An Outcomes Based Assessment Database:

Institutional Strategies for Making Decisions on What to Collect

Presented by Paula Harmer, M.P.P.

EnHsien Liu, MEd

LaMesha Carter, PhD

Western University of Health Sciences

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WASC Assessment Database Panel members and staff

Thank you to WesternU WASC panel members and WesternU staff, including:

Peggy Schmidt, College of Veterinary Medicine (CVM)*

Kay Kalousek, College of Osteopathic Medicine (COMP)*

Ryan Quist, College of Pharmacy (COP)*

Phil Nelson, Chair of panel, Dean of CVM*

Gary Gugelchuk, A.L.O., Academic Affairs

Donna Redman Bentley, College of Allied Health (CAHP)*

Richard Sugerman, Academic Affairs*

Otto Reyer, Financial Aid*

Kim de Kruif, Registrar*

Denise Wilcox, Information Technology*

Lisa Goldstein, College of Graduate Nursing (CGN)*

La Mesha Carter, Institutional Research

En Hsien Liu, Institutional Research

Dorothy Buchanon, Alumni Affairs*

Objectives

- Explain an institutional approach for making decisions on what evidence to collect in an outcomes based assessment database (d.b.)
- Demonstrate how one institution approached methods to evaluate what should be included in a database.
- Demonstrate how the process also helped us evaluate how well our institution assesses outcomes to prepare for Educational Effectiveness Review
- Apply the conceptual approach to your institutional context with exercises.

Working Definition of Assessment

Assessment: the systematic collection of information about student learning using time, knowledge, expertise and resources available in order to inform decisions about how to improve learning (Walvoord, B. 2004).

Motivation

- Western Association of Schools and Colleges – Accreditation is periodic evaluation of quality and institutional educational effectiveness

- Criteria for Review and Four Standards (Source: WASC Handbook of Accreditation)

"The institution has published educational objectives that are consistent with its purposes" (CFR 1.2)

"Guideline: The institution incorporates assessment of educational objectives results with respect to student achievement" (CFR 2.7)

Standard Four - Question #4 for Institutional Engagement:

How does an institution incorporate assessment of teaching and learning to increase its institutional capacity for evaluating educational effectiveness?

Further Motivation

- Panel members relayed frustration at getting timely assessment information for inquiry on outcome studies.

- Current transactional database with student information requires programmer assistance to extract data.

- 6/8 programs are professionally accredited

- Regional accreditation with WASC

Establishing Outcomes

- Institutional Context: Panel members read literature on outcomes.

- Reviewed literature on topics in graduate student learning outcomes, health professional outcomes, representing our institution, including nursing, dentistry, medical, veterinary, physical therapy, physician assistant, podiatry, optometry, pharmacy.

- Hint: Get support of reference librarians – faculty/staff can be uncomfortable with a literature search outside of their domain of expertise.

Methodology for Outcome Selection

- Content analysis of literature summaries by panel members.

- Selected Top Eight Outcomes most frequently mentioned.

- Multiple methods: 'triangulated data' by reviewing our own programs' websites & catalogue, peer institutional websites' & professional accrediting standards to 8 outcomes. Consistent results.

- Other sources of information: Self studies, syllabi, exam content, etc.

Outcome Ranking Results

		Rating
	Ratings calculated by looking at program outcomes found in literature summaries. Later, we compared to professional accreditation standards, peer websites, and university catalogue.	
1	**Critical Thinking & Clinical Reasoning:** The graduate should be able to identify and solve problems that require integration of multiple contexts when applying patient care	7
2	**Diagnosis, Management, Prevention, and Clinical Competence:** The graduate should be able to demonstrate diagnostic and therapeutic skills and apply relevant information to patient care and practice, and to educate patients regarding common health problems	6
3	**Interpersonal and Effective Communication Skills:** The graduate will be able to demonstrate effective interpersonal skills that enable them to establish and maintain therapeutic relationships with patients and other members of the healthcare team.	6
4	**Collaboration Skills**: The graduate should be able to demonstrate collaboration with patients and with other health professionals to develop a plan of care to achieve patients positive health outcomes.	5
5	**Ethical Reasoning and Decision Making Skills:** The graduates should be able to demonstrate the highest quality of care, governed by the ethical principles, integrity, honesty and compassion.	5
*	**Humanistic Compassionate Care:** The graduate should be able to apply humanistic principles using compassion and empathy when providing patient care and advocate for the patient's well being.	--
7	**Life Long Learning:** The graduate will engage in lifelong self directed learning to validate continued competence in practice.	5
8	**Evidence Based Practice: The graduate will utilize research and evidence based practice and apply relevant findings to the care of patients.**	4

Top Down vs Bottom Up

- Top Down – a group of scholars decide what are important learning expectations

- Bottom Up – identify primary learning expectations of courses and use them to establish program expectations

- Both – literature review was top down, and assessment inventory and syllabi review was bottom up

(CAIR workshop on Assessing Graduate Programs with J. Hoey and L. Kuffel)

Exercise One

- What 'search terms' could you use to review literature for your campus' learning outcomes?

