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Linking the Scholarship of Teaching and Learning to Clinical Education in Audiology, presented in partnership with the University of Pittsburgh

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Mark is Professor and Vice Chair for Academic Affairs at the University of Pittsburgh. He has had decades of classroom and clinical education experiences which have helped his interests in the scholarship of teaching and learning to grow. Mark is a co-editor of Clinician's Guide to Applying, Conducting and Disseminating Clinical Education Research and he is a founding editorial board member of Teaching and Learning in Communication Sciences and Disorders.

Disclosures

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- **Content Disclosure**: This learning event does not focus exclusively on any specific product or service.
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Learning Outcomes

After this course, participants will be able to:

1. Define the scholarship of teaching and learning and evidence-based education.
2. List ways that learning taxonomies apply to audiology clinical education today.
3. Discuss ways they can implement evidence-based clinical education into their own clinical environments.

Introduction

- Scholarship of teaching and learning is not new
- Clinical education in audiology is not new

- What deserves more attention? (these are biased):
  - More clearly linking the scholarship of teaching and learning to evidence-based clinical education
  - Continually affirming how clinicians are providing instruction!

The Journey

- Began with teaching concepts of speech and hearing science and introduction to audiology between 1998 – 2005
  - Observing learners
  - Concepts seasoned clinicians take for granted

