UC Riverside, School of Medicine Policies and Procedures
Policy Title: Nomenclature System for Instructional Methods and Identification of Instructional Methods Considered Active Learning
Policy Number: 950-06-014

Responsible Officer:	Senior Associate Dean, Medical Education
Responsible Office:	Office of Medical Education
Origination Date:	07/21/2022
Date of Revision:	12/20/2023
Scope:	Faculty, Administrators, Students

I. Policy Summary

This policy establishes 1) an official nomenclature system for general categories of instructional methodologies, 2) adoption of the standardized 2016 MedBiquitous system for defining specific instructional modalities, and 3) identification of which instructional methods are considered "active learning" at UCR School of Medicine.

II. Definitions

A. The general categories of instructional methodologies used at UCR SOM:

1. Lecture - Instruction delivered as a verbal discourse by a speaker(s) to a small or large group of learners.

2. Active-learning - *An approach to instruction in which students engage with material by doing things that directly enable them to reflect on, synthesize, and apply the concepts being taught.*

   a. Active learning can occur in a variety of settings, including the classroom, the clinical environment and/or on-line.

   b. Active learning is not defined by the number of students involved and can be used to engage students individually and within small or large group environments.

   c. Use of audience response system technology during what is primarily a lecture does not make the lecture "active learning".

3. Self-directed Learning (SDL) – *One form of active learning that may include both an in-class and an out-of-class component. For an instructional session to qualify as SDL, the* **session must meet the definition established by the Liaison Committee on Medical Education** *(as defined by the 2024-25 LCME Element 6.3 Data Collection Instrument published May 2023):*

   a. *"Includes all of the following components as a single unified sequence that occurs over a relatively short time: 1) the medical student's self-assessment of his/her learning needs; 2) the medical student's independent identification, analysis, and synthesis of relevant information; and 3) the medical student's appraisal of the credibility of information sources; and 4) the facilitator's assessment of and feedback to the student on his/her information seeking skills."*

4. Independent Learning – Instructor-assigned learning activities to be performed by the learner **outside of formal educational settings and "outside-of-class" time.** Independent learning is considered a form of active learning. Examples include:

   a. *Post-class homework*

   b. *Pre-class homework* - Dedicated time on learner schedules to prepare for specific in-class learning activities e.g., case discussions, team- based learning (TBL), problem-based learning

(PBL), case-based learning (CBL), clinical activities, research project(s), self-directed learning sessions, etc.)

    c. *Independent required formative assessments - assigned during "out-of- class hours".*

5. Self Study - Students' own time for regular study or review.
   a. The LCME does not count student's own time for regular study or review as part of independent learning time.
   b. This is not instructor-assigned learning activities.
6. Flipped Classroom - A pedagogical model in which students gain first- exposure learning prior to class (e.g., via online modules, videos, readings, etc.) and focus on the processing part of learning (synthesizing, analyzing, problem-solving, etc.) in class. The instructional methods in class can be variable (e.g., case-based, games, team-based learning, lab sessions, etc.).

B. UCR SOM utilizes the official standardized nomenclature system known as the "MedBiquitous" Curriculum Inventory Working Group Curriculum Inventory Standards, March 2016, to define specific instructional methods (e.g., case- based instruction / learning; clinical experience –ambulatory; discussion, laboratory, small group [≤12]; service-learning activity; simulation; team-based learning, ward rounds, etc.) – See Appendix A for complete document.

C. The following specific instructional methods are classified as "active learning" versus not active learning:

Active Learning	Not Active Learning
Case-Based Instruction/Learning Clinical Experience - Ambulatory Clinical Experience - Inpatient Concept Mapping Conference Demonstration Discussion, Large Group (>12) Discussion, Small Group (<12) Games Independent Learning Journal Club Laboratory Mentorship Patient Presentation – Faculty Patient Presentation - Learner Patient Presentation - Patient Peer Teaching Preceptorship Problem-Based Learning (PBL) Reflection Research Role Play/Dramatization Self-Directed Learning Service Learning Activity Simulation Team-Based Learning (TBL) Team- Building Tutorial Ward Rounds Workshop	Lecture

III. Related Information

LCME Element 6.3

LCME Element 8.8

MedBiquitous Curriculum Inventory Working Group Curriculum Inventory Standards, March 2016 (Appendix A)

