

Assessment SIG: The Culture of Assessment – Best Practices

Tuesday, July 12 @ 8:00-9:30 AM

Lone Start Ballroom, Salon E, Floor 2

Grand Hyatt San Antonio

Program outline

General structure (Moderator – Terri Poirier)

- Introduction/Overview

- Engagement of Faculty in the Assessment Plan – Mark Britton

- Round tables with 2 rotations – Topics:
 - 1-PROGRAMMATIC ASSESSMENT
 - 2-STUDENT LEARNING ASSESSMENT – PORTFOLIOS
 - 3-ASSESSMENT OF CRITICAL THINKING
 - 4-WHAT DO YOU DO WITH THESE DATA?
 - 5-FORMATIVE ASSESSMENT OF TEACHING – How to improve your teaching
 - 6-VALIDATED TOOL
 - 7-AACP: AAMS & PEAS
 - 8-STUDENT LEARNING ASSESSMENT – Use of SPs

- Debrief

Programmatic Assessment - Discussion Points – Marie Abate

A. Definition – *The process of determining if a program is achieving its mission and goals

“The college/school of pharmacy **must** have a published statement of its mission, its goals in the areas of education, research and other scholarly activities, service, and pharmacy practice, and its values... The college or school **must** establish and implement an evaluation plan that assesses achievement of the mission and goals. The evaluation **must** measure the extent to which the desired outcomes of the professional degree program (including assessments of student learning and evaluation of the effectiveness of the curriculum) are being achieved...the extent to which the desired outcomes of research and other scholarly activities, service, and pharmacy practice programs are being achieved must be measured.. The evaluation plan **must** reflect a commitment to quality improvement through a continuous and systematic process of assessment and evaluation covering all aspects of the college or school mission and goals and the accreditation standards...” (ACPE, Accreditation Standards and Guidelines 2.0, Revised Jan 23, 2011)

B. Areas of Assessment Focus – Mission/Goal Driven*

- a. Education (E) – primary emphasis for most programs
- b. Research/Scholarship (R)
- c. Service (S) – professional, patient-centered, community, region, religious
- d. **What else does your mission/goals include?**
- e. **Are you currently assessing ALL aspects of your mission/goals?**

C. Methods Used (most focus on *educational* student learning outcomes assessment)

- a. NAPLEX/MPJE; End-of-year/milemarker/progress exams; Pharmacy Curriculum Outcomes Assessment (PCOA) exam (14 participants - 2010); Critical thinking tests; Curriculum mapping; AACP standardized surveys; course evaluations, student surveys; Many others – refer to references
- b. **What education-related methods do you use?**
- c. **Are you in favor of using a national standardized progress exam?**
- d. **How are you assessing each of the other areas in your mission/goals?**

D. Involvement/Coordination

- a. Coordinator: Administrator (director, asst/assoc dean, dean, committee/chair)
- b. Participants: Faculty – critical; Alumni/preceptors; Students; Others outside school/college
- c. **Who is coordinating and participating in your program assessment efforts?**

E. Status

- a. Educational outcomes assessment – 18% assessed entire curriculum; 57% partial (Kirschenbaum)
- b. Assessment of all other aspects of the school’s mission/goals??

F. Possible approaches to development of a programmatic mission/goals evaluation (assessment) plan

Participants’ experiences

- a. Successes
- b. Areas for improvement

**West Virginia University School of Pharmacy
Template for Programmatic Assessment Plan Development**

Add Committee Name Here – 2011 Evaluation Plan for Excellence

Strategic Themes – Innovation, Integration, Collaboration, Excellence (*These are key terms that describe what the School would like the Strategic Plan to involve, so consider how these traits might apply to the work your Committee will be doing*)

School Goal/Objective (Program Outcome/ Output)	Add Committee Name Objective	Strategies/ Activities/ Tasks (Inputs, Environment)	Assessment Method/Measures of Performance	ACPE Standard(s)/ Guideline(s) Addressed	Who Responsible	Timeline	Desired Results/ Targets	Progress or Findings & Evaluation	Improvement Initiatives (if targets not met)
<p><i>List (numbered) each School goal or objective (taken from the first part of the School's Strategic Plan document available through SOLE) that is relevant to the functions and work of your committee</i></p> <p><i>*Indicate any wording changes or additions to the existing School goals or objectives that you would recommend</i></p>	<p><i>Develop objectives, relevant to your committee's charges, that would help to accomplish each listed School goal or objective</i></p>	<p><i>For each Committee-specific objective listed, determine appropriate inputs and environment factors that are important considerations for accomplishing that objective (brainstorm both appropriate inputs AND environmental considerations)</i></p>	<ul style="list-style-type: none"> <i>Identify assessment methods or performance measures to use to determine the success or fulfillment of the specific strategies/ activities/tasks listed (in list format)</i> 	<p><i>Review the ACPE Standards 2007 (available from: http://www.acpe-accredit.org/standards/default.asp) and list those Standards (and any specific related guidelines) that pertain to the items listed to the left</i></p>	<p><i>Indicate those committees or individuals responsible (or who should be responsible) for conducting each assessment method or performance measure listed</i></p>	<p><i>Indicate the year when each assessment will be undertaken (prioritize here as appropriate)</i></p>	<p><i>State the desired targets or results for each assessment method listed</i></p>	<p><i>Summarize new or existing relevant findings for each assessment method; also provide an overall evaluation or interpretation of what the findings mean</i></p>	<p><i>For each finding/ evaluation that indicates the desired target was NOT met, list specific initiatives planned for improvement (these will become new committee-specific objectives in subsequent years)</i></p>

