VIRTUAL ANATOMY AND ANATOMY LEARNING

Geoff Norman
McMaster University, Hamilton, Canada

Summary:

It would seem self evident that the ability of the computer to present dynamic images from multiple perspectives with the capacity to rotate to different orientations would represent a real advantage in learning anatomy.

It may seem so, but it isn't so. A series of carefully controlled studies of learning wrist skeletal anatomy and gross brain anatomy have shown that multiple orientations actually handicap students with poor spatial ability. Further, when students are left to their own devices, they spend most of the time examining near or at key views. Finally in learning brain anatomy, the ability to control the key view orientation (active learning) resulted in a decrement in performance.

The presentation will review these findings and draw general conclusions about effective and ineffective instructional strategies for spatial learning.

Collaborators in this work include: Amit Garg, Kevin Eva and Anthony Levinson