



**The Pennsylvania Pharmacists Association**  
**Continuing Pharmacy Education**  
**Program Development Guidance**

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## ACTIVITY TYPES

In accordance with ACPE requirements, All CPE programs that PPA offers are categorized as either Knowledge-based or Application-based, and there are very important and specific differences between the two. PPA Staff will work with you to determine the appropriate activity type for your program, but you should be familiar with each and understand how they will impact the development of your presentation.

### **Knowledge-based**

These CPE activities should be designed primarily for pharmacists and technicians to acquire factual knowledge. The minimum credit for these activities is 15 minutes or 0.25 contact hour.

Knowledge-based programs should transmit knowledge to attendees, and attendees should be able to absorb and repeat the facts learned during the program.

### **Application-based**

These CPE activities should be designed primarily for pharmacists and technicians to apply the information learned in the time frame allotted. The minimum credit for these activities is 60 minutes or one contact hour.

Application-based activities should provide attendees with information and methods to apply that information to a situation. Attendees should have an opportunity during the program to apply the information they have learned.

### **Practice-based**

Practice-based activities are the third type of activity that can be offered by ACPE-accredited providers. PPA does not currently offer these programs as the minimum credit for these activities is 15 hours or 1.5 contact hours and they do not fit into our conference schedules. This guidance document will provide relevant details only for knowledge- and application-based activities.

### **Determining Objectives Based on Activity Type**

The activity objectives you choose should be appropriate for the activity type.

Objectives for **knowledge-based** activities should use verbs such as define, list, describe, and identify.

Objectives for **application-based** activities should use verbs such as apply, calculate, compare, analyze, differentiate, and relate.

Find more information on appropriate objectives in the next section.

## **Appropriate Assessment Tools Based on Activity Type**

The assessment tools you use in your program should allow the learners to assess their achievement of the learned content and should be appropriate for the activity type:

Assessment tools for **knowledge-based** activities should involve questions structured to determine *recall of facts* (e.g. pre and post-tests).

Assessment tools for **application-based** activities should require the attendee to *apply* the information they have learned (e.g. case study).

Find more information about appropriate assessment tools in Section Four.

## APPROPRIATE OBJECTIVE CONSTRUCTION

Function of Objectives: The development of objectives serves as the guide in the process of planning, presenting and evaluating instruction.

Goals vs. Objectives: There is a major difference between a goal and an objective.

GOALS of a course are stated in general terms so that the participant can be quickly informed about the nature of the course. Sample terms found in GOALS include: “know about”, “understand”, “become aware”, and “develop an appreciation for”. All of these phrases are found in GOAL or PURPOSE statements.

OBJECTIVES are used to attain the stated goal. They assist the presenter and the participant in deciding specifically what is to be learned. When informed of the objectives, the participant will be prepared for what he/she is expected to do with the information. Typical activities found in OBJECTIVES include: “to write”, “to list”, “to analyze”, “to solve”, and “to discuss”.

OBJECTIVES must be specific and measurable, developed to specifically address the identified educational need, addressed by an active learning activity, and covered by learning assessment.

The most difficult – and the most important – part of constructing an OBJECTIVE is the selection of an appropriate action verb. It should express clearly what the participant should be able to do with the subject content – recognize, explain, solve, assess, and so on.

CPE program objectives should always be able to follow the sentence: “At the completion of this activity, the participant will be able to:”

ACPE has provided the following guidance regarding appropriate and inappropriate verbs for use in activity objectives:

