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# Basic Principles for Effective Teaching and Learning

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## Basic Principles for Effective Teaching & Learning



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## Today's Objectives

- Describe basic concepts related to new pharmacy education strategies
- Develop basic strategies for planning, implementing and assessing educational experiences structured to achieve proper outcomes.
- Clarify one's own purposes, goals, and philosophy for teaching in pharmacy practice.



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## Teaching is an Ability

i.e.

Teaching is an integration of:

- Knowledge
- Skills
- Attitudes/values/habits

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# Why do I Need a Teaching Philosophy Statement (TPS)?

# WHY?

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## Teaching Philosophy Statement: Importance

- Has both external and intrinsic benefits.
- Reflects a purposeful approach to evidence-based teaching.
- Conveys your goals for teaching in relation to your methods.
- Serves as a benchmark for self-assessment and development.
- May provide inspiration.



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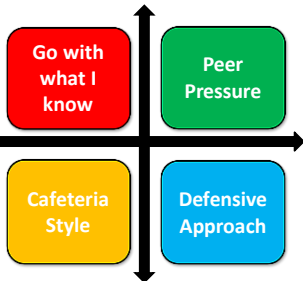
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## Teaching Philosophy Statement: Importance

In the absence of Defined Teaching Philosophy, what drives your approach?



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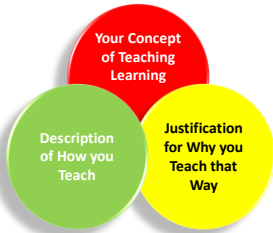
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## Content of Personal Teaching Philosophy Statement



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## What is your Personal Teaching Philosophy Statement ?

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## Foundational Strategies for Effective Teaching "Teaching and Learning Toolkits"

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**4 Evidence-Based Education Steps**

- 1 Outcomes
- 2 Practice
- 3 Criteria
- 4 Assessment Feedback

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This graphic illustrates the four evidence-based education steps. It features a central title '4 Evidence-Based Education Steps' flanked by icons of three people. Below the title are four horizontal, ribbon-like bars, each representing a step: 1. Outcomes (orange), 2. Practice (green), 3. Criteria (blue), and 4. Assessment Feedback (red). At the bottom, there are social media icons for Facebook, Twitter, YouTube, and a website icon, followed by the text 'FADIC.official', 'FADIC\_DIC', 'FADIC tube', and 'FADIC.NET'. The footer includes the 'FADIC Annual Meeting 2019' logo.

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**The Four Steps**

- 1 Outcomes
- 2
- 3
- 4

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This graphic is titled 'The Four Steps'. It shows a vertical list of four numbered steps. Step 1, 'Outcomes', is highlighted with an orange ribbon. Steps 2, 3, and 4 are represented by empty circles. The bottom of the graphic features the 'FADIC Annual Meeting 2019' logo.

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**Foundational Strategies**

**Step 1: Outcomes**

**Determine:**

- Content
- Strategies
- Assignments
- Assessments
- Curricular Design

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This graphic is titled 'Foundational Strategies' and focuses on 'Step 1: Outcomes'. It lists five key areas to determine: Content, Strategies, Assignments, Assessments, and Curricular Design. The bottom of the graphic features the 'FADIC Annual Meeting 2019' logo.

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## Relationship of Objectives to Abilities in Pharmacy Education

### Ability Outcome

- Counsel patients on antimicrobial drug therapies

### Objectives

- Acquire antimicrobial knowledge base (knowledge example)
- Adapt communication to audience (skill example)
- Exhibit empathy (attitude example)

The ability is composed of several objectives



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## Course ability Outcomes: Didactic Example

### Course: Infection Diseases Pharmacotherapy

- Select and recommend appropriate antimicrobial treatment for common infections
- Monitor for expected therapeutic outcomes and potential adverse effects associated with anti-infective therapy
- Educate patients and health professionals regarding the treatment of common infections



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## Assignment Outcomes

### Aminoglycoside therapy for Hospital-Acquired pneumonia

- Based on an assigned clinical case describing a patient with hospital-acquired pneumonia, students are asked to recommend appropriate antimicrobial therapy.
- Select and recommend appropriate antimicrobial treatment for common infections (aminoglycoside, hospital-acquired pneumonia)



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## Course Ability Outcomes

### Step 1: Outcome

#### Clinical Example

- Employs the OARS technique to interact with difficult or ambivalent patients
- Demonstrates respect for the patient with affirmation and regard for his or her autonomy
- Creates opportunities for follow-up with patient who are resistant or ambivalent to change