- Outline particular learning outcomes already established on your campus, such as quantitative literacy, critical thinking skills, diversity, etc.

- Definition of learning outcome - what students should be able to know and do as a result of student participation in a series of learning experiences and assessments.
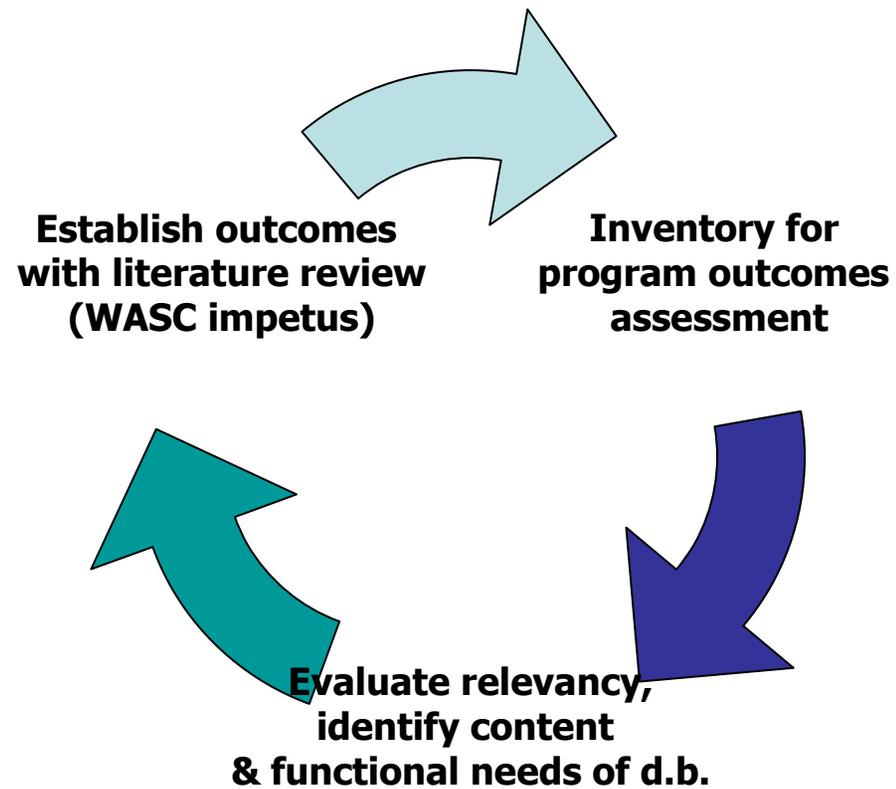
Evaluate Relevancy of Outcomes

- Once outcomes identified, used 3 methods to establish relevancy to our programs
- Assessment Inventory: Structured Interviews with Key Individuals Responsible for Assessment per Program (n=13)
- Faculty Survey asked how frequently faculty/programs measure 8 outcomes, and, how important they were (n=129)
- Syllabi Sample Content Analysis (15% random sample by program) identified outcomes in learning objectives, assessment, learning experiences (n=42)

Panel Process

Establish outcomes with literature review (WASC impetus)

Inventory for program outcomes assessment

Evaluate relevancy, identify content & functional needs of d.b.

Assessment Inventory

- Answers the questions, what assessment information is collected measuring 8 outcomes? What assessment methods? When is it collected?

- For database purposes, we also asked where is the data file stored, and what formats?

- Structured Interview Guide and training sessions.

- Challenge – Consistency when different panel members conducted structured interviews.

- Strength – Faculty from programs conducted inventory, 'ownership' & 'engagement'

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Example for EBP Outcome

Results: All five colleges reported using direct and/or indirect measures to assess components of the EBP process, but no college evaluates EBP as a whole. No colleges reported using validated tools for the assessment of EBP, such as the Fresno Test. Sixty-four percent of faculty report EBP as very important important to their teaching, and 69% report the same for curriculum. However, the review of a random sample of program syllabi indicate only 22% explicitly identify EBP related assessment and grading, while 86% mention EBP objectives.

Structured Interviews

Figure: Evidence Based Practice Outcome - Assessment interview responses by college. 1 indicates mention, 0 indicates no mention.

COLLEGE	Standardized Tests	Performance Tests	Direct Observations	Portfolios	Capstone Projects	Research Projects	Key Mutliple Choice Tests	Focus Groups	Student Evaluations	Surveys	Other
Phar	0	1	0	0	0	0	0	0	0	0	0
Med	1	1	1	0	0	0	1	0	0	0	0
Nurs	0	1	0	0	1	0	0	0	0	0	0
Vet	0	0	0	0	1	0	0	0	1	0	0
Allied Health	0	1	0	1	1	0	1	0	1	0	1
Total	1	4	1	1	3	0	2	0	2	0	1
%	20%	80%	20%	20%	60%	0%	40%	0%	40%	0%	20%

Faculty Ratings of Importance

Figure 5: Faculty responses to survey regarding the importance of EBP within programs and individual teaching. 70% response rate (n=129).

