Learning Theory To Improve Teaching

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Objectives

› Define (4) major learning theories and (5) modalities for learning styles

› Apply learning theory and styles to specific clinical situations

› Describe 2-3 strategies and skills to accommodate and overcome barriers to learning

Some Questions

› Why would/should we look at learning theory?

› What do you know about learning theory - or how knowledge is built?

Deep Versus Surface Learning

Surface Learning is a tenuous understanding.

The learner:

- Focuses on discrete bits of information
- Memorizes, but cannot explain concepts
- Has difficulty ordering material into an organized presentation (or re-ordering it)
- Has difficulty using the information in new ways

Deep Versus Surface Learning

Deep learning is real understanding; the learner "owns" the material.

The learner can:

Explain the information	Focus on what is important	Relate the concepts to previous knowledge	Organize the content in meaningful ways	Use the information in new ways

Learning Theories

COMPARISON OF LEARNING THEORIES		
Theory	Theorist(s)	Definition
Behaviorism	Pavlov, Skinner	Demonstrated behavior changes as response to stimulus
Constructivism	Vygotsky, Ausabel, Piaget	Active integration of new information with old
Social Learning	Bandura	Observing as a model and practicing
Social-Culturism	Casden, Gee	Meaningful use of language in a social situation

Behaviorism

Learning = demonstrated change in behavior

- Positive stimuli (rewards) reinforce behavior
- Negative stimuli (punishments) extinguish behavior
- Reinforcers can be extrinsic or intrinsic
- Primary theorists: Pavlov & Skinner

Constructivism

Learning = the active integration of new knowledge with previously learned information

Strengths: Consistent with research on cognitive development and structure and function of the brain

Clear understanding of deep learning

CONSTRUCTIVISM

Emphasis on what the **learner** does

Learner comes to the learning situation with **prior knowledge**

Learner **actively connects** new knowledge with prior knowledge, and tries to make sense of it

SOCIAL LEARNING THEORY

<u>Learning</u> = Observing the behavior of a model and imitating that behavior

Social Learning Theory

- Strengths/outcomes: Learner imitates teacher behavior; teacher as model and guide

- Weakness: Does not account for "private" cognitive learning

- "Self-regulation" = We observe and reward our own behavior

- Stages: attention, retention, imitation, motivation

- Deep learning is ability to imitate

Socio-cultural Learning Theory

- <u>Learning</u> = the construction of knowledge by using language meaningfully in a social situation

- <u>Strengths/outcomes</u>: Explains some cultural variations in learning

- Absorbing the "discourse" accounts for deep learning

- <u>Weakness</u>: Focuses primarily on linguistic learning

Adults and Learning

We're all adults – how do you learn best?

What techniques or methods support your learning?

Inhibit your learning?

The "Good" Teacher of Adults

Cannot learn for a learner – yet the teacher is **accountable** to the learner (environment, content, methods)

Ensures that learners are fully and actively **engaged**
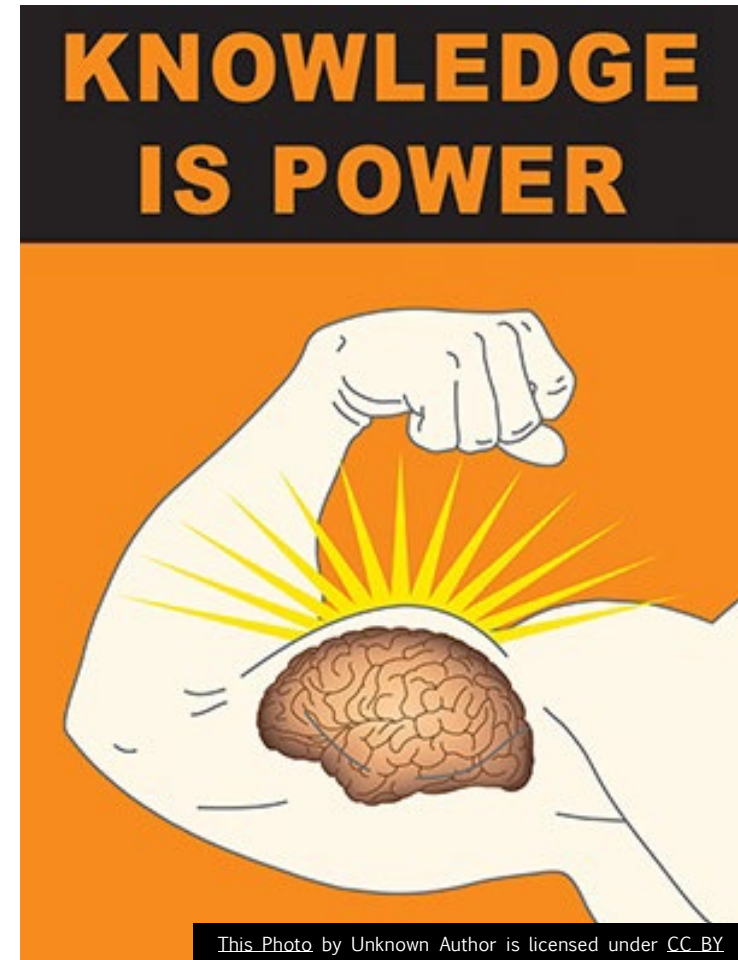
How do we fully engage our learners?

