SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE

School of Pharmacy
Continuing Pharmacy Education

Faculty (Speaker) Guidance for Developing CPE Activities

To adhere to the Accreditation Council for Pharmacy Education (ACPE) Standards for Continuing Pharmacy Education, SIUE office of Continuing Education strongly supports the use of supportive and supplemental instructional materials for use in the development of continuing pharmacy education activities.

The following guidelines for preparing learning objectives, self-assessment questions, visual aids and handouts have been prepared to assist you in developing meaningful instructional aids for your activities.

Instructions for Writing Behavioral Objectives
A behavioral objective states what a learner should be able to do at the conclusion of the activity. It identifies the terminal behavior (outcome) of the activity.

Objectives are critical to CE activity development because they (1) reflect inputs from the learners relative to educational needs (2) determine the selection of content and teaching methods and (3) provide a guide to the evaluation phase.

When writing objectives, make sure:
1. To use verbs which describe actions that can be observed
2. Objectives are measurable within the teaching action time frame
3. To use only one action verb per objective
4. To describe the learner outcome, not the instructor's process or approach
5. Objectives are appropriate for the designated teaching method (s).

Developing Learning Objectives
1. Prepare at least one (1) learning objectives for your presentation for each 20-30 minutes of instruction, up to a maximum of eight (8) for a four (4) hour program.
2. Learning objectives describe what you want the learner to be able to do as a result of participating in your educational activity -they do not describe what the activity will do or say.
3. Do not use abbreviations or acronyms in learning objectives – spell it out.
4. Verbs for performance objectives must elicit or describe observable or measurable behaviors, and must be specific. Identify the behavior by name that will be accepted as evidence the learner has achieved the objective.
    Measurable: describe, explain, list, state, identify, compare
    Not Measurable: know, understand, learn, grasp significance of, and become familiar with.

Examples of verbs that may be used

Examples of behavioral terms that may be used. The learner should be able ………….			
Acquisition of Knowledge	Enhancement of Thinking Skills	Development of Psychomotor Skills	Changes in Attitudes, Values and/or Feelings
To identify	To compare	To demonstrate	To challenge
To list	To contrast	To produce	To defend
To define	To catalogue	To assemble	To judge
To describe	To classify	To adjust	To question
To state	To evaluate	To install	To adopt
To prepare	To forecast	To operate	To advocate
To express	To formulate	To detect	To bargain
To categorize	To investigate	To locate	To cooperate
To chart	To modify	To isolate	To endorse
To rank	To organize	To arrange	To justify
To distinguish	To plan	To build	To persuade
To explain	To research	To conduct	To resolve
To outline	To translate	To check	To select
To inform	To differentiate	To manipulate	To dispute
To label	To analyze	To fix	To approve
To specify	To compute	To lay out	To choose
To tell	To devise	To perform	To express
		To sort	
		To construct	
		To draw	

Selected verbs from Caffarella RS. (1994). *Planning Programs for Adult Learners*, San Francisco: Jossey Bass,

These Action verbs should be used with teaching methods that involve participants beyond lecture and discussion, such as skills demonstration, written and group exercises etc.

Do not use words that describe mental responses that cannot be measured, or terms that are broad, vague, and difficult to measure or permit a variety of interpretations.

Examples of terms that SHOULD <u>BE AVOIDED</u> because they are open to interpretation or are not easily measured.

Appreciate	Enjoy	Know	Review	Behave	Explore	Learn
Understand	Believe	Grasp Significance of		Perceive	Comprehend
Be aware of	Have faith in	Realize			

Activity Types and Characteristics

There are three types of activities: knowledge, application and practice-based. You must identify the type of activity you are presenting and submit on the CE activity planning form.