Rated Importance of Using Evidence Based Practice Outcome

Legend: Program Curriculum, Individual Teaching
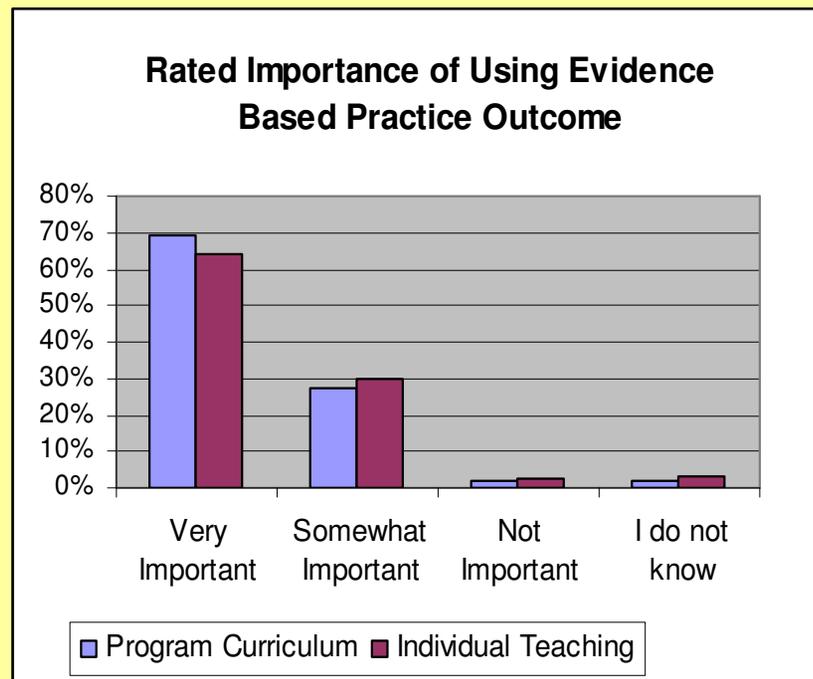
Syllabi Review for EBP

Figure 6: Results of syllabi review for 15% of syllabi for each program. (42 syllabi out of 44 course numbers. 2 courses are now no longer in existence.)

College/Program	Pharmacy		Physical Therapy		Physicians Assistant		Osteopathic Medicine		Veterinary Medicine		Graduate Nursing		Overall	
Number of courses sampled with syllabi available at all.	4	%	8	%	6	%	6	%	6	%	12	%	42	%
Topics covered mention EBP related topics.	4	100	1	12	5	83	5	83	6	100	12	100	33	75
Learning objectives mention EBP related topics.	4	100	6	75	5	83	5	83	6	100	12	100	38	86
Grading and assessments mention EBP related topics	2	50	1	13	2	33	2	33	0	0	3	25	10	22

Results

- All 8 outcomes had one or more methods of assessment by 5 colleges, with one exception (1/40)
- 90% of the time, colleges report 8 outcomes had 2 or more methods of assessment. (63% - 3 or more)
- Colleges widely use performance tests
- Faculty rated 8 outcomes as very important to curriculum (69%-94%) and frequently (54%-94%) assessed, some more than others
- Syllabi reveal 33% as having either objectives, learning activities, or assessment aligned with 8 outcomes
- Included items in First Year Survey related to 8 outcomes

Exercise Two

- Reflect on the outcomes you listed for Exercise One.

- What are sources of information on your campus could you use to evaluate whether or not the outcomes are used and documented consistently?

Database Conclusions

• 8 outcomes should be the basis for what goes into the database.

• A lot of assessment is already being accomplished – need to more effectively organize and mine information.

• Faculty want to inquire in student learning using database.

• Head start on what assessment data is available with inventory interviews.

• Student record database to include 'within course' assessment to major milestones such as Board examinations.

• Can also include admission factors, demographic data, etc. to evaluate relationships between student characteristics to assessment outcomes.

• Allows for predictive analyses to identify struggling students earlier, to improve student learning.

• Academic Progress Portal – already established at college of osteopathic medicine using freely available software.

Additional Benefits of Study

- Increased understanding of how well we measure outcomes across campus.
- Identified a gap between how frequently faculty think each outcomes are being assessed, and how frequently our syllabi reveal them to be.
- Possible Reasons for the Gap: Syllabi are a poor representation of assessment, random sample of 15% of syllabi is too small, or, we don't measure the outcome as frequently as we should or think.
- Future Inquiry: Sample actual assessments.
- End Result of Inquiry: We are better prepared for Educational Effectiveness Review

Questions and answers

Exercise Three

Would a similar approach work for your institutional culture? (ie top down or bottom up?)

How could you create a process to determine how well you measure outcomes?

How could you determine what goes into an assessment database?

Contact Information

Paula Harmer

Western University of Health Sciences

Email: pharmer@westernu.edu

Phone: 909-469-5394