Implications for Teaching

› Adults have a broad base of experience upon which to draw and to share with others.

› Respect that experience:

 − Ask about, acknowledge and use the experience (addiction counselors, PTs, social workers …)

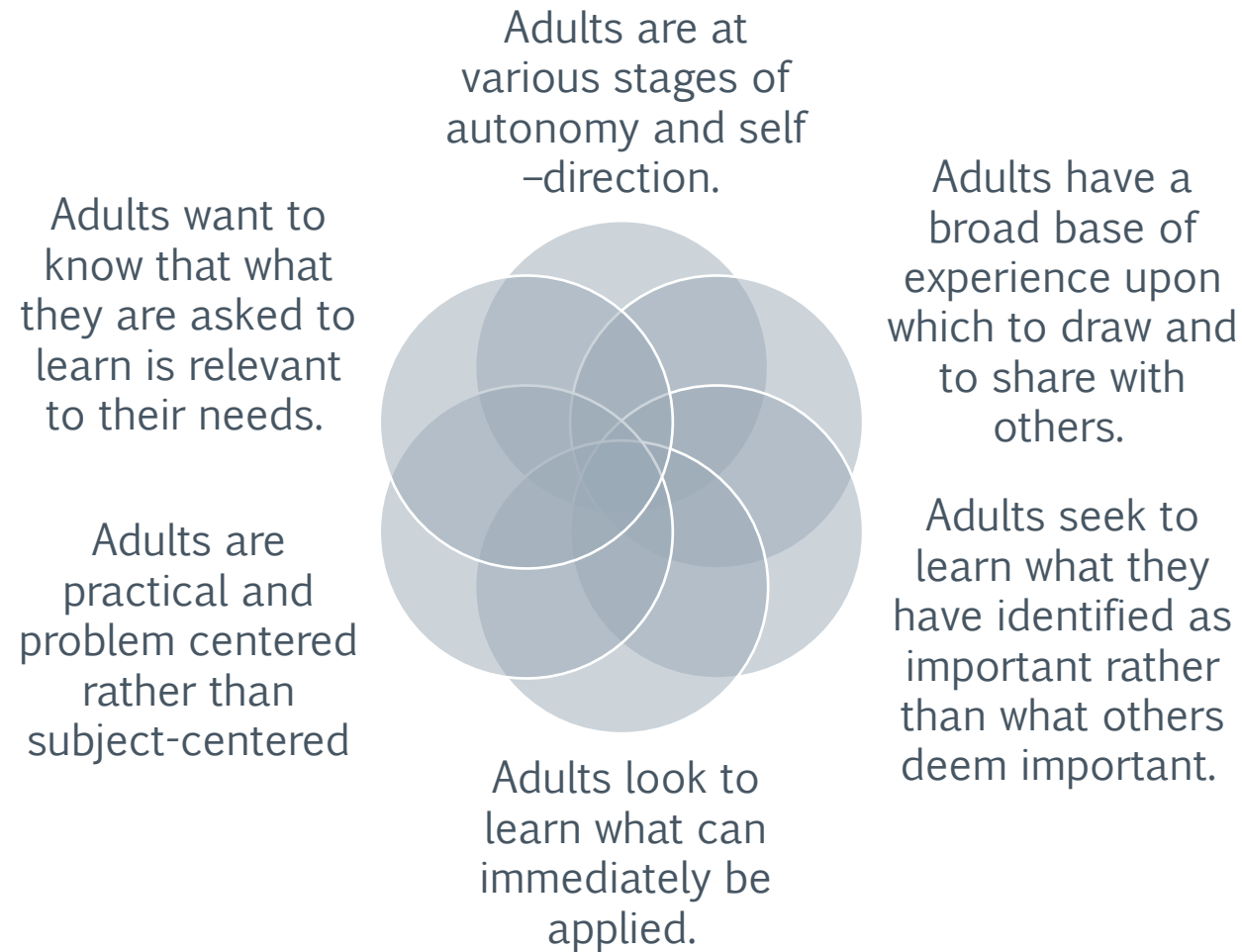 − Present content that invites critical analysis, input and ideas for personal application

Implications for Teaching

› Adults look to learn what can immediately be applied.