**Organize the rows/columns in a manner that allows others to easily see which objectives, inputs, assessment methods, etc. relate to each other and to an identified School goal or objective*

Feel free to use the School's current Strategic Plan to identify committee-specific objectives, assessment methods, timelines, targets, etc. as appropriate to your committee's work

Student Learning Assessment – Portfolios

Second Year of Implementation (2010-2011)

Overall Structure

- 125 P1 students, 131 P2 students
- 13 Advanced Academic Assistants (AAAs) – P3-P4 peer mentors responsible for providing constructive feedback on first drafts of assignments
- 26 Faculty “Mentors” (FMs) - faculty members, preceptors, and administrators responsible for grading final drafts of assignments
- Requirement for Professional Development Convocation course (six semesters; P1-P3)

Faculty Mentor A					Faculty Mentor B				
Advanced Academic Assistant A									
P2A	P2B	P2C	P2D	P2E	P2F	P2G	P2H	P2I	P2J
P1A	P1B	P1C	P1D	P1E	P1F	P1G	P1H	P1I	P1J

<p>Discussion Questions:</p> <ul style="list-style-type: none"> • What is the structure for e-portfolios at your institution? • What would your ideal structure look like? • What ideas do you have for sustaining the e-portfolio at your institution in the future? 	<p>Notes:</p>
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Assessment

Faculty Mentors provide feedback and assess depth of reflection and basic writing skills for each assignment

	3 – Excellent	2 – Very Good	1 – Fair	0 – Unacceptable
Depth of Reflection	(Reconstructing) The student exhibits a high level of abstract thinking...	(Reasoning) The student demonstrates a deeper understanding of the purpose of the assignment...	(Relating) The student relates the assignment to a prior or current experience...	(Responding) The student describes or re-tells what happened while writing with little additional insight...
Writing	The reflection is well-written, clear, and easy to understand.	The reflection has just a few errors and/or word choice and style could be improved somewhat.	The reflection contains errors and/or incorporates a writing style that distracts the reader...	The reflection contains many errors that make it difficult to understand.

<p>Discussion Questions:</p> <ul style="list-style-type: none"> • What are you using to assess students’ work in their e-portfolios? • What exactly is being assessed? • How do you plan to demonstrate students’ achievement of professional outcomes through the e-portfolio? 	<p>Notes:</p>
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Reviewers

Recruitment Ideas

- in addition to faculty, seek assistance from preceptors and administrators
- present at faculty meetings, annual faculty retreat, annual preceptor conference
- share testimonials from current Faculty Mentors
- clarify expectations, level of commitment, and workload

Training, Communication

- email announcements
- online tutorial
- “Best Practices” workshop in August
- Faculty Mentor Packet

Faculty Mentor Packet

- role of the Faculty Mentor commitment
- organizational structure course coordinators other Faculty Mentors
- expectations, guidelines getting to know your students
- training instructions online tutorial practice reviews
- assignments, deadlines
- FAQs

<p>Discussion Questions:</p> <ul style="list-style-type: none"> • How are you recruiting/retaining individuals to participate in the review process? • What methods are you using to promote consistency when training and communicating with reviewers? 	<p>Notes:</p>
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E-Portfolio Contents

Table of Contents

- biographical information
- pharmaceutical care
- systems management
- public health
- professional development
- P1 work in progress/mementos
- P2 work in progress/mementos
- P3 work in progress/mementos
- P4 work in progress/mementos
- life after pharmacy school

	Fall	Spring
P1	Pharmacy Role Model	Region Selection
	Career Goals + <i>Introduction</i>	Social Networking
	Maintaining Academic Integrity + <i>Resume/Goals</i>	Chemical Dependency + <i>mementos</i>
P2	P1 Milestone Exam/Self-Assessment	Career Goals 2
	Resume Building + <i>Updated Resume</i>	Leadership in Society
	Leadership Development + <i>worksheet</i>	Patient Care + <i>artifact, mementos</i>
P3	P2 Milestone Exam/Self-Assessment	Lessons from Interviewing
	Future Employment	IPPEs/MTM Certification + <i>artifact</i>
	Career Goals 3 + <i>Updated Resume</i>	Continuing Professional Development + <i>mementos</i>

<p>Discussion Questions:</p> <ul style="list-style-type: none"> • What is contained in the e-portfolio, and how is it organized? • How much choice do students have about the contents of the e-portfolio? 	<p>Notes:</p>
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Highlights from Roundtable Discussions – Portfolios

