A MULTIPLANAR LEARNING MANAGEMENT SYSTEM TO SUPPORT COMPETENCY-BASED EDUCATION

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Summary:
We are developing a novel, interactive, 3-dimensional graphical user interface that will serve as the map and overview for an LMS database that will in turn support, a comprehensive competency-based educational pilot program for the medical school. This will simplify navigation and understanding of our LMS. There are no existing models for a 3D graphical user interface for a Learning Management System, this concept is innovative.

Introduction:
Two crucial movements in post secondary higher education are competency based programs and self-regulated learning. We are designing a new pilot program to incorporate these concepts. The chief characteristic is to 'Reverse engineer' the program by first determining the outcomes that should be expected of every graduating medical student. These outcomes will be mapped to specific learning objectives, learning experiences, innovative assessments, and performance standards. Self directed learning in medical education can be frustrating, without systematic organization and full understanding by teacher and student of the overall educational plan. The success of such educational innovations is the LMS.

Details of Project: A 3-dimensional graphical interface being designed to provide the conceptual and technical representation of the complex and comprehensive LMS database. This will enable: students to be effective self-regulated learners, instructors to see where students are progressing and administrators to understand the organization of the educational program. There are 3 inter-related major components of the new medical education approach, which is why 3 dimensions is needed for the graphical user interface: (1) Nine Competency Domains: Clinical Skills, Communication Skills, Diagnosis and Risk Assessment, Education and Assessment of Self and Others, Professionalism, Scientific Reasoning, Social Context of Health and Disease, Systems of Care Delivery, and Therapeutics and Management. (2) Common patient symptoms/complaints - These 128 problems represent the finite set of presenting problems in most patient presentations, validated by the Royal College in Canada. (3) Specific outcomes, accompanied by relevant specific learning objectives, learning experiences, assessments and performance standards categorized by the competency domains (#1) and patient symptoms (#2), The graphical user interface that organize these components will be constructed by N Formation Design™ (http://www.nformationdesign.com/) We will assess its utility with a survey and usability study of 20 users who will be assigned navigation and retrieval tasks. http://www.med.umich.edu/medschool/curriculum/LMS_Short_07.htm.

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