Section 4.3

Educational theories

Alison Hutchinson PhD
Postdoctoral Fellow, Knowledge Utilization Studies Program, Faculty of Nursing, University of Alberta

Carole A. Estabrooks PhD
Professor and CIHR Canada Research Chair in Knowledge Translation, Faculty of Nursing, University of Alberta
Educational theories

- Can be used to inform the design and testing of educational interventions
- Can help explain the effectiveness of educational interventions
- Knowledge deficits (identified or implied) usually prompt the use of educational interventions
Learning domains

- **Cognitive** – acquisition of academic knowledge
  - Didactic lectures, academic detailing and computer-based modules

- **Affective** – adoption of values, beliefs and attitudes that are important precursors to behavior change
  - Group interaction, self-evaluation, role play, case studies and simulation

- **Psychomotor** – skill acquisition and development
  - Supervised skill performance, practice

(Stuart et al., 2004)
Learning styles

• Activist learns through experience, tends to adopt an innovation readily but may become bored and quickly reject the innovation

• Reflective systematically collects information on all options, and can procrastinate leading to delayed adoption

• Theoretical analyzes the information and models cause and effect before acting

• Pragmatic bases behavior on experience with the innovation

(Grol et al., 2007; Lewis & Bolden, 1989)
Motivation to learn

- **Intrinsic sources** from within the individual e.g., interest in acquiring knowledge, and are considered more powerful than external sources

- **Extrinsic sources** external e.g., employment or career advancement requirements, mandate or directive

(Grol et al., 2005)
Learning theories

- Behaviorist approaches
- Cognitivist approaches
- Constructivist approaches
- Humanist approaches
- Social learning approaches
Behaviorist approaches

• Behaviorist theorists:
  • Believe individuals’ behavior is influenced by the context in which they work
  • Look for observable and measurable responses to stimuli (Merriam & Caffarella, 1999)
  • Believe reinforcement is a valuable part of learning (Mann, 2004)

• Behavior theory can inform design of interventions such as:
  • Performance appraisal
  • Development of behavioral learning objectives
  • Use of competencies
Cognitivist approaches

- Examine approaches to acquisition, interpretation, storage and use of information in order to develop awareness, understanding and meaning (Merriam & Caffarella, 1999)
- Cognitive theorists believe modeling behavior is one means by which learning occurs
- Cognitive theory can inform design of interventions such as:
  - Preceptor programs
  - Role modeling
  - Problem-based learning methods
Constructivist approaches

• Claim that learning is based on reflection and evaluation of past experience (Merriam & Caffarella, 1999)

• Constructivist theory can inform design of interventions such as:
  • Reflective journaling
  • Critical incident debriefing
  • Preceptorship programs to stimulate reflection on practice
Humanist approaches

- Conceptualize learning as a function of growth (Merriam & Caffarella, 1999)
- Learning through experience, autonomy and individual responsibility for learning are emphasized (Merriam & Caffarella, 1999)
- Adult learning theory dominates the humanist approaches and the principles of adult learning can be used in the development of education interventions such as:
  - Self-directed learning
  - Small group work
  - Academic detailing
Social learning theory

- Focuses on how learning occurs through social and environmental interaction (Merriam & Caffarella, 1999)
- Learning can occur through observation of others and personal experience (Mann, 2004)
- Social learning theory can inform design of interventions such as:
  - Role modeling
  - Mentorship programs
Evidence for learning theories

- Limited evidence for these theories exists (Stuart et al., 2004)
- The effectiveness of educational interventions has been the focus of a large body of research
  - Traditional, passive, non-interactive teaching methods have little effect on health professionals’ behavior and no recognizable effect on patient outcomes (Stuart et al., 2004; Mazmanian & Davis, 2002)
  - Some elements of continuing education have been shown to be effective among physicians (Mazmanian & Davis, 2002)
Future research

- Research testing the effectiveness of educational interventions should be:
  - designed to promote generalizability and to avoid methodological limitations such as unit of analysis error
  - underpinned by theory
  - designed to test the assumptions of educational theory
  - reported in detail to include description of the intervention and context
  - include an economic evaluation


Mann KV. The role of educational theory in continuing medical education: Has it helped us? The Journal of Continuing Education in the Health Professions 2004;24:S22-S30.