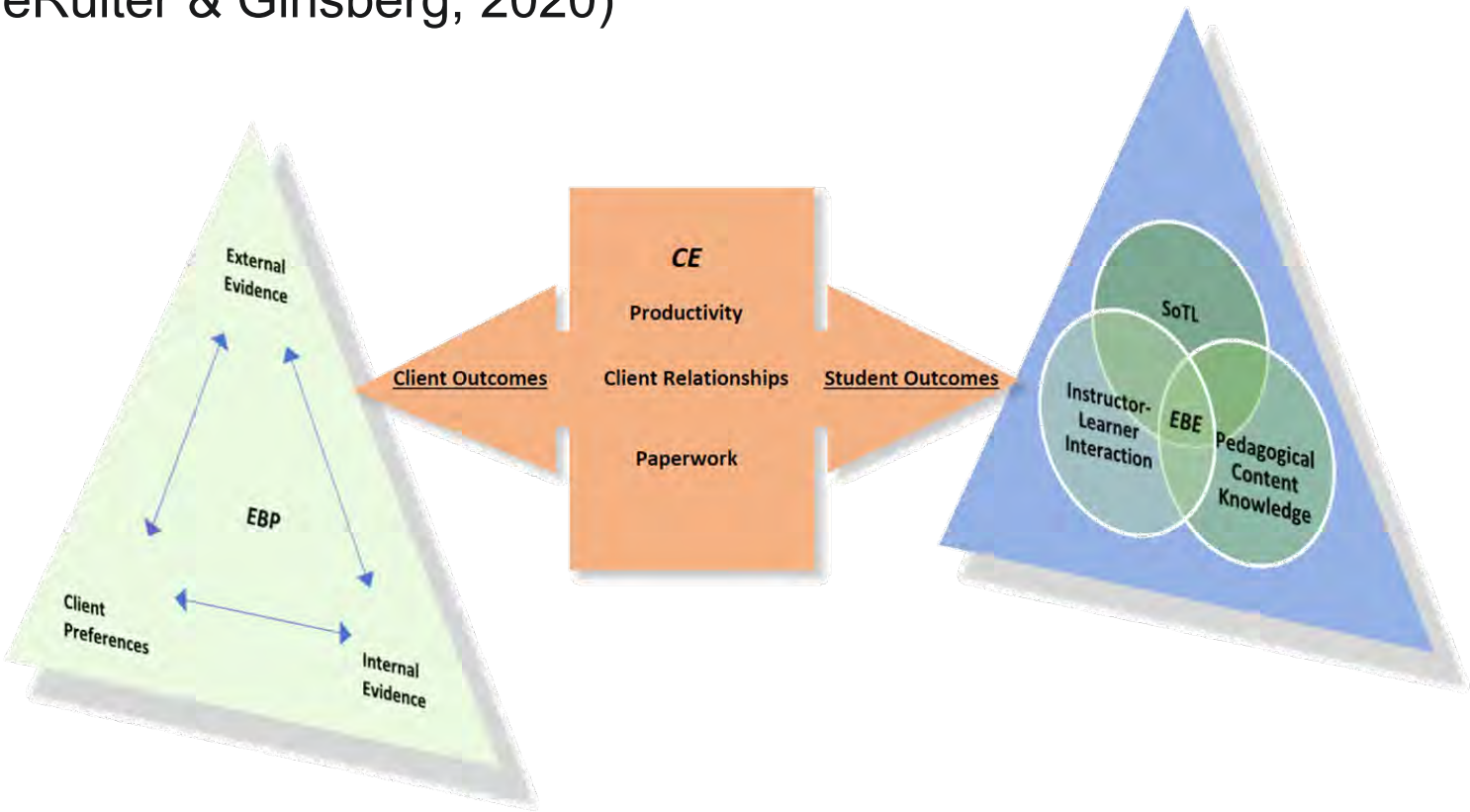
What Is SoTL

- SoTL is "…inquiry focused on student learning… grounded in both scholarly and local context… methodologically sound… conducted in partnership with students… [and] involves 'going public'" (pp. 122-123).

Peter Felten, 2013

Linking Evidence-based Education: Clinical Education (EBE:CE) to SoTL

(DeRuiter & Ginsberg, 2020)



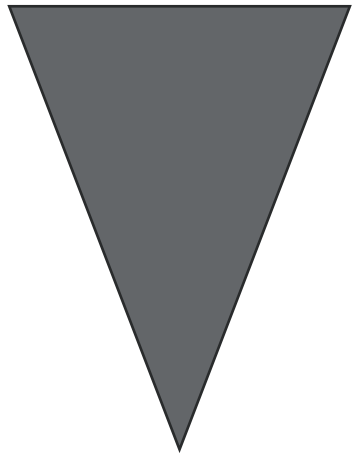
Evidence-Based Education-Clinical Education Model (EBE-CE)

Linking Clinical Education to SoTL

- Some taxonomies of learning:
  - Bloom's Taxonomy
  - Miller's Pyramid of Assessment
  - Fink's Significant Learning Outcomes

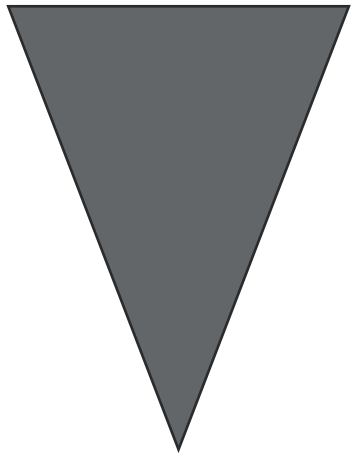
Bloom's Taxonomy (Bloom, 1956)

- Knowledge (base)
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation (pinnacle)



Bloom's Taxonomy Revised

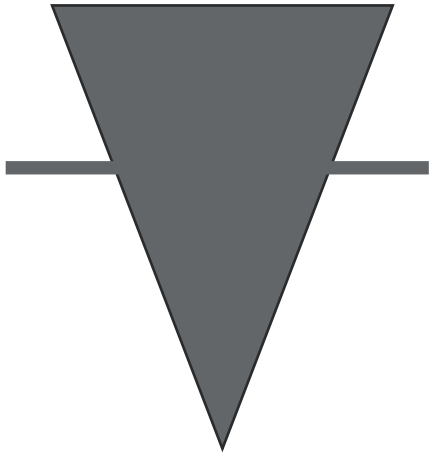
- Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create



Miller's Pyramid of Assessment

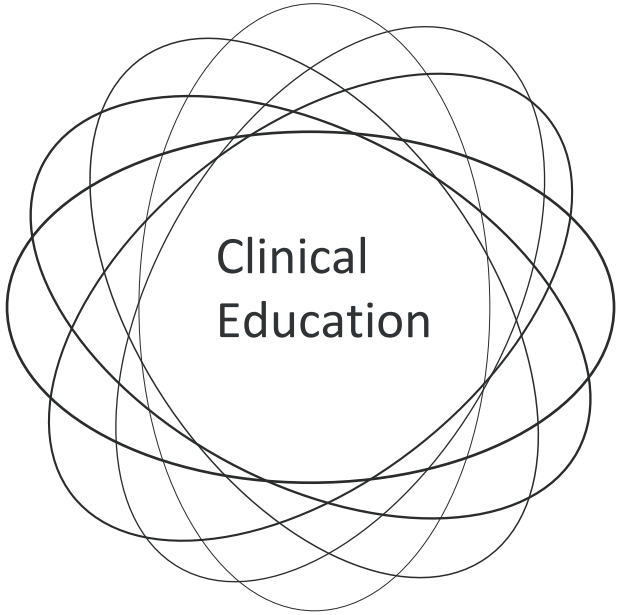
(Miller, 1990)