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## Course Ability Outcomes

### Step 1: Outcome

#### Clinical Example

- **Ambulatory care clerkship**
  - Educate patients, family members, and/or caregivers using advanced counseling techniques (i.e. motivational interviewing, shared-decision models, etc.):



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## Raising the Goals of Critical Thinking/Problem-Solving



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## Critical Thinking in Pharmacy Education

- Thinking about thinking in order to improve thinking
- Analyzing and critiquing ideas and situations
- Developing well-reasoned arguments with convincing evidence
- Making clinical decisions
- Solving problems
- Developing a mature world view

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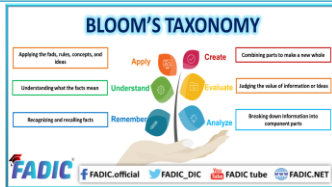
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## The Verb You Start With Can Be A Clue To The Level of Thinking You Are Expecting



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## Bloom's Taxonomy

<b>Evaluation</b>	Evaluate Judge Grade	Rate Choose Decide	Assess Critique Diagnose
<b>Synthesis</b>	Design Invent Infer	Predict Create Solve	Hypothesize Imagine compose
<b>Analysis</b>	Compare Categorize Tell why	Contrast Dissect Deduce	Classify Distinguish investigate
<b>Application</b>	Apply Make Demonstrate	Show Illustrate	Teach Tell how to use Employ
<b>Comprehension</b>	Summarize true or false Tell in your words	interpret	Explain Paraphrase
<b>Recall</b>	List Repeat Describe	Name Identify Fill in the blank	Memorize Match Define

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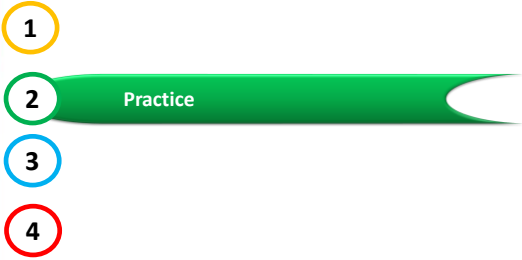
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## The Four Steps



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## Foundational Strategies

### Step 2: Practice

- Abilities
- Practice = Active Learning
- Criteria
- Feedback



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## Active Learning

### Holding a cat by the Tail:

A man who carries a cat by the tail ...



Learns Something  
he can learn in no  
other way



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## Active Learning

The Person that had took a bull by the tail once



Had learnt sixty or seventy times as much as a person that hadn't

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## Requirements for Active Learning

- Outcomes/goals for the activity
- Guidelines/criteria by which student can determine good performance
- Student involvement (not only observation)
- Feedback from the instructor about what went right, what should be improved, and how to improve it.

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## The Four Steps

- 1
- 2
- 3
- 4

Criteria

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### Step 3: Performance Criteria

- Explicitly detail what the student must do to practice the ability well at this point in the curriculum
- Provide framework by which students will be assessed
- Facilitate self assessment and enhanced performance
- Promote consistency of evaluation and feedback



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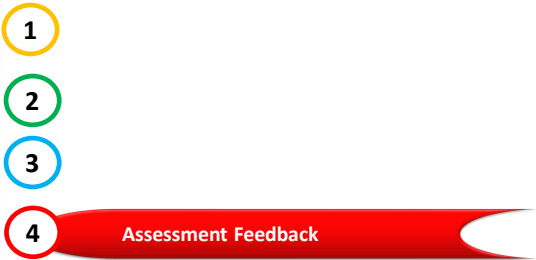
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### The Four Steps



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### Assessment-as-Learning

#### Why Assess?

- Summative
  - Evaluation, accountability
  - End of the learning process
- Formative
  - Improvement in learning
  - Part of the learning process



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## Modes of Assessment Feedback

- Self Assessment
- Peer Assessment
- Expert Assessment



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## Putting it All Together The Four Steps

- Outcomes
- Practice
- Criteria
- Assessment Feedback



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## Aligning the Education with the Mission of Pharmacy Practice FADIC System



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### Suggested Verbs for The Effective Lecture Preparation

Cognitive Domain (Bloom)	
<b>Evaluation</b>	To appraise, argue, assess, attach, choose compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate.
<b>Synthesis</b>	To arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write.
<b>Analysis</b>	To analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, investigate, question, research, test.
<b>Application</b>	To apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.
<b>Comprehension</b>	To classify, describe, discuss, explain, express, identify, indicate, locate, outline, recognize, report, restate, review, select, translate.
<b>Knowledge</b>	To arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce, state.