### Imprecise or Ambiguous Verbs to Avoid:

Appreciate

Explore

Learn

Behave

Grasp significance of

Perceive

Believe

Have faith in

Realize

Be aware of

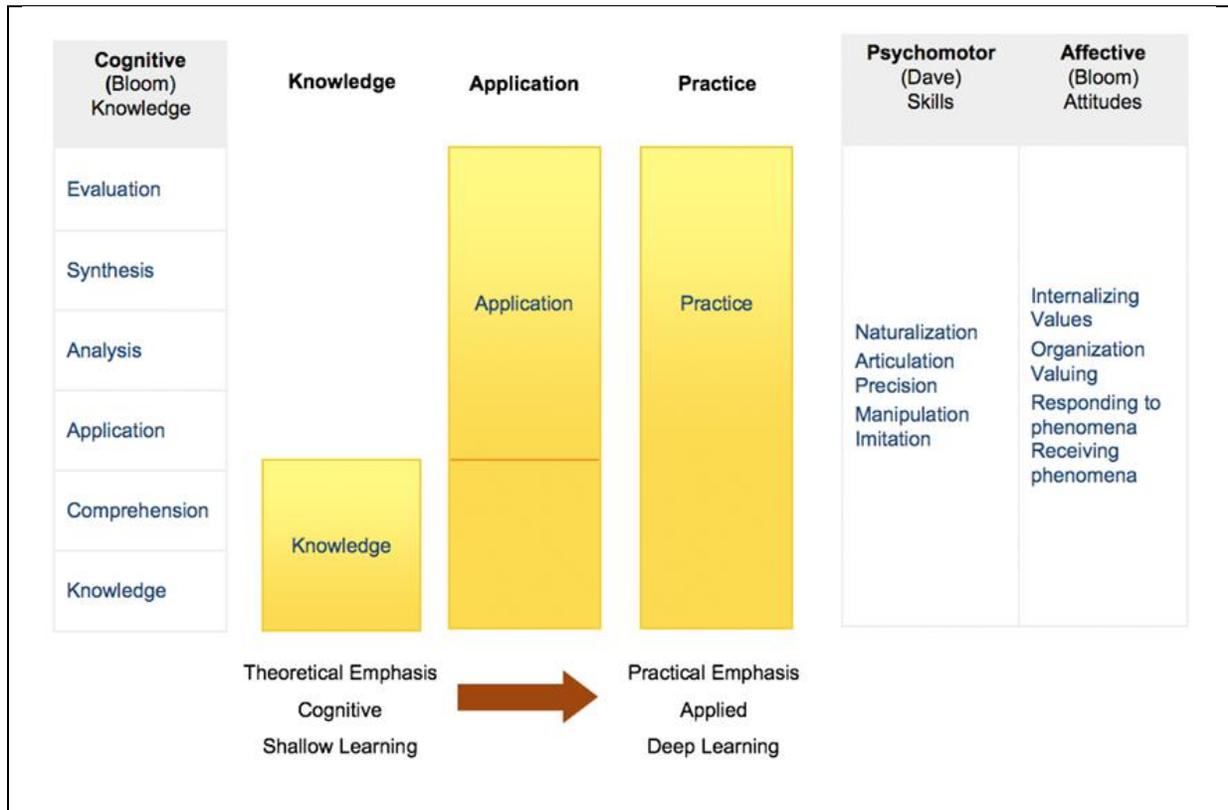
Know

Understand

Enjoy

### Suggested Acceptable Verbs:

Relative to taxonomies of learning, ACPE CPE activities will fall along a continuum of learning, starting at Knowledge, moving through Application, and ending at Practice. Learning across this continuum will generally progress from being more cognitive, theoretical and shallow at the knowledge end to becoming more practical, applied and deep at the practice end, including additional elements from psychomotor and affective domains that emphasize the systematic application of content, skills and attitudes to real-life practice.



### Suggested Verbs for CPE Activities by Domain

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

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

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

## ACTIVE LEARNING

PPA encourages the use of active learning and participation in all CPE activities. Survey results for past activities have shown that active learning provides higher involvement during class and better retention rates days later. Anyone who has ever sat in a classroom (or slept through a lecture) can appreciate the benefits of active versus passive learning.

You'll be completing a Faculty Self-Assessment Matrix to outline the active learning strategies you'll use to meet each objective. Below, you'll find ACPE's suggested active learning strategies, broken down by activity type and Bloom's Taxonomy Levels.

<b>CPE Activity: KNOWLEDGE</b>	
<i>Bloom's Taxonomy</i>	<i>Suggested Active Learning Techniques</i>
<u>Knowledge-type verbs</u> Define Repeat List Record	Lecture Visuals Examples Illustrations Analogies
<u>Comprehension-type verbs</u> Discuss Describe Explain Recognize Identify Translate Restate Express	Test/Assessment Review Writing Presentations Matching questions/answers Questions Discussion Report

<b>CPE Activity: APPLICATION AND/OR PRACTICE</b>	
<i>Bloom's Taxonomy</i>	<i>Suggested Active Learning Techniques</i>
<u>Application-type verbs</u> Interpret Apply Employ Use Demonstrate Illustrate Practice	Role play Simulations Practice exercises Demonstrations Projects
<u>Analysis-type verbs</u> Distinguish Analyze Differentiate Calculate Compare Contrast Criticize Debate Diagram	Case studies Problems Discussion Pro/con grids Application exercises

