, but medical students have traditionally had access to real-life hands-on practice through the dissection and examination of human cadavers and other specimens.

Since the advent of new technologies, particularly computer programs and applications, new ways of affording rich multisensory learning experiences have become available for teaching subjects such as pathophysiology to health professionals including nursing. An important sector of nursing informatics focuses on nursing education, especially on how to use information technologies to enhance the teaching of nursing students. This includes applying various technologies to provide realistic rich visual, auditory, and interactive learning experiences to hopefully cultivate a richer understanding of pathophysiology principles, assessment, diagnosis, prognosis, and intervention skills and theory.



Learner Interactivity Preferences

Learner interactivity is an important consideration when selecting the best methods to teach and apply technologies to pathophysiology education. “Interactivity is not simply a function of computer-based transactions, but a fundamental success factor for teaching and learning, especially when implemented in an online context. In most cases, regardless of any virtual community that exists, the learner will be working independently and therefore the effectiveness of those communications (interactions) will ultimately determine the effectiveness and efficiency of the learning environment.” (Sims, Dobbs & Hand, 2001, p. 514).

The theory of learner interactivity preferences (developed by Rhodes and Azball in 1985) is particularly significant when teaching fundamental topics like pathophysiology that require cognitive development but also visual and spatial learning. It is difficult to predict the actual preferences of future learners, but measures can be taken to promote all levels of learner interactivity preference within a pathophysiology course.