› As clinical teachers, you have a real advantage here - how can/do you do this?

KNOWLEDGE IS POWER

Characteristics of Adult Learners

Adults are at various stages of autonomy and self–direction.

Adults have a broad base of experience upon which to draw and to share with others.

Adults want to know that what they are asked to learn is relevant to their needs.

Adults seek to learn what they have identified as important rather than what others deem important.

Adults are practical and problem centered rather than subject-centered

Adults look to learn what can immediately be applied.

Summaries

› Learning theories include concepts of:

– Behavior acquisition through stimulus/response

– Observation and modeling the behaviors of others

– Acquisition and meaningful use of the professional language

– Active integration of new knowledge with old

SUMMARIES

1. Learners come with *prior knowledge*

2. Prior knowledge must be *activated* for the connections to happen

3. Learners must *actively construct* new meaning/knowledge

4. Deep learning takes time

5. Motivation has a strong impact on learning

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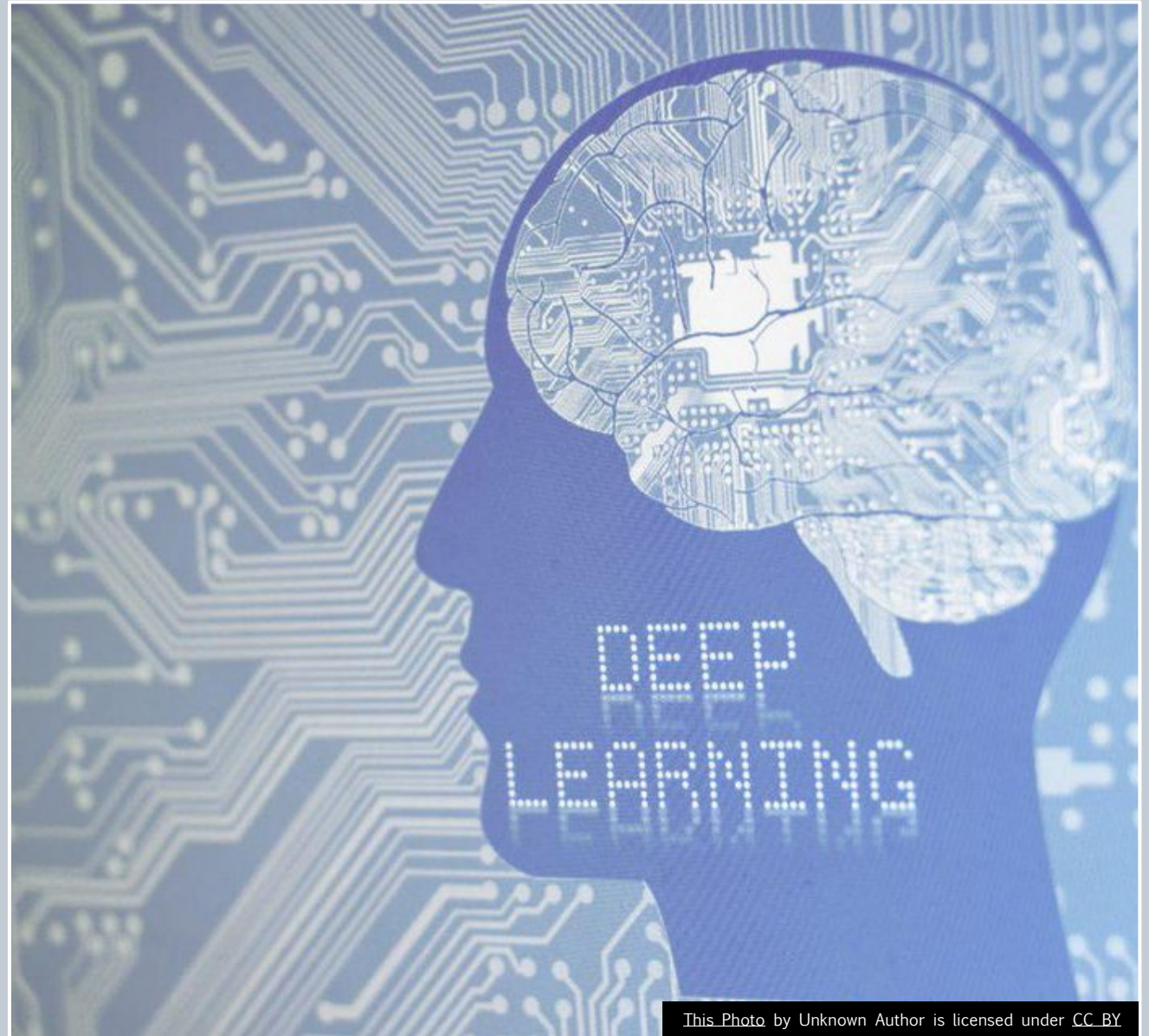
Summaries

