Making expert thinking visible:

Harnessing cognitive apprenticeship to improve teaching

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Objectives (the “what”)

- Describe the cognitive apprenticeship framework as it relates to teaching in workplace environments
- Evaluate cognitive apprenticeship strategies that can be applied to enhance the learning environment
- Develop a plan to integrate strategies to optimize learning in the workplace

What do YOU want to learn?

Purpose (the “so what”)

- As we become more “expert”, it can be more difficult to teach complex topics
- Cognitive apprenticeship is a framework that aids teaching with different strategies and considerations to optimize the learning environment
- Experts can immediately apply these practices into their workplace education

What is your reason for attending?

Expectations (the “say what?!”)

- Who is this session (not) for?
- What are the assumptions?
- What should you (not) expect from this session?
- What are (in)appropriate behaviors during this session?

Questions, comments, or concerns?

Reflect & Share

Positive	Negative
• Examples of ideal learning environments • What works?	• Examples of non-ideal learning environments • What does NOT work?

Key Terms

- Cognitive Apprenticeship
- Scaffolding
- Situated Learning
- Modeling
- Sequencing
- Reflective Practice
- Coaching
- Zone of Proximal Development
- Intrinsic Motivation

Self-Assessment

I consistently demonstrate how to perform clinical skills to learners.

I consistently give useful feedback after direct observation of learners.

I consistently adjust my level of support for learners based on need.

I consistently ask learners to provide a rationale for their actions.

I consistently ask learners to reflect on their learning experiences.

I consistently ask learners to apply their learning to new scenarios.

Why Cognitive Apprenticeship?

What is a major skill or task you want learners to be able to do at the end of an experience?

Four Domains

Content

Sequencing

Methods

Sociology

So what?

Content

Let's APPLY it

Types of knowledge required for expertise

- Domain knowledge
- Heuristic strategies
- Control strategies
- Learning strategies

Sequence

Let's APPLY it

Keys to ordering learning activities

- Increasing complexity
- Increasing diversity
- Global to local skills

Sociology

Let's APPLY it

Social characteristics of learning environments

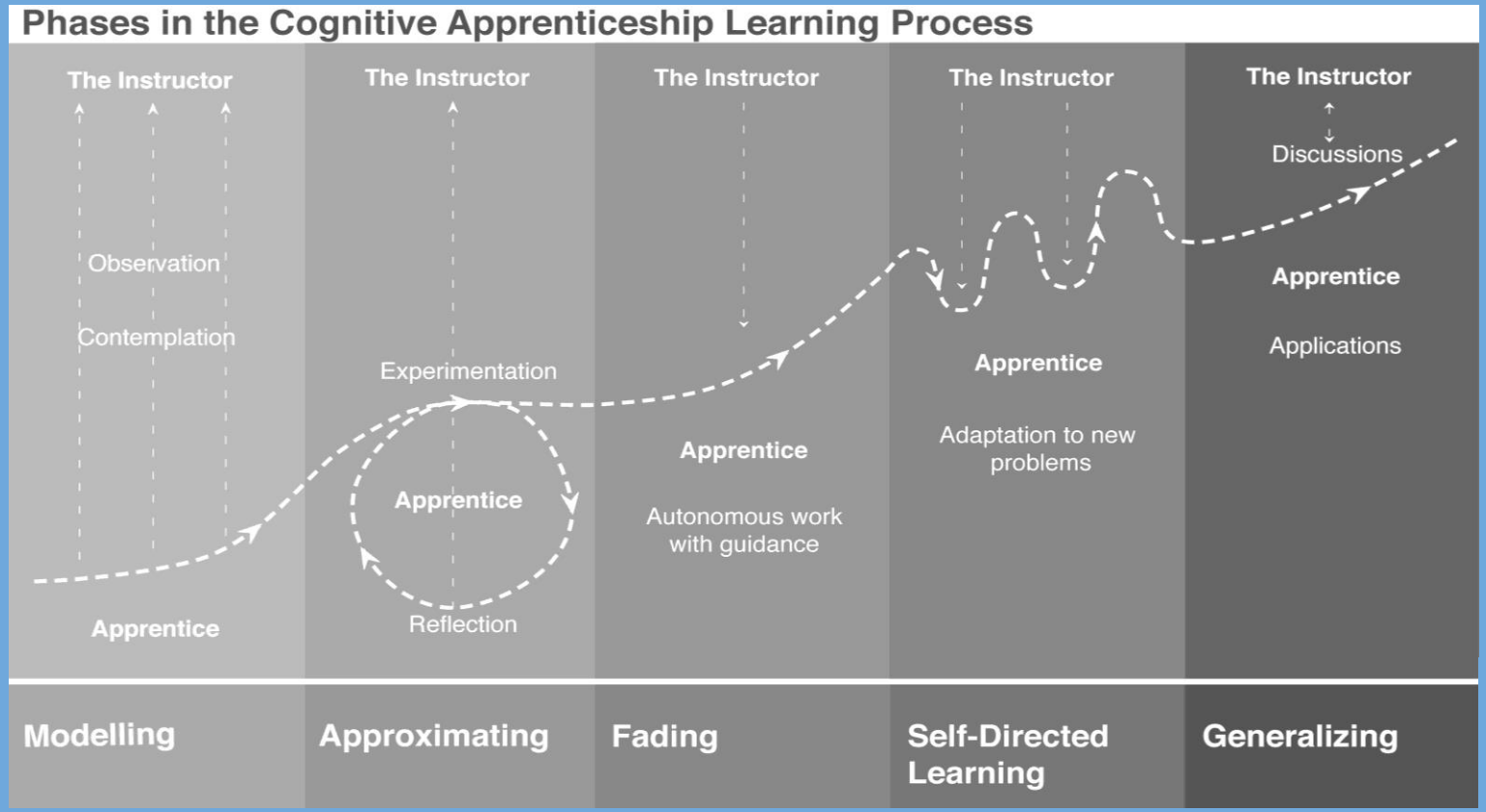
- Intrinsic motivation
- Situated learning
- Communities of practice
- Cooperation

Methods

Ways to promote the development of expertise

- Modeling
- Articulation
- Coaching
- Reflection
- Scaffolding
- Exploration

Proposed Phases



Brainstorm!

Modeling

Coaching

Scaffolding

Articulation

Reflection

Exploration

Develop a plan

Select strategies & commit

- Identify ONE domain strategy
- Identify ONE strategy from EACH method
- **How (and when) can you incorporate them?**
- **How will you keep yourself accountable?**

Monitor & evaluate yourself

Maastrict Clinical Teaching Questionnaire

- 14-item survey for learners
- Evaluate modeling, coaching, articulation, exploration, and learning environment
- Scale of strongly disagree to strongly agree

Rodino, A. M., and Wolcott, M. D. (2019). Assessing preceptor use of cognitive apprenticeship: Is the Maastricht Clinical Teaching Questionnaire (MCTQ) a useful approach? *Teaching and Learning in Medicine*, 7, 1-13. Doi:10.1080/10401334.2019.1604356.

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