- Knowledge (base): cognitive
- Application of Knowledge: cog
- Clinical Competency: behavioral
- Clinical Performance (pinnacle): beh



Think About It…

- Many times, clinical education isn't linear…



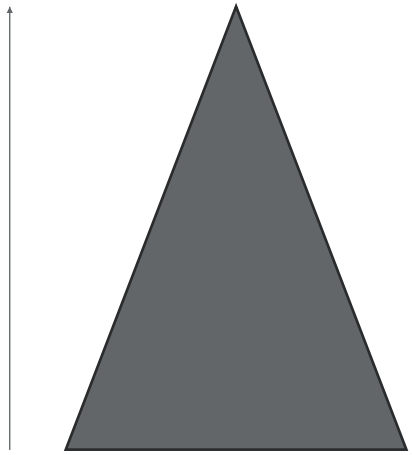
Fink's Significant Learning Outcomes

(Fink, 2003)

- Foundational Knowledge
- Application
- Integration
- Human Dimension
- Caring
- Learning How to Learn

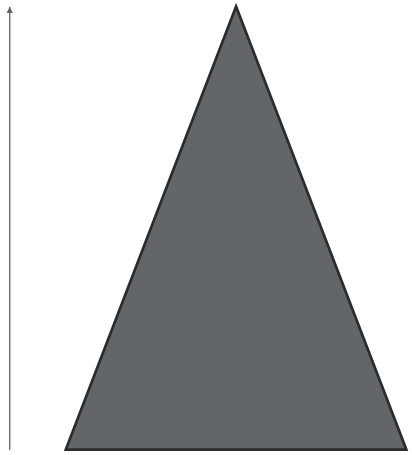
Fink: Foundational Knowledge

- What is foundational for clinical practice?
  - Links to other taxonomies



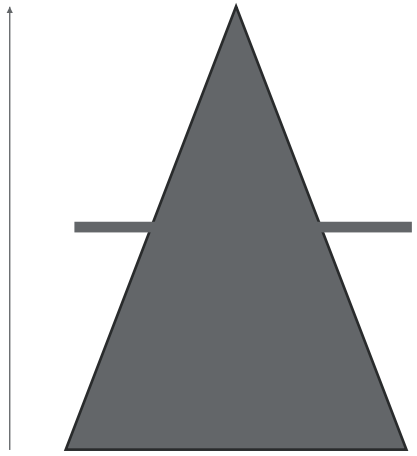
Fink: Application

- Applying foundational knowledge
  - Links to other taxonomies



Fink: Integration

- "Putting it all together"
  - Links to other taxonomies



Fink: Human Dimension

- Divergence from other taxonomies starts here:
  - Using learning to help the people you serve
  - Success/failure are considered relative to how the individual sees themselves
  - Can continue across your career

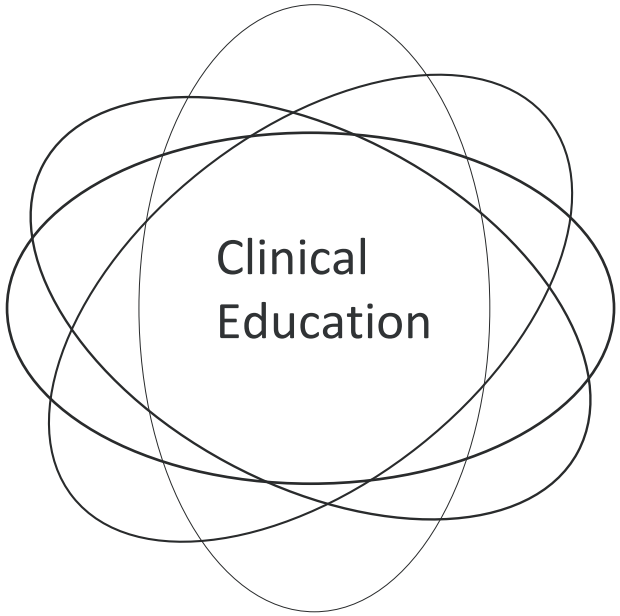
Fink: Caring

- Learners care about content and understand why they should care about it
  - (Here, think about learners who might have other motivators to attend school)

Fink: Learning How to Learn

- Refining the process of learning over time
- Focusing on yourself and how you learn, understanding what might motivate others in their learning

Clinical Education is Less Linear Than We Thought?



