

AbstractID: 14561 Title: Education Council Symposium - Effective Use of Web-Based Resources to Enrich Classroom and Collaborative Learning Activities

Advances in digital technology, and especially the rapid developments of the internet, the world-wide web, and associated applications are producing major changes in the process of education. The most significant feature of the web is that it connects learners (students, residents, life-long learners, etc.) and learning facilitators (teachers, mentors, collaborators, etc.) not only with each other, but with extensive resources that can enrich and enhance their learning experiences.

Learning is a natural human function in which personal experiences produce changes in the brain. Of specific interest to us here are the changes that form knowledge structures of the physical aspects of a variety of medical imaging and therapeutic procedures. There are many variables associated with a learning experience that determine the characteristics of the knowledge structures and especially the outcomes with respect to the ability to perform specific functions.

It is recognized that highly effective learning experiences are ones in which the learner is in direct and interactive contact with the physical reality, the "real thing," under the guidance of an experienced professional and perhaps working with collaborating learners. This is demonstrated in clinical medical education where there is direct contact with patients or the images used in radiology. Medical physics education is often challenged with the separation or the barrier that exists between a class and conference room learning activity, or small group discussion, and the physical reality that is being studied. This is generally because of issues of efficiency relating to the cost (time, resources, financial, etc.) to provide learners with rich, direct, and interactive experiences.

Vision is generally the most powerful medium for sensing, exploring, and investigating most aspects of the physical universe, and this is especially true for the field of medical physics. Digital technology for the creation, management, and distribution of visual representations and images is one of the major innovations in modern education. It provides the classroom/conference learning facilitators with the opportunity to guide the learners in a highly effective learning experience.

Learning Objectives:

1. Observe and evaluate learning activities with respect to effectiveness in producing desired outcomes and learner capabilities.
2. Experience the value of visuals and images to enrich learning experiences.
3. Use visuals and images to enhance human performance for both teachers and learners in a variety of learning activities.
4. Explore the web as a source of shared resources to enhance medical physics learning activities.
5. Remembering, "Technology is the tool; it is not the teacher."