- Most colleges are using or moving to the use of electronic portfolios
- Commonly used vendors: E-value, LiveText, TaskStream
- PharmAcademic is rolling out a portfolio program
- Students do not have a problem with the technology; faculty and preceptors sometimes do
- Some colleges make portfolios a class in itself and others make the portfolios a component of other courses; recitations, etc. (some use portfolios as a core component where students either do not pass or receive an incomplete if the portfolio is not completed satisfactorily)
- Deadlines are essential for completion of portfolio assignments and reflections
- Students who do not satisfactorily complete their portfolios are referred to the Progression Committee; some colleges block future registration if portfolios are not completed
- Use portfolios to measure outcomes that cannot be easily evaluated by other methods (exams, OSCEs, clerkship experience)
- The number of assignments included in the portfolios varies greatly but it is important to keep the portfolio assignments in balance with other assignments, exams, etc.
- Colleges use a variety of evaluators (faculty, peer mentors, preceptors, residents, advisors)
- Some colleges pay upperclassmen to help evaluate portfolios (Academic Track students, Academic Assistants provide initial feedback to allow for revisions prior to faculty reviewing portfolios)
- Some colleges tie portfolio evaluation to a mentorship program
- Some colleges require faculty to participate and others use volunteers
- At some colleges, faculty receive teaching load credit if they evaluate portfolios
- It is essential to provide students with instruction on how to complete reflective writing assignments
- Reviewing portfolios is time intensive for evaluators
- Training of faculty is difficult at times
- The use of on-line tutorials and standardized rubrics works well
- Examples of well and poorly written reflections are an essential part of training
- It is essential to make the student's effort meaningful; be sure to explain the purpose of the assignment (how it relates to an outcome)
- Giving the student some choice of which examples and artifacts are included in the portfolio works well at many colleges
- Be sure students map evidence to particular outcomes
- Some colleges have students reflect on pharmacy role-models
- Common reflections include rating confidence in performing a certain outcome; growth over time; how the experience or assignment was helpful to the student's future

ASSESSMENT OF CRITICAL THINKING

ACPE ACCREDITATION STANDARDS AND GUIDELINES, Effective February 14, 2011

Standard No. 11 – Teaching and Learning Methods; **Guideline 11.2** - The development of critical thinking and problem-solving skills through active learning strategies and other high level pedagogical strategies should be supported throughout the curriculum.

Standard No. 13 – Curricular Core – Knowledge, Skills, Attitudes, and Values; **Guideline 13.3** - The college or school curriculum should address issues that cut across a number of topics, such as communication skills, professionalism, critical thinking, problem-solving, health and wellness, patient safety, teamwork, mathematical skills, and information management.

Standard No. 15 – Assessment and Evaluation of Student Learning and Curricular Effectiveness; **Guideline 15.1** - use teaching and learning techniques that promote: knowledge base development; integration, application, and assessment of principles; critical thinking and problem solving; and professionalism.

DISCUSSION: What is Critical Thinking and Why is it so hard to teach?

“We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based.” (American Philosophical Association Expert Panel)

“Critical thinking is the ability to identify central issues and assumptions in an argument, recognize important relationships, make correct inferences from data, deduce conclusions from information or data provided, interpret whether conclusions are warranted on the basis of the data given, and evaluate evidence.” (Pascarella and Terenzini)

“Critical thinking is the deliberate use of cognitive skills and strategies that increase the probability of a desirable outcome in a given situation.” (Halpern)

Instructional Strategies

- Problem-based learning
- Case-based scenarios
- Debates, role-play, argument mapping, thinking aloud, and simulation among others
- Other _____

ASSESSMENT OF CRITICAL THINKING SKILLS

Measures	Purpose	Source
Watson-Glaser Critical Thinking Appraisal (WGCTA)	Assesses participants' skills in five subscales: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments.	Watson G, Glaser EM, Rust J. Manual of the Watson-Glaser critical thinking appraisal (UK Edition). London and San Antonio: The Psychological Corporation; 2002.
Cornell Critical Thinking Test (Level Z) (1985)	Measures test takers' skills in induction, credibility, prediction and experimental planning, fallacies, and deduction. Aimed at college students and adults, but usable with advanced or gifted high school students.	Critical Thinking Press and Software (formerly Midwest Publications), PO Box 448, Pacific Grove, CA 93950.
California Critical Thinking Skills Test (CCTST)	Provides objective measures of participants' skills in six subscales (analysis, inference, explanation, interpretation, self-regulation, and evaluation) and an overall score for critical thinking.	http://www.insightassessment.com/Products
California Critical Thinking Dispositions Inventory (CCTDI)	Assesses test takers' consistent internal motivations to engage in critical thinking skills.	http://www.insightassessment.com/Products
Health Sciences Reasoning Test (HSRT)	Assesses critical thinking skills of health science professionals and students. Measures analysis, evaluation, inference, and inductive and deductive reasoning.	http://www.insightassessment.com/Products
Professional Judgment Rating Form (PJRF)	Assesses critical thinking skills of health science professionals and students. Measures analysis, evaluation, inference, and inductive and deductive reasoning.	http://www.insightassessment.com/Products/Rubrics-Rating-Forms-and-Other-Tools/Professional-Judgement-Rating-Form-Novice-and-Internship-PJRF
Teaching for Thinking Student Course Evaluation Form	Used by students to rate the perceived critical thinking skills content in secondary and postsecondary classroom experiences.	http://www.insightassessment.com/Products/Rubrics-Rating-Forms-and-Other-Tools/Teaching-for-Thinking-Course-Evaluation-Forms/Teaching-for-Thinking-Course-Evaluation-Form-PDF
Peer Evaluation of Group Presentation Form	A common set of criteria used by peers and the instructor to evaluate student-led group presentations.	

