

Chapter 2

Instructional Strategies and Sequencing

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ABSTRACT

An instructional strategy is a designed course of action for an instructional goal framed by credible and realistic problems in order to activate prior knowledge and experiences in order to learn new knowledge and skills. In medical education, instructional strategies are designed as purposeful interventions to meet educational goals and achieve socio-cultural norms of medical practice. Reigeluth (1983) identified three major categories for instructional strategies: organizational, delivery, and management. The purpose of this chapter is to define and classify key concepts related to instructional strategies from an instructional design perspective and then apply them toward achieving medical education goals.

INTRODUCTION

Medical education, guided through a philosophy of modern science, has continuously re-analyzed the scientific explanation process to help communicate its social purpose (Tang, 2015) by: (a) *reporting* information through an organized classification, description, or comparison approach, (b) *explaining* processes and underlying causes, (c) *experimental reporting* through presented methodology, results, and discussion, and (d) *argument* of evidence to support a claim or position. The changing dynamics of medicine is not lost on medical educators, who establish and re-establish educational goals to align with evidence-based medicine practice expectations of modern society.

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Established medical educational goals might vary from one U.S. medical college to another, but there are over-arching commonalities. Common goals include (The University of Kentucky College of Medicine, 2016):

1. Providing patient care through demonstration of knowledge, skills and attitudes to effectively evaluate and treat common health problems and promote the health of patients.
2. Demonstrating medical knowledge through the application of fundamental biomedical, clinical, and social science to the care of patients.
3. Demonstrating practice-based learning and improvement through critically evaluating performance and identifying opportunities for improvement.
4. Providing interpersonal and communication skills that develop effective and appropriate relationships with patients, colleagues, and other health professionals.
5. Demonstrating professionalism through sensitivity and respect of patient individuality, accountability of clinical and educational activities, and interactions with family members as well as colleagues.
6. Applying a systems-based practice that incorporates the inter-professional healthcare team and protects organizational accountabilities of timeliness, patient-centeredness, and fiscal efficiency.

Reaching these goals can be heavily influenced by the medical educator's choice of instructional strategies throughout the classroom and clinic. The purpose of this chapter is to introduce strategic examples of instructional strategy implementation throughout the medical education environment in order to achieve instructional goals.

Foundations of Instructional Strategy

An *instructional strategy* is a designed course of action for an instructional goal framed by credible and realistic problems in order to activate prior knowledge and experiences in order to learn new knowledge and skills. In medical education, instructional strategies are designed as purposeful interventions to meet educational goals and meet best-practice guidelines of medical practice. This chapter highlights three categories of instructional strategies: organizational, delivery, and management (Reigeluth, 1983). Organizational strategies are intended to scope, sequence, or specify order to activities of small and large bodies of information as well as instructional events, or activities. Delivery strategies in medical education are intended to support decisions on readiness of learner transition between stages of education, training, and practice. Management strategies support structures to promote self-awareness of knowledge, skills, and attitudes necessary to guide development of a competent professional. This chapter largely emphasizes organizational and delivery instructional strategies in medical education: micro strategies, problem-based learning (PBL), and distance learning (DL). Practical applications for each are presented along with guiding theory and design principles leading up to implementation.

Instructional strategy is a preferred term used in the instructional design (ID) field instead of teaching methods or approaches for a variety of reason. One simple explanation is that instruction might not always be delivered by an instructor, but could be delivered through alternative means instead. The term, *instructional strategy*, is a combination of *strategy* and the adjective form of *instruction*. *Strategy* is a goal attainment approach developed through purposeful and intentional courses of action. *Instruction* engages learners through authentic problems in order to activate existing knowledge and provide a foundational framework for new knowledge (Merrill, 2002). The authors believe elements of ID theory and

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