IV. Revision History
New 07/21/2022
12/20/23

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Instructional Methods

Instructional Method	Definition / More information
Case-Based Instruction/ Learning	**Use of patient cases (actual or theoretical) to stimulate discussion, questioning, problem solving, and reasoning on issues pertaining to the basic sciences and clinical disciplines** (Anderson, 2010)
	Synonymous with/Includes: Case Study
	Does not include: Conference; Discussion, Small Group (≤12); Patient Presentation - Faculty; Patient Presentation - Learner; Problem-Based Learning (PBL); Simulation; Team-Based Learning (TBL)
	Note(s): Distinguished from Simulation in that, in CBL, learner is not necessarily practicing the role of care provider, yet in Simulation, learner is practicing some aspect(s) of provider role.
Clinical Experience - Ambulatory	**Practical experience(s) in patient care and health-related services carried out in an ambulatory/outpatient setting where actual patients are studied and treatment and/or counseling is given** (ERIC, 1968 & 1981; *CI Standardized Vocabulary Subcommitee)*
	Synonymous with/Includes: Clinical Reasoning; Communication Skills; Community-Based; Outpatient; Patient Care; Patient Care Activity; Problem Solving
Clinical Experience - Inpatient	**Practical experience(s) in patient care and health-related services carried out in an inpatient setting where actual patients are studied and treatment and/or counseling is given** (ERIC, 1968 & 1981; *CI Standardized Vocabulary Subcommittee)*
	Synonymous with/Includes: Clinical Reasoning; Communication Skills; Patient Care; Patient Care Activity; Problem Solving
Concept Mapping	**Technique [that] allows learners to organize and represent knowledge in an explicit interconnected network. Linkages between concepts are explored to make apparent connections that are not usually seen.** (Weiss & Levinson, 2000, citing Novak & Gowin, 1984)
Conference	**Departmentally-driven and/or content-specific presentations by clinical faculty/professionals, residents, and/or learners before a large group of other professionals and/or learners** (e.g., Mortality and Morbidity, or "M & M," Conference--Biddle & Oaster, 1990--and Interdisciplinary Conference--Feldman, 1999; also see Cooke, Irby, & O'Brien, 2010b)
	Synonymous with/Includes: Grand Rounds; Mortality/Morbidity (M & M) Conference; X-Ray; Tumor Board
	Does not include: Discussion, Large Group (>12); Lecture
Demonstration	**A description, performance, or explanation of a process, illustrated by examples, observable action, specimens, etc.**
	Synonymous with/Includes: Autopsy
	Does not include: Laboratory
Discussion, Large Group [>12]	**An exchange (oral or written) of opinions, observations, or ideas among a Large Group [more than 12 participants], usually to analyze, clarify, or reach conclusions about issues, questions, or problems** (ERIC, 1980)
	Does not include: Conference
Discussion, Small Group [≤12]	**An exchange (oral or written) of opinions, observations, or ideas among a Small Group [12 or fewer participants], usually to analyze, clarify, or reach conclusions about issues, questions, or problems** (ERIC, 1980)
	Does not include: Case-Based Learning/Instruction; Conference; Problem-Based Learning (PBL); Team-Based Learning (TBL); Tutorial; Workshop
Games	**Individual or group games that have cognitive, social, behavioral, and/or emotional, etc., dimensions which are related to educational objectives** (ERIC, 1966a)
Independent Learning	**Instructor-/ or mentor-guided learning activities to be performed by the learner outside of formal educational settings (classroom, lab, clinic)** (Bowen & Smith, 2010); **Dedicated time on learner schedules to prepare for specific learning activities, e.g., case discussions, TBL, PBL, clinical activities, research project(s)**
	Synonymous with/Includes: Independent Study; Homework
	Does not include: Self-Directed Learning

Journal Club	**A forum in which participants discuss recent research papers from field literature in order to develop critical reading skills (comprehension, analysis, and critique)** (Cooke, Irby, & O'Brien, 2010a; Mann & O'Neill, 2010; Woods & Winkel, 1982)
	Synonymous with/Includes: Critical Reading
	Note(s): "[A] forum for the education of residents in the techniques of critical reading, that is, the ability to understand the format of an article, analyze the process by which the study was done, recognize the limitations of the work, and critique the results and interpretation" (Woods & Winkel, 1982); "[A] forum for discussion of recent papers in [a] specialty [and] mechanism for residents [and/or learners] to learn how to assess the quality and import of clinical research papers" (Cooke, Irby, & O'Brien, 2010a)
Laboratory	**Hands-on or simulated exercises in which learners collect or use data to test and/or verify hypotheses or to address questions about principles and/or phenomena.**
	Synonymous with/Includes: Autopsy; Anatomy Lab; Gross Lab; Histology Lab; Wet Lab
	Does not include: Demonstration
Lecture	**An instruction or verbal discourse by a speaker before a large group of learners** (Institute for International Medical Education, 2002)
	Synonymous with/Includes: Didactic; Recording of a lecture
	Does not include: Conference; Discussion, Large Group (>12)
Mentorship	**The provision of guidance, direction and support by senior professionals to learners or more junior professionals** (U.S. National Library of Medicine, 1987)
	Synonymous with/Includes: Advising; Career Development; Coaching; Professional Development
	Does not include: Preceptorship
Patient Presentation - Faculty	**A presentation by faculty to faculty, residents, and/or other learners of patient findings, history and physical, differential diagnosis, treatment plan, etc.** (Wiener, 1974; CI Standardized Vocabulary Subcommittee)
Patient Presentation - Learner	**A presentation by a learner or learners to faculty, resident(s), and/or other learners of patient findings, history and physical, differential diagnosis, treatment plan, etc.** (Wiener, 1974)
Patient Presentation - Patient	**A presentation by a patient to faculty, residents, and other learners that tells or recounts the patient's experience** (CI Standardized Vocabulary Subcommittee)
Peer Teaching	**Learner-to-learner instruction for the mutual learning experience of both "teacher" and "learner"; may be "peer-to-peer" (same training level) or "near-peer" (higher-level learner teaching lower-level learner)** (Soriano et al., 2010)
	Synonymous with/Includes: Near-Peer Instruction; Peer Instruction; Peer Teaching; Peer Tutoring; PeerAssisted Learning
Preceptorship	**Practical experience in medical and health-related services wherein the professionally-trained learner works under the supervision of an established professional in the particular field** (U. S. National Library of Medicine, 1974)
	Synonymous with/Includes: Externship
	Does not include: Mentorship; Service Learning Activity
Problem-Based Learning (PBL)	**The use of carefully selected and designed patient cases that demand from the learner acquisition of critical knowledge, problem solving proficiency, self-directed learning strategies, and team participation skills as those needed in professional practice** (Eshach & Bitterman, 2003; see also Major & Palmer, 2001; Cooke, Irby, & O'Brien, 2010b; Barrows & Tamblyn, 1980)
	Does not include: Case-Based Instruction/Learning; Discussion, Small Group (≤12); Team-Based Learning (TBL)
Reflection	**Examination by the learner of his/her personal experiences of a learning event, including the cognitive, emotional, and affective aspects; the use of these past experiences in combination with objective information to inform present clinical decision-making and problem-solving** (Mann, Gordon, & MacLeod, 2009; Mann & O'Neill, 2010); reflecting on patients' experiences using narrative and/or storytelling (*Advances in Health Sciences Education*, *18*(4), 727-743. http://link.springer.com/article/10.1007/s10459-012-9411-y)
	Synonymous with/Includes: Journaling, Narrative, Story-telling