Diagnostic Thinking Inventory (DTI)	Measure of degree of flexibility in thinking and knowledge structure in memory.	Bordage G., Grant J., Marsden P., Quantitative assessment of diagnostic abilitiesability, Medical Education, 1990, 24, 413-425
Problem Solving VALUE Rubric	Measures the quality of a process, not the end-product.	http://www.aacu.org/value/rubrics/ProblemSolving.cfm
Critical Thinking VALUE Rubric	Rubric can be used for analyses of text, data, or issues.	http://www.aacu.org/value/rubrics/CriticalThinking.cfm
Script Concordance Test	Measures organization of knowledge for clinical actions.	

RESOURCES/REFERENCES

American Dental Education Association Critical Thinking Skills Toolbox (<http://www.adea.org/adeacci/Resources/Critical-Thinking-Skills-Toolkit/Pages/default.aspx>)

An Environmental Scan on the Status of Critical Thinking and Problem Solving Skills in Colleges/ Schools of Pharmacy: Report of the 2009-2010 Academic Affairs Standing Committee. http://www.aacp.org/governance/COMMITTEES/academicaffairs/Documents/09_10AcademicAffairsStandingCommittee.pdf

Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction, is published by The California Academic Press, 217 La Cruz Ave., Millbrae, CA 94030. It is also available in ERIC as Doc. No. ED 315 423, principle investigator, Peter A. Facione.

Halpern DF. Teaching critical thinking for transfer across domains; dispositions, skills, training, and metacognitive monitoring. *Am Psychol.* 1998;53:449-55.

Mental Measurement Yearbook

Pascarella E., Terenzini P. How college affects students: Findings and insights from twenty years of research. San Francisco: Jossey-Bass; 1991.

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What to do with these Data? Presenting your data to different stakeholders

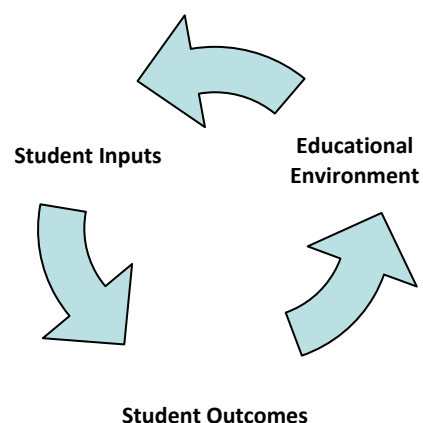
Mitchell Barnett, PharmD, MS
Touro University-CA College of Pharmacy

Terrill Tang, MS, PharmD, BCPS
Touro University-CA College of Pharmacy

Assessment is the practice of gathering data on the various facets of a system to improve and enhance its overall function and outcome. System metrics can include resource availability, process efficiencies, and product quality. Analysis of findings and presentation of results to stakeholders are ultimately what defines the meaningfulness and effectiveness of the data collection to drive and influence change.

Data => Results => Information => Knowledge => Application

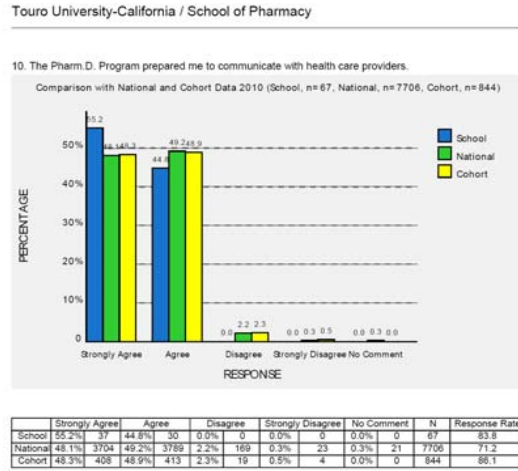
Astin's I-E-O Model: AW Astin was one of the first researchers in higher education to present a simple holistic model for gathering, managing, and validating data. This conceptual model has 3 basic components: input-environment-outcome (I-E-O), which are interrelated. Data concerning all 3 elements are necessary in order to assess the potential influences of a variety of educational environments or teaching/learning activities on student learning and development. This approach is commonly employed in pharmacy education to look at curriculum effectiveness and student impact. Results elucidated from the data are then utilized to improve and adjust programming, continuing the constant cycle of assessment.



This “closing of the loop” that leads to innovation and change requires that the proper audiences be apprised of the results. In identifying these groups to present the data to, it is similarly important to determine the specific information each would be interested in and/or needs to make decisions and take action. Organizing the data in a systematic, easy to use format is key to ensuring that the major points are emphasized and accurate conclusions are drawn. Therefore, it is vital to understand the unique perspectives of every member invested in the system under review and package the results appropriately. Examples of pharmacy education stakeholders may include students, faculty, management/administration, preceptors, accreditation bodies, and the financial office.