Minimum Contact Hours	Primary Activity Purpose	Sample Learning Objective Verbs	Active Learning Exercises	Learning Assessment Tools
Knowledge-Based Activities				
0.25 hour	Transmit knowledge	Define, list, describe, identify	Questions, recall of facts	Post-test and/or evaluation
Application-Based Activities				
1 hour	Apply information	Apply, calculate, compare, analyze, differentiate, relate.	Case studies, group discussions, apply principles, practice	Pre-test, post-test and/or evaluation
Practice-Based Activities				
15 hours	Instill skills, knowledge, and attitudes	Plan, design, measure, prepare, and demonstrate.	Formative and summative	Practice site project, and/or post-test and evaluation.

Knowledge-based CPE activities – Should be designed primarily for pharmacists to acquire factual knowledge or recall facts. This information must be based on evidence as accepted in the literature by the health professions.

Application-based CPE activities – Should be designed primarily for pharmacists to apply the information learned within the time allotted. This information must be based on evidence as accepted in the literature by the health professions.

Practice-based CPE activities – Should be designed primarily for pharmacists to systematically acquire specific knowledge, skills, attitudes and performance behaviors that expand or enhance practice competencies. The information must be based on evidence as accepted in the literature by the health professions. The format must include a didactic component and a practice component.

Promoting Active Participation in Continuing Pharmacy Education

Activities must be designed so that pharmacists are able to participate by talking, relating the activity to their experiences, applying the activity to their professional lives and thus making learning a part of them.

What is active participation?

Active participation encourages the audience actively participate in the activity by processing and applying knowledge gained during the activity. It requires the audience to talk, listen and reflect on what has been presented.

<u>What are the benefits of active participation?</u>

During a lecture, the typical participant's attention declines after the first 10 minutes. Active participation encourages interest and attention throughout the lecture. A participatory role is required and consequently, greater comprehension and better retention of material can be achieved. Research has demonstrated greater learning and enjoyment when participants are actively involved in learning.

<u>What are some examples of techniques that promote active learning?</u>

Ask what questions learners would like addressed and use that information to guide the activity.

Two-minute pauses – to allow participants to review and reflect on the material presented. Such pauses promote active listening and increase understanding of the material.

Provide immediate feedback. Speakers ask a question and ask for a show of hands indicating agreement with various responses. Instant feedback can then be provided and indicates to the speaker the extent to which the material was understood.

Think pair share - the speaker asks the participants to think about a case or question alone at first, and then discuss the case or question with someone else. One of the pairs is then selected at random to summarize their discussion. This technique helps individuals organize knowledge and apply information.

The presenter can create a forum to allow participants to communicate during the activity. Examples include chat rooms, and micro blogs. These can help participants to discuss their application of the material presented.

Audience response systems (such as qwizdom) allow adult learners to engage in interactive learning as well as providing immediate feedback on learning comprehension. Ask questions at the start of the presentation to establish a baseline level of knowledge. Use different response (T-F, multiple choice, Yes-No) to help keep the audience engaged. Include the questions as part of the presentation.

<u>Tips for Stimulating Learning</u>
- Start the session with an overview of the content in the educational offering and why it's of value to the participants; end with a summary of key points.
- For information on learner centered instruction and delivery refer to the following web site: http://www.acpe-accredit.org/pdf/Presentations/Subramaniam-Delivery%20of%20a%20CPE%20Activity%20Oct07%202009.pdf

Developing Active Learning Exercises

According to educational research, adults learn best when there is interaction between the presenter and the learner, they participate in role-playing or when peer-to-peer dialogue takes place. Active participation encourages the audience to do more than passively listen to a lecture. Rather, participants are processing and applying knowledge gained during the lecture. Active participation requires the audience to talk, listen, and reflect on the material presented. The focus of education has shifted from how much you know to how you apply what you know.

1. Active learning exercises should link to the activity learning objectives.
2. Presentations should include active participation and involvement of the learner.
3. Active learning should be appropriate for the content level and the expected audience (i.e. knowledge-, application-, or practice-based; pharmacist, technician or both).
4. All active learning exercises should include feedback to the learner and allow the instructor to assess the effectiveness of the instruction.
5. Allow at least 5 minutes in presentation time for each active learning exercise.