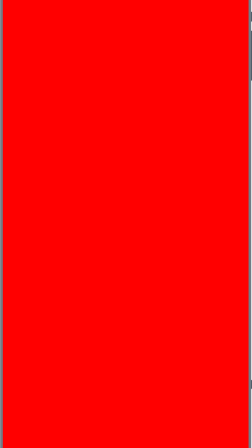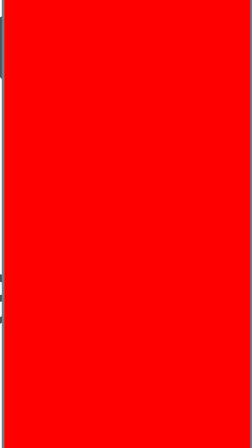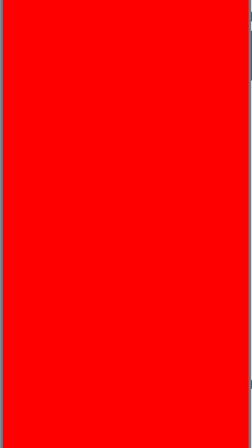**Adult learners do best:**

In a safe environment	
When their experience is respected	
When material is clearly relevant and immediately applicable to their work	
When they are responsible for their learning	

Pause Procedure

› What was the [ ]iest [ ]ast clear point so far?

› Reflect on you[ ] lea[ ] – how could this presentation b[ ]red [ ]proved?

Facilitating Learning

Learning Styles and Strategies

Learning Styles

› Learning theories provide an explanation for how different adults can learn differently and propose different definitions of what learning *is*

› Learning *styles,* however, refer to methods of teaching that align with learners' preferences

  – Though research shows that all learners benefit from varying "entry modes" into learning (Kaplan, 2013)

Learning Styles

Input mode: Visual, Auditory or Kinesthetic

Motivation: Extrinsic to Intrinsic

Content: Practical to Conceptual

Social Context: Independent to Interpersonal

Plan: Strategic to Spontaneous

Implications for Teaching

Acknowledge the usefulness of different styles

Help your learner identify his/her preferences

Accommodate your learner when appropriate

Varying the way that you teach will also make you a more flexible teacher

This is relevant for teaching patients as well

What if they don't get it?

› Sometimes we encounter barriers to effective teaching

› Teachback

› Active reflection

Practice

› Now it's time to utilize all of this information by examining a few cases.

Case #1 - Knee Injection

› A 60 yo male patient presents with increased pain and swelling in his left knee. He has responded well in the past to drainage and injection of steroid/lidocaine. Your learner is interested in sports medicine and would love to help with this procedure, but doesn't feel confident enough to do the procedure on his own with you observing. How do you teach in this situation?

  – NP student who just started the clinical rotation

  – 3rd year medical student who has completed internal medicine and surgery and loves to draw

  – 3rd year family medicine resident who is thinking of applying to a sports medicine fellowship

Case #2- something isn't clicking

› You have asked your med/NP/BH student who will be seeing one of your patients with poorly controlled diabetes and hypertension. You review the patient's history prior to the learner seeing them, and discuss potential treatment strategies. The learner doesn't' say much during your talk, and returns after seeing the patient presenting them as motivated to make changes in their exercise regimen. While this is great, the patient's A1C today was 13.1%, and you feel you need to start insulin. The learner hadn't considered this.

We've covered a lot. What are your thoughts and questions?

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