	Students	Faculty (Colleagues)	Management	Preceptors	Accreditation Bodies	Finance Office
Information Example(s)	-Letter Grade -%tile ranking	-Self Assessment -Descriptive-Statistics	-Descriptive-Statistics -Schematics and charts	-Descriptive-Statistics -Bench marking	-Descriptive-Statistics -Bench marking	-\$-\$ -Spreadsheet
Sample Format(s)	-Report Cards -Transcripts -Dashboards	-Tables/charts -Dashboards	-Tables/charts -Dashboards	-Tables/charts -Dashboards	-Tables/charts -Dashboards	-Budgets -Trend analysis -Dashboards

Example from AAMS, a new component of PEAAAS designed with ACPE (Data from AACP Student Surveys)



Example from Touro University College of Pharmacy (Data from AACP Faculty Surveys)

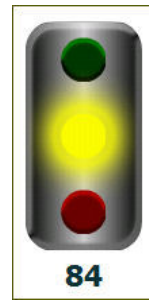
	Touro 2010	US 2010	P Value
	Median, Mean ± SD	Median, Mean ± SD	Wilcoxon Rank Sum
1. The college/school's administrators function as a unified team.	4, 3.9 ± 0.3	3, 3.0 ± 0.8	<0.001
6. I am given the opportunity to provide evaluative feedback of the administrators.	3.5, 3.3 ± 0.8	3, 2.8 ± 0.9	0.020
8. The committee responsible for assessment is effective.	3, 3.4 ± 0.5	3, 3.1 ± 0.8	0.086
27. The college/school has a sufficient number of qualified faculty.	3, 3.2 ± 0.4	3, 2.9 ± 0.7	0.195
28. The program's resources can accommodate present student enrollment.	3, 3.1 ± 0.7	3, 2.9 ± 0.8	0.278
25. I have access to library and other educational resources.	3, 3.5 ± 0.5	3, 3.5 ± 0.5	0.734
30. My campus work environment is safe.	3, 3.4 ± 0.6	3, 3.4 ± 0.6	0.913
21. I have adequate office space.	3, 3.2 ± 0.7	3, 3.3 ± 0.7	0.287
24. Computer resources are adequate for my academic responsibilities.	3, 3.0 ± 0.7	3, 3.3 ± 0.7	0.043
22. I have adequate laboratory and/or clinical resources for my research and/or scholarship needs.	2.5, 2.4 ± 0.8	3, 3.0 ± 0.8	0.009

Dashboards

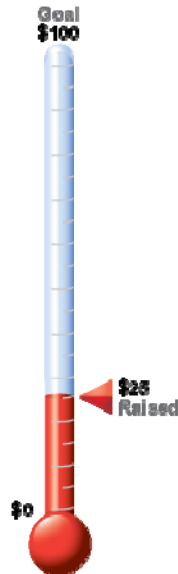
Pros

- Visually appealing, e.g., speedometers, thermometers, traffic lights, et al
- At-a-glance view of the most important results
- Easy to compare and contrast interrelated metrics

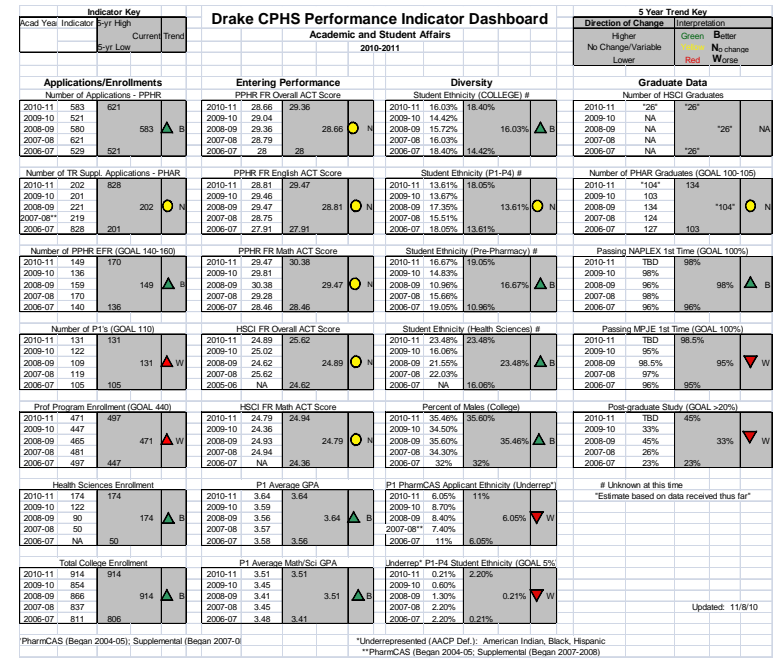
Example from ibm.com



Example from success.salesforce.com



Example from Drake University College of Pharmacy



Example from Virginia Dept. of Transportation



Cons

- Style selected can be distracting
- Can be difficult to differentiate metrics and significant results
- Can be time consuming to design and implement

**Formative Assessment of Teaching:
Sources of Evidence of Teaching Effectiveness**
Cathy Santanello, Southern Illinois University Edwardsville School of Pharmacy

***Student Evaluations of Teaching (SETs)**

An essential component in all faculty assessment systems, they are a source of evidence in formative, summative, and program decisions. BUT they should not be used as the sole source of evidence of teaching effectiveness.