Research	**Short-term or sustained participation in research.** *Research* is defined as a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy, whether or not they are conducted or supported under a program which is considered research for other purposes. For example, some demonstration and service programs may include research activities. (U.S. Department of Health & Human Services 45 CFR 46 http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html)
Role Play/ Dramatization	**The adopting or performing the role or activities of another individual**
	Synonymous with/Includes: Practicing Skills (with peers)
	Does not include: Simulation (as with Simulated/Standardized Patient) – See Resource Types)
Self-Directed Learning	**Learners taking the initiative for their own learning: diagnosing needs, formulating goals, identifying resources, implementing appropriate activities, and evaluating outcomes** (Garrison, 1997; Spencer & Jordan, 1999)
	Does not include: Independent Learning; Independent Study, PBL, TBL
Service Learning Activity	**A structured learning experience that combines community service with preparation and reflection.** LCME Glossary of Terms for LCME Accreditation Standards and Elements 2015-2016, October 2015)
	Synonymous with/Includes: Community Service
Simulation	**A method used to replace or amplify real patient encounters with scenarios designed to replicate real health care situations, using lifelike mannequins, physical models, standardized patients, or computers** (Passiment, Sacks, & Huang, 2011)
	Does not include: Role Play/Dramatization
Team-Based Learning (TBL)	**A form of collaborative learning that follows a specific sequence of individual work, group work and immediate feedback; engages learners in learning activities within a small group that works independently in classes with high learner-faculty ratios** (Anderson, 2010; Team-Based Learning Collaborative, n.d.; Thompson, Schneider, Haidet, Perkowski, & Richards, 2007)
	Does not include: Case-Based Instruction/Learning; Discussion, Small Group (≤12); Problem-Based Learning (PBL)
Team- Building	**Workshops, sessions, and/or activities contributing to the development of teamwork skills, often as a foundation for group work in learning (PBL, TBL, etc.) and practice (interprofessional/-disciplinary, etc.)** (Morrison, Goldfarb, & Lanken, 2010)
Tutorial	**Instruction provided to a learner or small group of learners by direct interaction with an instructor** (ERIC, 1966c)
Ward Rounds	**An instructional session conducted in an actual clinical setting, using real patients or patient cases to demonstrate procedures or clinical skills, illustrate clinical reasoning and problem-solving, or stimulate discussion and analytical thinking among a group of learners** (Bowen & Smith, 2010; Wiener, 1974)
	Synonymous with/Includes: Attending Rounds; Bedside Rounds; Bedside Teaching: Teaching Rounds; Student group visit as part of "Doctoring" or "Physical Diagnosis" course
	Does not include: Clinical Experience - Ambulatory; Clinical Experience - Inpatient; Patient Presentation - Faculty; Patient Presentation – Learner
Workshop	**A brief intensive educational program for a relatively small group of people that focuses especially on techniques and skills related to a specific topic** (U. S. National Library of Medicine, 2011)
	Synonymous with/Includes: Seminar

Note: The concepts of **Flipped Classroom, Clinical Correlation, Clinical Case Modules, Case Inventories**, and similar terms that describe a particular use of multiple instructional methods or specific types of clinical documentation are not included in this list. It is the opinion of the MedBiquitous Curriculum Inventory Working Group Standardized Vocabulary Subcommittee that these terms are reflected by or are combinations of existing Instructional Methods or Resources.