ARC-PA

Accreditation Review Commission on Education for the Physician Assistant, Inc.

Syllabi, Program Competencies, Learning Outcomes & Instructional Objectives

***Standards* 5th edition**

A Guide for PA Program Faculty©

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Contents

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Introduction

This resource uses the ARC-PA *Standards,* 5th edition, effective September 2020. Several of the ARC-PA *standards* are related to program *competencies, learning outcomes* and *instructional objectives* and are important to keep in mind when developing and revising the program curriculum, course syllabi and student assessment tools.

Purpose of this document:

- Identify which ARC-PA standards are important in the development of syllabi and *instructional objectives*
- Describe the general role and content of a syllabus
- Differentiate between *instructional objectives, learning outcomes* and program *competencies*
- Describe brief overview of writing objectives
- Provide examples to increase understanding of terms

Important Standards (5th edition) to reference include:

B1.01b The curriculum *must* be consistent with program *competencies*.

B1.01d The curriculum *must* be of *sufficient* breadth and depth to prepare the student for the clinical practice of medicine

B1.03 For each didactic and clinical course (including *required* and *elective rotations*), the program *must* define and publish *learning outcomes* and *instructional objectives,* in measurable terms that can be assessed, and that guide student acquisition of required *competencies*.

B3.03 Supervised *clinical practice experiences* must enable all students to meet the program's *learning outcomes*:
  a) for preventive, emergent, acute, and chronic patient encounters,
  b) across the life span, to include infants, children, adolescents, adults, and the elderly,
  c) for conditions requiring surgical management, including pre-operative, intra-operative, post-operative care, and
  d) for behavioral and mental health conditions.

B4.01 The program *must* conduct *frequent*, objective and documented evaluations of student performance for both didactic and *supervised clinical practice experience* components. The evaluations must:
  a) align with what is expected and taught and
  b) allow the program to identify and address any student deficiencies in a *timely* manner

B4.03 The program *must* conduct and document a *summative evaluation* of each student within the final four months of the program to verify that each student meets the program *competencies* required to enter clinical practice, including:
  a) clinical and technical skills,
  b) clinical reasoning and problem-solving abilities,
  c) interpersonal skills,
  d) medical knowledge, and
  e) professional behaviors.

In addition, Standards A2.05 and A2.12 should be reviewed relative to the individuals responsible for development of program competencies and curricular revisions. Finally, two additional *standards* that affect programs applying for Accreditation Provisional are listed below. Provisional applicant programs are to demonstrate compliance or the ability to comply when operational with all accreditation *Standards*.

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D1.03 Prior to the ARC-PA provisional comprehensive evaluation site visit, the program *must* have a complete curriculum and institution-approved curriculum and have established evaluation methods for all didactic and clinical components of the program.

D1.04 The program *must* provide detailed information for each course and *rotation* offered in the program. The program *must* have a course syllabus for each course and rotation that includes the:
   a) **course name,**
   b) **course description,**
   c) **course goal/rationale,**
   d) **outline of topics to be covered,**
   e) ***learning outcomes and instructional objectives*,**
   f) **faculty instructor of record if known,**
   g) **methods of student assessment/evaluation, and**
   h) **plan for grading.**

Course Syllabus

The course syllabus is an early point of contact and connection between students and faculty. It is a contractual agreement between the students and faculty. It places the course in a broader context within the curriculum and provides a general conceptual framework for the course. Additionally, it serves several very important functions.

- Sets tone for course
- Describes the purpose of the course
- Provides information about course (e.g. location, meeting dates/times, etc.)
- Provides an outline of course topics
- Defines student responsibilities for success
- Describes expected student *learning outcomes*
- Lists *instructional objectives*
- Describes requirements/ deadlines for completion
- Lists required textbooks and available learning resources
- Communicates use of technology in the course

In addition to those functions listed above, the syllabus may also improve the effectiveness of learner note taking, can include material that supports learning outside the classroom, and can serve as a learning contract. Course syllabi should be written in a manner that assists students in becoming effective learners. It functions to guide student learning and not simply designed to meet an institutional or accreditation requirement. There should be some consistency of syllabi format across a PA program. However, each syllabus should be developed to include essential content to assist students in their learning material from specific courses.

