Integrated Cognitive Simulation

Abstract: Competency in the performance of clinical and procedural tasks requires both technical and cognitive skills. While commercially available VR simulators focus on the former, the Integrated Cognitive Simulator (ICS, www.govirtualmedical.com) has reversed that and provided a cost-effective validated and accessible alternative. The ICS is software-based (not requiring stand-alone hardware other than an extra mouse for two-handed tasks), combines multiple media (including hyperlinked text, internet, interactive anatomy, audiovisual demonstration), uses pre-rendered simulation (VR and/or video sequences), allows testing of knowledge and decision-making and provides proximal feedback using relevant metrics (for trainer and supervisor). There is also the inherent flexibility of self-directed training for different learning styles and for “just-in-time” learning. This approach can be used for individual learning and to “book-end” more traditional labor and time intensive clinical training sessions, ensuring better preparation for learning under supervision. It can also be used to reinforce learning to ensure durability of learning.