Design Takes a Different Approach

Initial Phase:

- Building primary components
  - Setting your expectations/goals for learning
  - Determining the situational factors necessary

Initial Phase: Backward Design

- Here you begin with the end in mind:
  - Based on the work of Wiggins and McTighe (2005)
    - Identify Results
    - Determine Evidence
    - Make a Plan!

Intermediate Phase: Create a Coherent Model

- Building a thematic structure for learning
- Using a strategy for teaching
- Integrating the structure and the strategy

Final Phase: Remaining Tasks

- Grading system
- Plan how the experience might be evaluated

Empirical Study in Audiology Clinical Education?

- Miller (2021) searched Cumulative Index to Nursing and Allied Health (CINAH) as part of a capstone project*
  - Keywords: ”audiology” and “education” yielded 950 documents
  - Keywords: “audiology”, ”education” and “clinical” yielded 230 documents

*years: 1995-2020

Miller (2021)

- Few empirical studies of audiology clinical education, particularly related to Fink's taxonomy
- Instead, documents fit into categories:
  - Models of supervision/instructor relationship
  - Simulation
  - Service learning
  - Reflection
  - Feedback
  - Lack of standardization
  - Unpreparedness for supporting marginal students

Why Few Studies in Audiology?

- Some concerns include:
  - Small *n*
  - Ethical issues
  - Less focus on the mechanics of clinical education in clinical training

How Can You Contribute?

- Creating your clinical education PICO question

Problem

What are the characteristics of the problem?

Intervention

What approach are you considering or have you tried?

Comparison

Is there a clear possible alternative you might consider?

Outcome

What are you trying to accomplish?

Find Your Literature

TLCSD	https://www.tlscdjournal.com/
ASHA	https://www.asha.org/publications/
AAA	https://wwww.audiology.org/
PubMed	https://www.ncbi.nlm.nih.gov/pubmed/
ERIC	https://eric.ed.gov/
DOAJ	https://doaj.org/
Google	https://scholar.google.com/

Read, read, read

- You might find that there are not an abundance of resources in audiology per se
- However, looking across disciplines can be very helpful

Consider Your Methods

- Quantitative
  - Correlational
  - Numerical
  - Measures
- Qualitative
  - Relationship
  - Descriptive
  - Understanding
- Mixed Methods
  - Combination of the above

Design

- Descriptive
- Correlations
- Experimental/quasi-experimental

Consider a Mentored Relationship

- Who could help you ask and refine your questions?
- Is there someone who can assist with the Institutional Review Board (IRB) process?
- Establishing a board of mentors may be a reasonable way to go!

Make Sure to Disseminate

- If you ask a research question relative to SoTL in a clinical environment, how will you let others know about your work?

Asking a Research Question Overwhelming?

- Consider other evidence-based/theory-driven ways to improve your clinical education experience during the different phases:
  - Initial
  - Intermediate
  - Final

Initial: Backward Design

- Carefully consider your expectations and how you might deliver what is necessary to meet those expectations at your site, beginning with the end in mind.
- Plan for how you will evaluate to determine expectations are met.
- Identify your path to assisting the new clinician in meeting expectations/goals.

Initial: Backward Design

- Consider how a learner might be able to develop competence through a process that is not entirely linear
  - Student tracking of individual skills that contribute to a greater ”whole” (e.g., hearing aid fitting)
  - Placement expectation worksheet (Mormer, et al, 2013)

Initial Phase: Feedback

- Being timely with feedback
- Offering positive and constructive feedback

Kelly, 2007

Intermediate Phase:

- Supporting critical thinking:
  - Problem-based learning (PBL: Duch et al, 2001)
  - Simulation
  - One Minute Preceptor (Neher, et al, 1992)

Intermediate Phase:

- There are other areas! Some include:
  - Reflection
  - Roles of relationships
  - Service learning

Final Phase

- Is the grading system “set” for you by the university?
  - Are there other forms of grading/feedback you can provide?
- Consider how YOU will be evaluated:
  - FERPA considerations
  - What information can you access, how can you make a fair process to obtain the feedback you need to determine you are the strongest clinical educator you can be?