**Suggested Active Learning Strategies for
Use with ACPE's CPE Activity Types and Bloom's Taxonomy Levels**

CPE Activity: KNOWLEDGE	
Bloom's Taxonomy	*Suggested Active Learning Techniques*

Knowledge-type verbs
   Define
   Repeat
   List
   Record
	Lecture
	 Visuals
	 Examples
	 Illustrations
	 Analogies

Comprehension-type verbs
   Discuss
   Describe
   Explain
   Recognize
   Identify
   Translate
   Restate
   Express
	Test/Assessment
	 Review
	 Writing
	 Presentations
	 Matching questions/answers
	 Questions
	 Discussion
	 Report

CPE Activity: APPLICATION AND/OR PRACTICE	
Bloom's Taxonomy	*Suggested Active Learning Techniques*

Application-type verbs
   Interpret
   Apply
   Employ
   Use
   Demonstrate
	Role play
	 Simulations
	 Practice exercises
	 Demonstrations
	 Projects

Illustrate Practice	

<u>Analysis-type verbs</u>
  Distinguish
  Analyze
  Differentiate
  Calculate
  Compare
  Contrast
  Criticize
  Debate
  Diagram
	Case studies
	Problems
	Discussion
	Pro/con grids
	Application exercises

CPE Activity: APPLICATION AND/OR PRACTICE (continued)	
Bloom's Taxonomy	*Suggested Active Learning Techniques*

<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

Adapted from Phillips, L. *The Continuing Education Guide The CEU and other Professional Development Criteria*. 1994

Summary of recommendations when incorporating active learning strategies

a. Select strategies with which you feel comfortable
b. Develop a goal for the activity and determine when in the lecture the active participation will occur. Determine what you will need to effectively use the active learning strategy.

Tips for Effective PowerPoint Slide Presentations

- Keep visuals simple –convey one idea/thought per slide.
- Use visual as an outline for content
- Know what you want to highlight and boil down the points
- Use visuals to remind yourself to keep focused
- Place points in order of importance
- Consistent grammar and punctuation, simple design and artwork, align text to left
- Use bullets rather than numbers or letters
- Use upper and lower cases consistently – do not use all caps
- Clear, plain typefaces that project well
- Show visuals only when you are referring to them
- DO NOT read visuals to the audience. Relate to the audience, not your audio-visuals
- Use colors wisely – light colors on dark backgrounds

You can view this show and follow these guidelines when developing your slides.
http://www.iasted.org/conferences/formatting/Presentations-Tips.ppt

Preparing assessment questions

Questions should be simple, clearly stated and measure only the educational objective for which they are designed.

- Self assessment questions should link directly to learning objectives and active learning.
- Questions should be simple, clearly stated, and measure only the educational objective for which they were designed.
-
- Pose the question in the affirmative – avoid the terms NOT and EXCEPT
- Ensure that the questions are similar in length and grammatical construction
- Avoid "all of the above" or true/false questions.
- Answer choices should be uniform in length and style, and grammatically consistent with the question
- Do not clue the reader in to the correct answer, for example by using the same or similar words in the question and answer.

Preparing handouts

Minimally, the handout must have a detailed outline: the learning objectives and assessment questions.

Include visual aids in the handout. Make sure the handouts follow your presentation.

Bibliography or reference list

To ensure that presentations are evidence-based, a bibliography or reference list must be included in the handout, particularly if you refer to certain articles in the presentation.

Yes. Please refer to *supplemental documents for further referencing information.
Visit www.icmje.org, or *http://www.nlm.nih.gov/pubs/formats/internet.pdf,*

Final Guidance

Always proofread!
Introduce yourself to the moderator prior to your presentation
Stay on time. Work with your moderator to keep track of time.
Repeat questions asked by the audience