<b>CPE Activity: APPLICATION AND/OR PRACTICE (continued)</b>	
<i>Bloom's Taxonomy</i>	<i>Suggested Active Learning Techniques</i>
<u>Synthesis-type verbs</u> Plan Compose Design Propose Formulate Arrange Construct Create Set up Organize Prepare	Problems Case studies Develop plans Simulations Projects
<u>Evaluation-type verbs</u> Judge Evaluate Rate Compare Revise Score Select Choose Assess Estimate Measure	Case studies Problem exercises Projects Critiques Simulations

## LEARNING ASSESSMENT TOOLS

Learning assessments must be included in each CPE activity to allow the participant to assess the achievement of learned content. An assessment can be informal (e.g. discussion) or formal (e.g. test), but it should be consistent with the activity type and the program objectives and it should be documented. Remember that there are two important components to an effective assessment tool: the exercise itself and the feedback provided to the learner.

Knowledge-based assessments should require a single-thought step to answer correctly, and the answer is often directly in the program materials. Application-based assessments should require multiple thought steps to answer correctly, each of which must be correct to get the final correct answer.

See ACPE's guidance on assessment tools below:

### Assessing recall and understanding (KNOWLEDGE)

- A. Memory Matrix: is a 2-dimensional diagram, divided into rows and columns, to organize information and illustrate relationships. Row and column headings are given, but cells within are left empty.

This learning strategy assesses the ability to recall content and display skill in organizing information. The activity may be used after videotapes, monograph, talk, etc.

Sample Memory Matrix for Differentiating Type 1 and 2 Diabetes

Characteristic	Type 1	Type 2
Age of onset		
Weight		
Use of insulin		

- B. The Minute Paper: is a quick and simple way to collect written feedback on participant learning.

After a videotape or certain part of a presentation, for 1-2 minutes, ask the question(s):

“What was the most important thing you learned during this presentation?” and/or

“What important question remains unanswered?” The participant will write on a piece of paper the answers. The responses may be collected so the speaker can identify the extent of the participants' learning or they may be exchanged with other people among the group and these participants would read each other's answers.

- C. The Muddiest Point: is the most highly efficient strategy to find what participants find least clear or most confusing about a particular lesson or topic. Faculty use it as feedback and to guide their talks. This strategy may be done at the beginning or end of the topic, close of a discussion or in the middle.

Example: In the beginning of the topic, the faculty asks:

“Many of you heard about the different treatment options for *Helicobacter pylori* for peptic ulcer disease. What question would you still like answered regarding the treatment options?”

- D. Background Knowledge Probe: are short, simple questionnaires for use at the beginning of a presentation. Example: pre-test.

**Assessing skill in analysis and critical thinking (SKILL)**

- A. Defining a Features Matrix: categorizes concepts according to the presence (+) or absence (-) of important defining features. This activity allows participants to quickly distinguish similar concepts.

Sample Feature Matrix

<u>Symptoms/Signs</u>	<u>Systolic CHF</u>	<u>Diastolic CHF</u>
Shortness of breath		
Cough		
Peripheral edema		
Dyspnea on exertion		
Orthopnea		

- B. Pro and Con Grid: is an analysis of the pros and cons, costs and benefits, or advantages and disadvantages of a topic. This learning strategy forces participants to search for two sides to the issue in question.

Sample Pro and Con Grid:

A mother brings her 5-year-old son, TJ, into the clinic. You recognize TJ because he has been in the clinic at least two times in the past 3 months for otitis media. The mother says he is running a fever and keeps tugging on his left ear, most likely another bout of otitis media. As you look at his profile he has a penicillin allergy in which he experienced a rash. The clinic’s pharmacy carries the following products. While the physician is verifying the diagnosis, which agent do you believe would be best for TJ?

Treatment	Pro	Con
Ampicillin		
Trimethoprim-sulfamethoxazole		
Azithromycin		

**Assessing skill in problem solving (SKILL)**

Problem Recognition Tasks: involves presenting to the participants a few examples of common problem types. The participants are to recognize and identify the particular type of problem each example presents. Sample:

Marge Simpson presents to the counter of the pharmacy with a prescription for erythromycin. She says, "I need this fast. My nose does not stop running and I have this cough,..aachooo.., and I keep sneezing. I went to the doctor and he gave me this...FILL IT NOW!!! This is all Homer's fault!!" You, as the pharmacist, ask, "Have you taken anything for your symptoms?" She denies anything and thinks the erythromycin "...will fix everything!!!" On her profile she's on the following medications: Theo-Dur® 400 mg bid, Albuterol MDI 2 puffs prn, and metoprolol 25 mg bid started 2 weeks ago.