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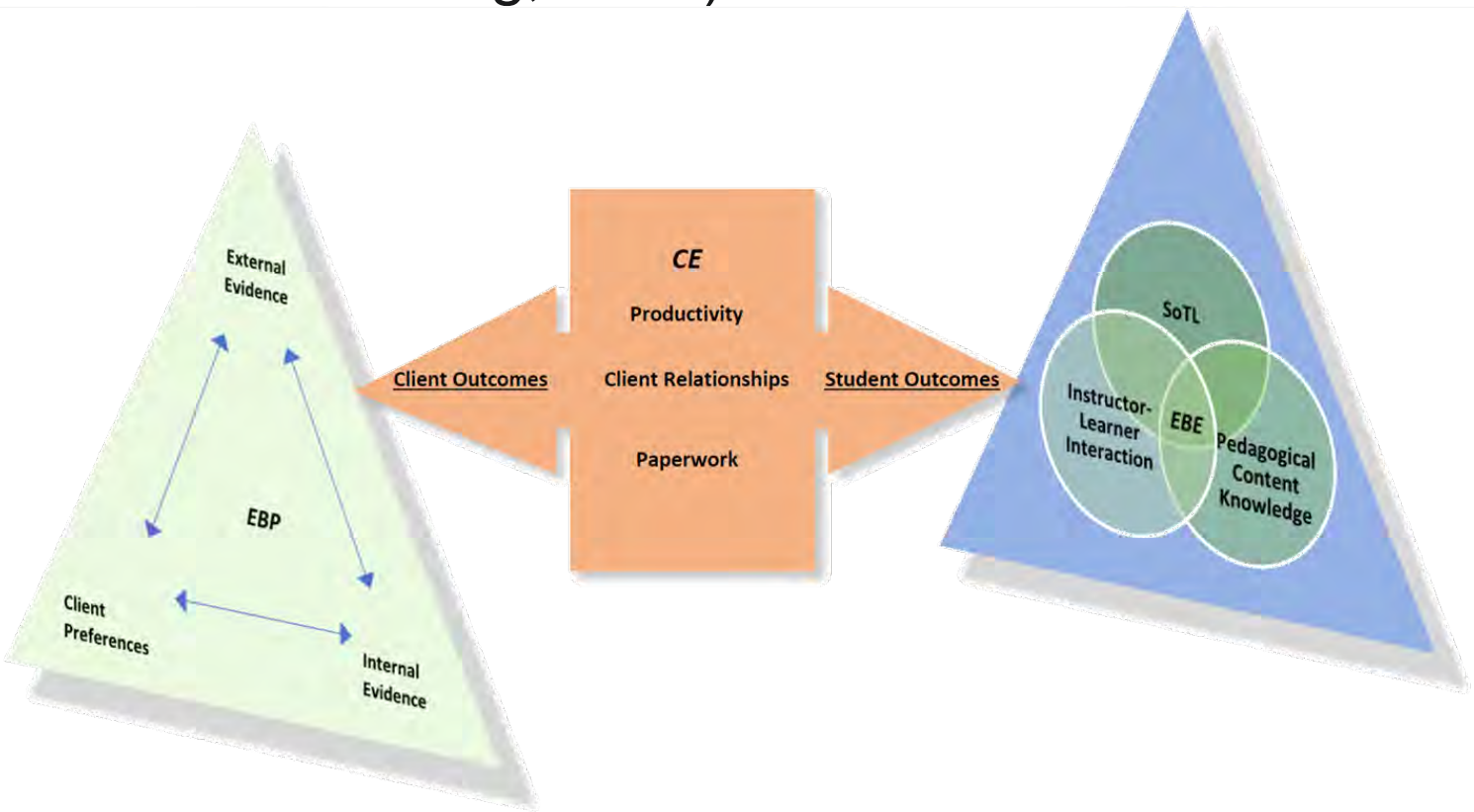

Evidence-Based Education-Clinical Education Model (EBE-CE)

Thank you!

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