For accreditation purposes, the ARC-PA expects that each syllabus, at a minimum will include:
   a) **course name,**
   b) **course description,**
   c) **course goal/rationale,**
   d) **outline of topics to be covered,**
   e) ***learning outcomes and instructional objectives*,**
   f) **faculty instructor of record if known,**
   g) **methods of student assessment/evaluation, and**
   h) **plan for grading**

Competencies

Competencies are defined as "the medical knowledge; interpersonal, clinical, and technical skills; professional behaviors; and clinical reasoning and problem-solving abilities <u>required for PA practice</u>." They are summative in nature and set the tone for what is required of the student upon completion of the program to enter clinical practice. When developing program *competencies*, programs need to identify the key qualities they require from a graduate of their program addressing the medical knowledge, interpersonal, clinical and technical skills, patient care, and clinical reasoning and problem-solving abilities.

Learning Outcomes

Learning outcomes are defined as "the medical knowledge, interpersonal, clinical and technical skills, professional behaviors, clinical reasoning, and problem-solving abilities that have been attained by the student <u>at the completion of a curricular component, course, or program</u>." They establish what the student must be able to do at the conclusion of a curricular component of the program.

A useful *learning outcome* should:
- Focused guidance for the development of the desired behavior
- Include specific verb, observable action
- State the desired level of performance

Learning outcomes reflect what the course assessments are intended to show -- specifically what the student will be able to do upon completing the course of study.

Relating Instructional Objectives to Learning Outcomes and Expected Competencies

Learning outcomes and *program competencies* are both knowledge, behavior, ability and skill defined outcomes, but they occur at different times in the educational process. *Learning outcomes* are to be attained by the trainee while in the program and usually occur at the <u>end of a unit, course, or clinical experience</u>. They are more formative in nature. *Competencies* refer to abilities <u>required for PA practice</u> and are summative in nature. *Learning outcomes* are integrally related to *competencies* and should reflect the building blocks needed to be attained as the trainee progresses towards acquisition of program *competencies*. Similarly, *instructional objectives* focus on content and skills important within each course and provide the details necessary to help the student progress towards the acquisition of *learning outcomes*.

Each PA Program must develop *learning outcomes* for each course in the curriculum. The program should ask what it wants the student to achieve at the end of the course/rotation (what is expected of the student) and how this piece of the curriculum assists the student towards achieving the qualities identified in the program *competencies*.

Instructional Objectives

Instructional objectives are statements that describe observable actions or behaviors the student will be able to demonstrate after completing a unit of instruction. *Instructional objectives* are designed to guide students in their studies and or activities and may also aid faculty in developing appropriate educational experiences.

Instructional objectives are specific, observable and measurable, and provide a more detailed level of the steps needed to achieve the desired *learning outcomes*. They provide guidance for trainees on what to study, how to prepare and what level of performance is required for success.

Instructional objectives are specific, observable and measurable, rather than broad, vague and intangible. They are tools to achieve desired *learning outcomes* but are not a process for achieving those outcomes.

Instructional objectives are categorized into three domains of cognitive, affective and psychomotor. Cognitive

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objectives are mainly used in instructional programs. Whereas, affective and psychomotor objectives are typically used for "hands on" learning. Historically, objectives are developed using the revised Bloom's Taxonomy (2001) which is a method of classifying objectives on differing levels of higher order thinking. There are six levels ranging from remembering information to evaluating and creating. The chart below is a quick reference but please see the references at the end of the document for a greater understanding of levels of objectives.

Taxonomy	Definition	Level	Description	Example Terms
Knowledge	Remembering	Lowest	Recall or recognize	Define, identify, list
Comprehension	Understanding		Low level understanding	Describe, interpret, summarize
Application	Applying		Implementing information	Apply, determine, demonstrate
Analysis	Analyzing		Break information into component parts and describe relationship	Distinguish, differentiate, diagnose, analyze
Evaluation	Evaluating		Make judgement about materials	Evaluate, conclude, justify
Synthesis	Creating	Highest	Generate new ideas or ways of doing things	Design, plan, formulate, generate, construct

In order to guide acquisition of student learning and be of sufficient breadth and depth, instructional objectives are developed for courses/rotations (course objectives) and may also be developed for smaller units of study like lectures or modules (lecture objectives).

