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Principles of Adult Learning for Achieving Effective Teaching

Karen K. Hoffmann, RN, MS, CIC, FSHEA, FAPIC
Clinical Instructor
Division of Infectious Diseases
University of North Carolina School of Medicine
2019 APIC President

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Goals and Objectives

Applying adult learning principles for effective teaching.

- **Specify learning strategies (needs, motivators, roadblocks) and learning domains**
- **Identify learning theories that explain learner motivation and success**

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Problems with Non-compliance with critical practices

- **Appropriate hand hygiene**
- **Pre-cleaning and disinfecting endoscopes correctly**
- **Following isolation precautions**
- **Wearing appropriate personal protective equipment**
- **Using aseptic practices**

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“Learning is a way to transform knowledge, insights, and skills into behavior. The learning environment in healthcare settings is unique because of the diversity of the healthcare personnel.”

APIC Text of Infection Control and Epidemiology 4th Edition



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Infection Prevention & Control Audience:

- Patients/Family
- Housekeeping
- Dietary
- Nursing Assistants
- LPNs
- Nurses
- Special Technicians (Radiology, Laboratory)
- Resident/House staff
- Physicians


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Adult Learners' Needs

- Acceptance
- Respect
- Support
- Spirit of mutuality
- Freedom of expression
- Known by name
- Valued as unique

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Adult Learner's Motivators


Self concept

- How they see themselves
- How do they want others to see them
- How do they want to be treated

Motivation

- Internal incentives
- Curiosity
- External motivators


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Learning Styles

- Left brain dominant - technical, rules, regulations
- Right brain dominant - intuitive, artistic, global thinker


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Roadblocks to Learning

- Education/training does not always predict improved behavior
- Learners become rapidly bored
- Adults are afraid of embarrassment
- Fear of failure


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Learning Process

- **Transforming new knowledge, skills, and values into behavior**
- **Directed toward goals**
- **Involves conflict and resistance to giving up comfortable ways of doing things**
- **Decision to change is necessary before learning can occur.**

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Historical Learning Theories

Learning theory common elements- learning produces a relatively permanent behavior change and is an internal process that varies from person to person.

- **Psychoanalytic**-control urges (Freud)
- **Behavioralist**-reward-motivation-conditioning-productivity (Pavlov, Skinner)
- **Humanist**: hierarchy of needs to achieve highest level of self actualization (Maslow)
- **Cognitive**: affiliation, power (Piaget)

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Alternative Learning Theories

- **Andragogy vs. pedagogy-adult/child**
- **Constructivism**
- **Collaborative learning**
- **Outcome based education**

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Knowles Theory of Andragogy

Andragogy vs. pedagogy-adult/child (Knowles)

Characteristics of Adult Learners:

- 1) Motivated by job needs
- 2) Accumulated life experiences
- 3) Prefers practical information
- 4) Immediate application
- 5) Problem solving orientation to learning

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Alternative Learning Theories

- **Constructivism** – Learners come with already formulated knowledge, ideas, and understandings. Teachers pose questions and guide students to find own answers.

```
graph TD; Student --> Teacher; Teacher --> OtherClassMembers[Other Class Members]; OtherClassMembers --> Student; subgraph Cycle; Student; Teacher; OtherClassMembers; end; Cycle --- CKS[Constructivist Knowledge Sharing];
```

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Modes of Learning

Retention of Information based on:


- Lecture = 5%
- Reading = 10%
- Audiovisual = 20%
- Demonstration = 30%
- Discussion Group = 50%
- Practice by doing = 75%
- Teach others/immediate use = 90%

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Alternative Learning Theories

- Collaborative learning - two or more people learn or attempt to learn something together older employees and giving trainees more of a hands-on approach.




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Alternative Learning Theories

- Outcome Based Education – competency; ability to demonstrate results of learning; from teacher center to student centered; teacher as a coach asks questions and provides guidelines for acquisition of knowledge.

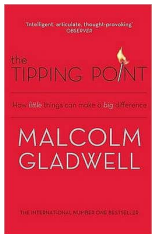



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The Tipping Point

100th Monkey Phenomenon Shared Consciousness



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Learning Domains

Learning domains:

- **Cognitive** (Recall, intellectual, application)
- **Affective** (New ideas, feelings, desire to learn)
- **Psychomotor** (Learning new skills or new way of acting or doing)


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Cognitive Learning

- **Definition:** Recall or recognition of knowledge involving the acquisition of new insights, new ways of thinking, problem-solving, and the development of intellectual abilities.
- **Examples:**
 1. *Recognize* the protective attire to be worn in caring for a patient on Contact Precautions.
 2. *Evaluate* IPC policies specific to traffic control in the operating suite.

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Affective Learning

- **Definition:** Learning new attitudes, values, beliefs, and way of being.
- **Examples:**
 1. Creating an environment which facilitates the learning experience and development of positive attitudes. Try to achieve a comfort level that reduces inhibition, promotes communication and creativity of thought.

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Psychomotor Learning

- **Definition:** Learning new skills or new ways of acting or doing.
- **Example:** Demonstrating the appropriate techniques used to suction a tracheostomy.

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People generally remember... (learning activities)

- 10% of what they read
- 20% of what they hear
- 30% of what they see
- 50% of what they see and hear
- 70% of what they say and write
- 90% of what they do.

Passive Learning

Active Learning

People are able to... (learning outcomes)

- Define List Describe Explain
- Demonstrate Apply Practice
- Analyze Define Create Evaluate

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Customized Infection Prevention and Control Education

Differentiated Learning Strategies Factors

- General educational background
- Reasons for attending
- Current level of knowledge
- Level in the decision-making tree


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Peer to Peer Mentoring Program

- CDC HH Guideline describes the importance of role models.
- HH compliance is influenced significantly by behavior of other HCP.
- Role modeling to high standards and improve safety.
- Improves competency and compliance


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Precede Model

- **P**redisposing factors - OR staff must believe wearing head coverings will prevent HAIs
- **R**einforcing factors – positive feedback
- **E**nabling **C**onstructs - reduce barriers comfort and convenience
- **D**iagnosis and **E**valuation - compliance measurement


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Hybrid Educational Program Model

- “Hybrid” or “blended” learning is a formal education course.
- Some traditional face-to-face or classroom methods are replaced by online learning activities.
- Example: attendance at a live event with assigned follow-up activities.

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Summary

HCP education and training is unique and complex because of a diversity of personnel. Successful strategies includes considering:

- **Age, cultural background, ethnicity, educational level, and learning styles.**
- **Literacy, cultural diversity, cross training and technological advances**
- **Applying learning theories and educational needs of learner population and institution.**

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"I believe that education is the principal component of infection control. Without education, every other activity of our specialty is just so much meaningless busy work."

Sandra J. Pfaff, 3rd Annual Carole DeMille lecture

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