Competency

Competency refers to the ability to do something successfully or efficiently. It includes a combination of knowledge, skills, and behaviors that are necessary to perform a task or role effectively.

Types of Competencies: Technical Competency – specific knowledge or skills related to a job (e.g., programming, operating medical equipment).

Behavioral (or Soft) Competency – traits or interpersonal skills (e.g., communication, teamwork, adaptability).

Core Competency – fundamental qualities that are essential across roles in an organization or profession (e.g., integrity, problem-solving).

Leadership Competency – skills needed to lead others (e.g., strategic thinking, decision-making, conflict resolution).

Example: A nurse's competencies may include clinical knowledge, patient communication, time management, and ethical decision-making.

In surgical education, technical competency is one of the key factors of efficacy in the curriculum, and it is an independent factor that is directly associated with postoperative patient outcomes [1) 2)]

By gathering large amounts of data from surgical simulation training, machine learning, and deep learning algorithms can be used to design intelligent tutoring systems to deliver a curriculum enhanced with artificial intelligence (AI) [3) 4) 5)].

An intelligent tutoring system is a pedagogical tool powered by an AI model that can provide learners with tailored performance assessment and feedback

Neurosurgical residency competency

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