Instructional Objectives, Learning Outcomes and Student Assessment

All student assessment tools should be linked to *learning outcomes* and *instructional objectives*. Assessing and reporting on every *instructional objective* for each PA trainee may be impossible. However, <u>assessment of *learning outcomes* serves as a foundation for assessing the trainee's knowledge, skills, and performance</u>. Student assessment tools must provide verification that each student has acquired the knowledge, skills and abilities expected by the program as described in the *learning outcomes* and are progressing to meet the program *competencies*. Assessment tools for each didactic course and *rotation* must parallel the expected *learning outcomes* identified in the course syllabi.

> *Competencies* **establish the target for the program.**
> *Learning Outcomes* **are the proof of how trainees are reaching the target.**
> *Instructional Objectives* **are the detailed steps of how to get there.**

Writing Instructional Objectives and Learning Outcomes

Many PA programs have some *instructional objectives* that include a long list of problems or disease entities for which the student is expected to demonstrate some behavior (e.g. *Discuss in detail the clinical manifestations, diagnosis, initial management and follow-up of the following problems/disease entities seen in an ambulatory care setting: followed by list of diseases).*

When using such instructional objectives, programs should remember that the list of problems/disease entities which follows the instructional objective must be:

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- Appropriate to the discipline. Pediatrics instructional objectives should focus on pediatrics).
- Appropriate to the length of time of the course. Can the students accomplish what the program hopes they can in the time allowed or is the list taken from a table of contents of a textbook?)
- Appropriate level for PA professional practice. Does the list of topics include those that should be included to prepare a PA for practice? For example, does a course on documenting a Problem-oriented patient examination include all the components of the history and physical, diagnostic studies, SOAP notes, etc.?)

Issues in Writing Instructional Objectives

It is easy to become overzealous in developing *instructional objectives*. Developing objectives that are too specific may result in an abundance of small-scope objectives. The resulting myriad of overly specific *instructional objectives* will so overwhelm the PA student, that they will pay no attention to any of the objectives.

The trick in conceptualizing *instructional objectives* that help rather than hinder is to frame those objectives broadly enough so that the faculty can sensibly organize instruction around them while making sure that they are still measurable.

Sometimes one broad, measurable objective subsumes many lesser or smaller-scope instructional objectives. Since taxonomies of learning build from the simpler to the more complex, it is reasonable to develop evaluation items that fit into a taxonomy level equal to or less than that of the objective. For example, being able to discuss typically requires a certain knowledge base before the discussion can occur. In this case, it might be reasonable to ask an evaluation item about knowledge level content that could be presumed under the verb "discuss."

Instructional objectives should provide students direct guidance. Students should not be expected to assume that an *instructional objective* implies more than what is provided. For example, an *instructional objective* that requires the PA trainee to "perform a physical exam" should not be assessed by an examination that requires the PA trainee to "name the physical exam test used to assess a low calcium level;" or "describe the consequences of performing a portion of the exam incorrectly." The latter two activities are not subsumed under "perform a physical exam," and should be identified as separate objectives.

Checklist for Evaluating Instructional Objectives

In reviewing instructional objectives, programs should ask if each objective is:

- Clearly written and understandable to the learner
- Not vague/intangible but specific to the expected outcome
- Developed using appropriate action verbs that indicate the depth of "understanding" or performance expected
- Developed using a method of appropriate higher order thinking (e.g. revised Bloom's)
- Observable and measurable by the faculty
- Achievable by the student
- Guides student acquisition of knowledge or skills
- A complete statement as written.
- Linked directly to assessment (written/ practical exams, OSCE, simulation or clinical experience assessment)

Lastly, do all the objectives as a group form an accurate picture of the expected learning outcomes for the course?

Examples

<u>Course Goal Rationale</u>
- The goal of this course is to provide a better understanding of the concepts of physical examination and how to perform various physical examinations as a physician assistant.

<u>Learning Outcome Examples (student should demonstrate by end of the course/rotation)</u>
- When presented with a patient with chest pain, the student will be able to perform an appropriate cardiac examination on a simulated patient.
- Based on history and physical exam findings, the student will be able to formulate a differential diagnosis for a patient presenting with chest pain.

<u>Instructional Objective Examples (The action the student is working toward during the unit of instruction)</u>
- Distinguish between the different auscultation points in the cardiac exam.
- Differentiate between cardiac and non-cardiac types of chest pain.
- Demonstrate a problem based cardiac examination.

<u>Assessment Example: (student should demonstrate achievement of the learning outcome by the end of the course)</u>
- Conduct a history and physical exam and formulate a differential diagnosis for a patient presenting with chest pain.

References

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