*** Peer Observation and Review (POR)**

A thorough POR can provide evidence of teaching effectiveness that students are not in a position to assess. When used with student ratings, they can provide a very comprehensive picture of a person's teaching profile.

***Self-ratings**

Faculty input on their own teaching can provide three direct-observation sources of one's teaching: peer, students and self. Self-ratings can be particularly effective when the faculty view their teaching via recordings. Note: The SIUE SoP utilizes the Accordent Capture Station which records and synchronizes audio, video and data output from lectures which are then accessible to faculty and students for later viewing.

***Videos**

Recordings can be viewed alone or with a colleague (peer or expert) for input. These can be included as a "sample of one's work" for summative decisions.

***Student Interviews**

Classroom assessment activities, in which students are questioned about ways to enhance their learning, provide feedback from students at a semester midpoint so that midterm adjustments can be made. This can allow students to enhance their learning outcomes in a course prior to the end of the semester. These assessments include strategies such as Group Instructional Feedback Technique {GIFT} and Small Group Instructional Diagnosis {SGID}. (1)

(See other side for references on assessment techniques.)

***Exit Interviews and Alumni Ratings**

These can also be used as evidence of teaching effectiveness for formative assessments by providing new information not captured in student ratings. They can give a retrospective snapshot of a teacher's performance.

A way to incorporate students into faculty development/formative assessment activities: Win/Win!

SIUE School of Pharmacy Teaching Concentration

General Model:

Concentration requirement: Students take six credits of didactic elective courses and complete an elective APPE with an education focus.

Schedule:

Fall – P3 (elective): Orientation to Teaching (2 credits – 14 week semester)

Spring – P3 (electives): Instructional Design and Strategies (2 credits – 7 weeks); Assessment Strategies (2 credits – 7 weeks)

P4 – APPE in Education

Benefits of Concentration:

1. Prepare students to pursue a career in academic pharmacy.
2. Enhance students' competitiveness for selected advanced pharmacy practice residencies.
3. Stimulate interest in becoming involved as an educator as a component of their pharmacy professional career.
4. Students become acquainted with assessment activities by facilitating Peer Observations and Review, Classroom Assessment techniques, etc. These activities allow the students to gain knowledge and experience in assessment procedures which can be beneficial if they enter the academy. In addition, these services provide useful formative assessment documentation for faculty dossiers.

Suggested Assessment References:

- 1) Angelo T. A. & Cross K. P., *Classroom Assessment Techniques: A Handbook for College Teachers*, Second Edition. San Francisco, CA: Jossey-Bass, 1993.
- 2) Berk, R. A., *Thirteen Strategies to Measure College Teaching*. Sterling, VA: Stylus Publishing, 2006.
- 3) Walvoord, B. E., *Assessment Clear and Simple*. San Francisco, CA: Jossey-Bass, 2004.

2011 AACP Assessment SIG Programming (Cathy Santanello and Lakesha Butler)

Ideas and Discussion points by roundtable participants:

- ✓ Importance of training faculty to be peer evaluators
 - Team senior and junior faculty to evaluate together
- ✓ Have focus groups throughout the course involving students
- ✓ To address the small percentage of students completing electronic evaluations, have an “assessment day” in which students obtain $\frac{1}{2}$ -1 point for completing evaluations online during class
- ✓ In team-taught courses with multiple faculty, it was suggested to open evaluations for the instructors as soon as they complete their course material so that students’ assessments are fresh in their minds

Validating Assessment Tools

Rule #1: When possible, seek assessment tools that have evidence of reliability and validity.

Rule #2: If you need to create your own assessment tool, determine the purpose of the tool and stay within those parameters. Avoid developing test items that are irrelevant or outside the scope of what you want to measure.

Rule #3: In order to be **Valid** an assessment tool must first be **Reliable**

Reliability: An assessment tool is reliable if it *consistently* measures a construct with similar results.

Validity: An assessment tool is valid if it *accurately* measures a construct.