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### Suggested Verbs for The Effective Lecture Preparation

Psychomotor Domain (Dave)	
<b>Naturalization</b>	To design, specify, manage, invent, and project-manage.
<b>Articulation</b>	To construct, solve, combine, coordinate, integrate, adapt, develop, formulate, modify, master, improve, and teach.
<b>Precision</b>	To demonstrate, complete, show, perfect, calibrate, control, and practice.
<b>Manipulation</b>	To re-create, build, perform, execute, and implement.
<b>Imitation</b>	To copy, follow, replicate, repeat, adhere, observe, identify, mimic, try, reenact, and imitate.

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### Suggested Verbs for The Effective Lecture Preparation

Affective Domain (Bloom)	
<b>Internalizing Values (Characterization)</b>	To act, discriminate, display, influence, listen, modify, perform, practice, propose, qualify, question, revise, serve, solve, verify.
<b>Organization</b>	To adhere, alter, arrange, combine, compare, complete, defend, explain, formulate, generalize, identify, integrate, modify, order, organize, prepare, relate, synthesize.
<b>Valuing</b>	To complete, demonstrate, differentiate, explain, follow, form, initiate, invite, join, justify, propose, read, report, select, share, study, work.
<b>Responding to Phenomena</b>	To answer, assist, aid, comply, conform, discuss, greet, help, label, perform, practice, present, read, recite, report, select, tell, write.
<b>Receiving Phenomena</b>	To ask, choose, describe, follow, give, hold, identify, locate, name, points to, select, sit, erect, reply, use.

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## The Concept of Trust

- A belief in the ability, reliability, or strength of someone.
- One party (trustor) is willing to rely on the actions of another party (trustee).
- The trustor (voluntarily or forcedly) abandons control over the actions performed by the trustee.

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## The Concept of Trust

Trust is the Residue of Promises Kept

-Frank Navran



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## Levels of Entrustment Level Description

Level	Description
1. Observe Only	Learner observes only; not entrusted to perform task even with direct supervision
2. Direct Supervision	Learner performs task with direct and proactive supervision
3. Reactive Supervision	Learner performs task with indirect/reactive supervision (i.e., preceptor/supervisor is readily available to assist if needed)
4. Intermittent Supervision	Learner independently performs task with supervision at a distance or post-hoc
5. General Direction	Learner independently decides what tasks need to be performed and can direct/supervise the activities of others

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### EPAs vs. Competencies vs. Learning Objectives

EPAs	Competencies	Learning Objectives
Activities/tasks that represent the day-today work of the practitioner	An observable activities, integrating multiple components /learning objectives such as knowledge, skills, attitudes/values/habits	A description of knowledge, skill, or behavior that you want learners to exhibit at the end of a learning experience
Specific tasks that are entrusted to trainees to perform	In aggregate, define the "good practitioner"	Atomistic, discrete
Descriptors of work	Descriptors of pharmacists	Descriptors of knowledge or skills

EPAs, Competencies, and Learning Objectives are not mutually exclusive. EPAs require integration of competencies which require integration of learning objectives.




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### Examples

#### Objectives

**Knowledge**

- Select appropriate medications based on appropriate clinical practice guideline

**Skill**

- Efficiently use appropriate tertiary references to check for drug-drug interactions

**Attitude/Behavior**

- Demonstrate confidence while interacting with the healthcare team




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### Examples

**Competencies Example:**

- Learner
- Caregiver
- Problem Solver
- Collaborator
- Communicator
- Advocate




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## Examples

### EPA— Entrustable Professional Activity

#### Patient Care Provider Domain

- Establish patient-centered goals and create a care plan for a patient in collaboration with the patient, caregiver(s), and other health professionals that is evidence-based and cost-effective.




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## Take Home Message

- Start create your teaching philosophy.
- Make learning as a lifelong mission.
- Put all teaching strategies all together to create an effective evidence-based teaching strategy.
- There is a big difference between Objectives, Competences, and EPA.
- Teaching is an important message need really to be delivered effectively.




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## Reference

- Teaching Certificate for Pharmacists  
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**Thank You!**



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