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Facilitating the Integration of Problem-Based Learning in Radiologic Science Education: The Role of the Educator

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Abstract

This qualitative research study examines the role of the educator in a problem-based learning program. Course observations and interviews were conducted with nine skilled educators at McMaster University, Hamilton, Ontario. In determining how to implement problem-based learning, critical decisions must be made about curriculum design and faculty development. Problem-based learning is a self-directed, learner-centered teaching method, and the educator serves as a facilitator. For faculty to make the transition to problem-based learning and fully embrace the concept, educators must believe they have the skills and resources to facilitate the process. Strategies for successful implementation of problem-based learning into radiological sciences are discussed.

Tailoring Instructional Strategies to a Student's Level of Clinical Experience: A Theoretical Model

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Abstract

Clinical education is a crucial component to a healthcare education program, serving as the time during which students gain knowledge and skills related to their field of study. Past studies have demonstrated a need for the optimization of clinical education. This paper presents a four-stage student clinical performance model that defines the roles of the student and clinical preceptor for each stage accompanied by respective goals. By designing a clinical education program requiring that assessments be tailored according to a student's stage of clinical performance, a more accurate evaluation of the student's growth and development can be established.

Risk Factors for Failure on the Magnetic Resonance Imaging Certification Examination

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Abstract

Epidemiologic study methods are used to determine risk factors for first-time failure on the American Registry of Radiologic Technologists (ARRT) magnetic resonance imaging (MRI) certification examination. Comparing first-time MRI certification examination post-primary candidate failure rates to primary candidate failure rates, a retrospective cohort study gives a failure risk ratio $RR = 1.59$ with a 95% confidence interval (1.23, 2.06). Comparing first-time MRI certification examination female candidate failure frequency to male candidate failure frequency, a case-control study gives a failure odds ratio $OR = 9.0$ with a 95% confidence interval (1.14, 71.2). Student performance data confirm that candidates with first-time failure on the MRI certification examination typically have multiple areas of weakness, including weakness in the heavily weighted area of MRI physics.