Tests for Reliability (generally measuring one construct—measures variability between and within

TEST	DESCRIPTION	STATISTICAL PROCESS	r value
Test-Retest	Temporal-consistent results over time Between test measurement	Correlate total scores from 2 or more administrations of the same test	$\geq .7$ = desirable $\leq .3$ = weak
Split Half	Point in Time-split test in half by even and odd items. Measures the relationship of one half the items to the other half	Correlate the two halves of the same test	$\geq .7$ = desirable $\leq .3$ = weak
Cronbach's Alpha	Point in Time-the relationship of each item to every other item in the test	Generally computed using SPSS or similar statistical software	$\geq .7$ = desirable $\leq .3$ = weak
Item Total Analysis	Point in Time-relationship of each item to the total score	Correlation matrix of each item and total score	$\geq .7$ = desirable $\leq .3$ = weak

Tests for Validity (most common-list not exhaustive)

TYPE	DESCRIPTION	Statistical Test for Validity
INTERNAL Validity		
Face Validity	The extent to which the test looks and feels as though it measures the construct	Non-statistical-logic, experience, common sense
Content Validity	The extent to which the test is a fair representation of the construct's domain	Non-statistical-logic, experience, common sense
Concurrent Validity	The test correlates with an established and accepted measure of the construct	Criterion-based-Pearson r
Predictive Validity	Used to validate one score as predictive of another score	Criterion-based-Pearson
Construct Validity	The ability to say that the results of the test clearly represent the construct, concepts or theories you intend to test	Considerable evidence over a period of time. Often accomplished with factor analysis.
EXTERNAL Validity	The ability to generalize results of the test to the larger population	

Requirements for using tests results for Causality & Prediction

1. Cause co varies with effect-a relationship exists between variables (e.g. weight covaries with height)
2. Cause precedes effect-the independent or predictor (height) variable comes before the dependent or criterion variable (weight).
3. Rival hypotheses are implausible-the outcome or relationship is not accredited to a third or confounding variable. (e.g. the effect of gender on the ability to accurately predict weight from height)

Threats to Internal Validity

1. **History**-Any unplanned event that occurs between the before and after (pre/post manipulation of the IV) that could influence the after (post or outcome).
2. **Maturation**-Physical or mental changes in participants over time

3. **Testing**-changes that occur on a second testing as a result of taking the test the first time.
4. **Instrumentation**-any change that occurs in how the DV is measured. Any change in the instrument used to measure the DV.
5. **Regression Artifact**-The tendency for outliers (very high or very low scores) to gravitate toward the middle or mean on a second testing.
6. **Differentiated Selection**-Uncontrolled or unaccounted for differences between or among experimental and control groups at the start of a study.
7. **Differentiated Attrition**-Loss of participants from groups over time. Can lead to differences between groups that were not present at the beginning of the study.
8. **Additive and Interactive Effects**-Any combinations of the above.

Threats to External Validity-Ability to generalize results of one study to the Target Population that includes groups (samples) other than those tested. Assumes random sampling

1. Across settings-to settings or situations other than the one tested
 2. Across time-to groups at a later time (including the group tested)
 3. Across different but similar outcomes related to the DV—one of the reasons to use multiple measures to test
-

Resources for published validated tools and instruments

Pharmacy Education

- AACP Pharmacy education assessment and accreditation services (PEAAS) <http://www.aacp.org/resources/education/peas/Pages/default.aspx>
- American Journal of Pharmaceutical Education www.ajpe.org
- Currents in Pharmacy Teaching and Learning http://www.elsevier.com/wps/find/journaldescription.cws_home/718643/description#description
- Pharmacy Education. An International Journal for Pharmaceutical Education <http://pharmacyeducation.fip.org/>
- The International Journal of Pharmaceutical Education and Practice. <http://www4.samford.edu/schools/pharmacy/ijpe/index.htm>

Health Sciences Education

- Academic Medicine <http://journals.lww.com/academicmedicine/pages/default.aspx>
- Advances in Health Sciences Education. <http://www.springer.com/education+%26+language/journal/10459>

Databases

- Educational Resources Information Center (ERIC). <http://www.eric.ed.gov/>
- List of all journals indexed in ERIC <http://www.eric.ed.gov/ERICWebPortal/journalList/journalList.jsp>

Mental Measurements Yearbook (Buros) website

- <http://www.unl.edu/buros/bimm/index.html>

Example (WHO)

- <http://heapro.oxfordjournals.org/content/25/2/221.full>



pharmacy education
assessment and
accreditation services



Pharmacy Education Assessment and Accreditation Services (PEAAS) Assessment and Accreditation Management System (AAMS)

Pharmacy Education Assessment and Accreditation Services (PEAAS) is a members-only resource that consists of four components.

One component of PEAAS is a searchable Web-based portal to access ACPE recognized noteworthy practices, Excellence in Assessment Award winning portfolios and other assessment and accreditation tools/processes. Submissions can be downloaded for use by other colleges/schools. Users can provide feedback ranging from how they used the tool/process to constructive feedback on how to improve the tool/process.

A discussion board is another feature offered to members. It provides a forum for individuals involved in assessment to share ideas, network and pose questions to help form a virtual assessment community. The discussion board and tool/process submission launched on the AACP web site in February 2009. The inclusion of ACPE recognized note-worthy practices was added in July 2009.

AACP Institutional Research surveys, publications and benchmarking reports are the third component of PEAAS. AACP publishes three publications and multiple reports using data collected via the annual surveys. Benchmarking reports are available in the Assessment and Accreditation Management System as well as by request to institutional research staff.