Identify and assess Mrs. Simpson's problems.

### **Assessing skill in application and performance (SKILL)**

- A. **Directed Paraphrasing:** the participant translates information into terms they will understand. This strategy assesses the learners' ability to summarize and restate important information and concepts in their own words so they may be able to explain to others.

Sample: In one or two sentences, explain how the mechanism of action of furosemide relates to the pathophysiology of congestive heart failure.

- B. **Application Cards:** is a technique used after participants have heard an important principle, theory, or procedure. The instructor then, hands out an index card and asks the participants to write down at least one possible, real-world application for what they have just learned.

This strategy allows faculty to know how well the participants understand the possible applications of what they have learned. For the participants, it prompts them to quickly relate the newly learned concepts with their prior knowledge.

Sample: In what type of patient would you use the combination of insulin and glipizide?

### **Assessing Participants' Awareness of Their Attitudes and Values (ATTITUDE)**

- A. **Opinion Polls:** is a strategy to indicate agreement or disagreement with a particular statement. It provides anonymity for the participants and it allows the faculty to understand the level of their audience. This assessment technique may be used in the beginning, middle or end of a topic.

Sample:

What percentage of patients want to quit smoking?

What percentage of patients use the nicotine patch? nicotine gum?

How many people conduct a smoking cessation program?

- B. **Double-Entry Journals:** The first half of the journal notes ideas, assertions, and arguments that the participants find most meaningful/controversial. The second half in the journal explains the personal significance of the item noted and responds to that item.



- C. Self-Confidence Surveys: consist of a few simple questions aimed at getting a rough measure of the students' self-confidence in relation to a specific skill or ability.

Example: How confident do you feel in monitoring the drug therapy for a patient with congestive heart failure?

## **INSTRUCTIONAL MATERIALS AND CONTENT**

Speakers are required to provide PPA with copies of all instructional materials; including but not limited to PowerPoint slides, handouts, reference materials, and assessment tools. PPA will make these documents available through a web link for participants to print and bring along to the program.

In addition, faculty is requested to provide reference materials that the attendees will find useful after the program. This could be a list of helpful websites, a quick info sheet, or anything else you feel may be a helpful take-away. This must be provided to PPA in advance.

If you will be using a PowerPoint, PPA requires three specific slides to be included at the beginning of the slideshow. Speakers must include a slide with the program title and a slide with the program objectives *exactly as provided by PPA* (right down to capitalization and punctuation). Additionally, the third slide should include a disclosure with the statement “I, (your name here), have no conflicts of interest or financial relationships to disclose” OR a slide stating a relationship you have disclosed to PPA and assurance that this relationship will not be reflected in your presentation.

### **Policies regarding bias, conflict of interest, and commercial interest**

Under absolutely no circumstances can a program include any preference of one drug or company over another. All content must be unbiased and based on evidence accepted by the health professions. Your goal should be to provide the facts so that attendees are able to draw their own conclusions. Every effort should be made to refer to drugs by their generic name only. If you must discuss a specific brand, you must provide the same information on all available brands – the same goes for drug manufacturers.

#### **Disclosure Policy**

All speakers for any CPE program shall, prior to the first presentation of the program, provide a completed and signed Speaker Disclosure Declaration form to the CPE Administrator.

If any presenter fails to return or declines to complete the disclosure form, this is automatic reason for removal as the speaker and possible program cancellation, if another presenter cannot be found.

PPA’s CPE Administrator, upon receipt of a speaker disclosure, shall automatically review it for any concerns of potential conflicts of interest. If there are any apparent conflicts or even possible concerns, the CPE Administrator will immediately contact the presenter to attempt to resolve or remove such conflicts.

If any conflict cannot be resolved or is found to impact the content of the program, then the speaker shall be cancelled and, if another presenter cannot be found, the program cancelled.

PPA will not tolerate any conflict of interest or commercial bias in any CPE presentations.

If commercial support for a CPE program is received, PPA’s CPE Administrator will contact the speaker to affirm that there is no relevant relationship that may impact the content of the presentation.



## EVALUATION

All program attendees are required to complete an online course evaluation survey within one week of the program. This evaluation asks for feedback related to the objectives, teaching and learning styles, instructional materials, and overall program. After feedback has been collected, PPA will provide you with a summary of the data and comments received so that you are able to evaluate yourself and find areas for improvement.

PPA asks that all speakers also provide PPA with feedback related to our policies and processes, as well as how successful you view your program to have been based on any initial feedback received during and immediately following your presentation. This can be done at your discretion and in any method you see fit.