The Assessment and Accreditation Management System (AAMS) is the newest component of PEAAS which was launched to all schools in November 2010. This system was designed in partnership with the Accreditation Council for Pharmacy Education. The system streamlines the compilation, management, analysis and reporting of data and documentation used for assessment and accreditation by storing assessment documents so that they are easily accessible and transferable into an accreditation report; tracking college/school's progress by standard between accreditation self-studies; providing data from AACP annual surveys into accreditation reports; providing tables and peer comparisons quickly and easily for benchmarking; and compiling and submitting self-study reports.

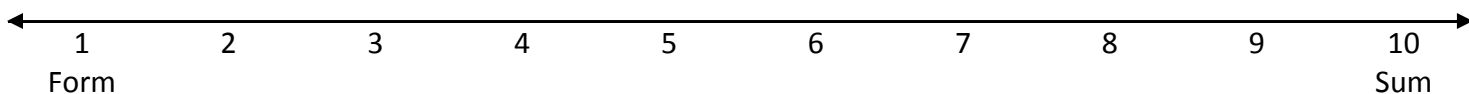
Student Learning Assessment – Use of Standardized Participants

The use of standardized participants/patients (SPs) for use in assessment and teaching is gaining interest in the education of student pharmacists. The Association of Standardized Patient Educators' (ASPE) define an objective structured clinical examination as "A station or series of stations designed to assess performance competency in individual clinical or other professional skills. Stations are carefully structured and designed to be easily reproducible. Learners are evaluated via direct observation, checklists, learner presentation or written follow-up exercises. The examinations are generally summative but may involve feedback. Stations tend to be short, typically 5-10 minutes, but can be longer." For more information about The Association of Standardized Patient Educators, please visit the website, aspeducators.org.

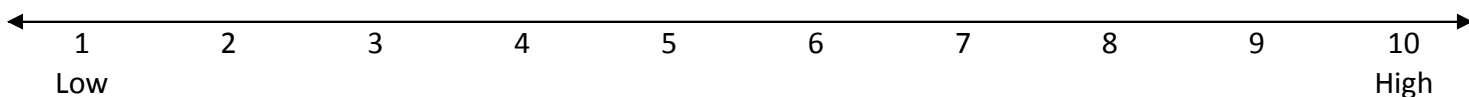
The use of SPs and simulated participants may be used to achieve formative (simulated) and summative (standardized) assessment and evaluation of student learning and curricular effectiveness. The use of SPs in teaching and assessment is a process. The implementation of a high-stakes OSCE takes years in the making and significant budgetary resources. A well-thought-out implementation with simulation, followed by low-stakes assessment that evolves to high-stakes testing will build a culture of faculty commitment and student satisfaction with the learning process. A change in culture takes time and will require a core group of committed, enthusiastic faculty. Seek out support from other healthcare professional colleagues who also use the methodology. You will be surprised how similar we all are and how you can share resources. In addition, the use of SPs can be a way to introduce interprofessional education activities into your curriculum.

Rate your institution on how you use SPs...

FORMATIVE versus SUMMATIVE assessment...



LOW versus HIGH stakes assessment...



Examples of SP use:

SP Case Development

Case Planning

Case Outline

- Directions to the Learner
- Directions to the SP
- Checklist (the what & how)
- Global assessment

Case Review/Revision

SP Criteria & Identification

SP Training

Test Day

Feedback for Students & Curriculum

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Summary notes from Assessment Sig Roundtable
The Culture of Assessment Best Practices
July 12, 2011

Standardized Patient Table Summary

Round 1

How are standardized patients (SPs) used?

- Not necessarily OSCEs “live clinical encounters”
- Used as patients as well as clients – techs and MDs
- Formative assessment in simulated encounters for P1s example tobacco cessation
- For P3s to determine readiness for APPEs checking for minimal competency attainment
- SPs used throughout the curriculum for counseling, milestone high stakes exams, multi-station exams are given. Low performers are subject to revised P4 rotation schedules
- Residents serve as “SPs” in formative encounters. 8 CA schools pooled resources to develop cases and outcomes. CA has 32 developed cases and a set of IPPE outcomes.

Summary points

- A common theme is that using SPs is labor intensive. Also validation of cases is labor intensive
- Debriefing with SPs after an event is a very good want to get feedback on what worked well and where to improve

Round 2

How are standardized patients (SPs) used?

- Inter-professional cases with the medical school
- Weekly in a patient assessment course for summative and formative cases, the patients are trained by medical school staff
- Self-care course using community volunteers not necessarily officially trained; working toward use of theater dept students as SPs
- Formative performance based assessments are embedded in courses throughout the curriculum along with some summative assessments. Debriefs from SPs are used to provide feedback to faculty and this has been useful in creating a culture of assessment.

Round 3

How are standardized patients (SPs) used?

- Early in the curriculum for formative feedback. Used in conjunction with the pre-NAPLEX. Focused cases/encounters produce the best summative assessments – the more complicated a case the more difficult to standardize the encounter
- Physical assessment course is using theater students as SPs
- Grad students are trained (for 2 years at a time) and used as SPs for formative evaluation of communication skills. These encounters are recorded and faculty provide summative evaluations and feedback
- Local development of cases is important use of Osceology process promotes success
- A communications course uses SPs in videotaped encounters along with self and peer assessment