Are They Learning What We’re Teaching?

A WORKSHOP ON DESIGNING STUDENT LEARNING ASSESSMENTS
Sponsored by the Planning Accreditation Board

Laurie S. Goldman, Ph.D.  (she, hers)
Urban & Environmental Policy & Planning, Tufts University
What you’ll gain from the workshop

• Understanding of student learning objectives (SLO) that are meaningful, useful, and feasible to assess

• Ideas for SLO assessment strategies and tools you might consider

• Consider common challenges and how to avoid them

• Start designing your student learning outcomes assessment strategy
Session Agenda

1. What are Student Learning Outcomes (SLOs) and why assess them?

2. Which SLOs should we assess?

3. Strategies for meaningful, useful, and feasible SLO assessment
   a. Selecting the learning activities
   b. Developing indicators and measurements
   c. Data collection, analysis, and interpretation
   d. Using the findings

5. Challenges of assessing SLOs

6. Crafting your SLO assessment plans
What Are Your Goals for Student Learning?

1. Based on student work you’ve seen, what have been 1-3 of the greatest gains in student learning in the past year or so?

2. What do you wish students had learned better? -- Identify 1-3 areas.

3. What are 1-3 of the most important signs of learning – evidence that they’re developing the knowledge, skills, appreciation and application of values – you hope to see among your students?

Enter your thoughts in the GoogleDoc (#1).
What are Student Learning Outcomes (SLOs)?

“What student learning outcomes clearly state the expected knowledge, skills, attitudes, competencies, and habits of mind that students are expected to acquire at an institution of higher education.”

- National Institute for Learning Outcomes Assessment
Why assess Student Learning Outcomes? – *External audiences*

- **Comply with mandates:** i.e., accreditation requirements

- **Demonstrate students’ level of “competence” or “mastery”**
  - to university decision-makers, other accreditation bodies, funders
  - to prospective employers of our students
  - to prospective students considering our program – *what is distinctive about it (Are we “walking our talk”?)*
Why assess SLOs? - *Internal audiences*

• To improve teaching and learning efforts by identifying ...
  - program-wide curriculum gaps
  - needs for alternative or additional pedagogy/approaches to teaching and learning
  - strengths to celebrate, preserve, and replicate in other domains

• To align student learning outcomes in relation to ...
  - changes in our curriculum – *Are they delivering expected improvements?*
  - changes in our student cohorts – *Are we responsive to changing needs?*
  - changes the field – *Are we keeping up with emerging demands?*
Student Learning Outcomes vs. Program Outcomes

FOCUS ON STUDENTS

What students do....
• assignments
• tests
• thesis
• capstone projects
• internships
• ......

As opposed to....

Program curriculum
- courses offered
- types of pedagogy
- teaching styles

Faculty
- expertise
- teaching skills
- investments in teaching (no. of faculty, teaching time)

Course evaluations
Student **Learning** Outcomes vs. Other Outcomes

**FOCUS ON LEARNING**

**Knowledge:** What we want them to *know* by the end of the program.

**Skills:** What we want them to be able to *do* by the end of the program

**Values, Sensibilities, Habits of Mind:** What we want them to be able to *discern, prioritize, raise up, or challenge*...

**As opposed to...**

- Retention and graduation rates
- Student and alumni satisfaction
- Employment rates or types of positions
- Service to the profession, communities, ecosystems...
FOCUS ON OUTCOMES
What they have internalized and can apply in practice
How much they have learned
How well they can apply skills in practices
The gaps in their knowledge, skills, and sensibilities
Distinctive strengths in their knowledge, skills, and sensibilities

As opposed to...
Inputs into learning:
• new readings, assignments, approaches to teaching
• whether/extent to which students completed the learning activities
• students’ and faculty’s efforts to improve
• enthusiasm and commitment to learn and grow more

Impacts of learning: employment, contributions and influence in field, ....
Leveraging current your assessment efforts

What are you already doing to assess how your students are achieving key learning goals?

Do these assessments focus on students, their learning, and the outcomes of their learning in your program?

What additional student learning outcomes might you assess?

GoogleDoc #II
Which Desired Learning Outcomes Should We Prioritize?

- External requirements (e.g. PAB standards), expectations of the field
- What is important to students, faculty, employers, communities
- What is distinctive about your program ("special sauce")
- Priorities in your program’s strategic plan
- Where you know there is room for improvement
- Where it’s feasible to make changes
- Those that apply to all your students (or all in a track or program)
Categories of Learning Outcomes to Assess

(GoogleDoc prompt III.)

Knowledge:  What we want students to know.

Skills:  What we want students to be able to do.

Guiding Planning Values:  (sensibilities, attitudes, habits of mind):  What we want them to be able to discern, prioritize, raise up, or challenge...
Measuring Student Learning Outcomes

**Direct Measures:** *Preferred priority*
Tangible, visible, and self-explanatory evidence of what students have and have not learned as a result of a course, project, or other activity that demonstrates student learning itself.

**Indirect Measures:** *Valuable supplement*
Opinions, perceptions, reflections or secondary evidence of students’ (or graduates’) knowledge, skills, attitudes, learning experiences to make *inferences* about student learning.

Selected references:
Examples of **DIRECT** Measurement Mechanisms

**Course embedded:**
- Papers and other assignments
- Exam questions
- Oral presentations

**Culminating projects**
- thesis, capstone projects
- qualifying examinations (already required)

**Exams (not course connected)**
- Program Developed Exams: comprehensive exams, pre- and post-tests
- AICP exams (post-graduation) – *attention to question clusters*
Examples of INDIRECT Measurement Mechanisms

Course Grades

*Limitations:* not distinguish specific knowledge, skills, value sensibilities acquired; may include participation, other factors

*Supplementary value:* low averages or trends can signal areas for improvement

Student and Alumni Surveys, Interviews, & Focus Groups

*Limitations:* bias of self-reporting; low-response/participation rate if not required;

*Supplementary value:* identify additional strengths, weaknesses, and priorities; value of student/alumni engagement in assessment and generating ideas for improvement

*Can elicit examples of competency-specific learning linked to particular learning experiences.*

Honors, Awards, Fellowships, etc.

*Limitations:* uncertainty about criteria applied; not systematic across cohorts; difficult to link to learning during program

*Supplementary value:* illustrates student/graduate potential & accomplishments
Strategies w. Elements of BOTH Direct and Indirect Measures

Internship, Community Fieldwork Partners, and Supervisor Feedback
• grounded in student work
• additional perspectives
• *Can elicit competency-specific feedback*
• *Opportunity for input into curriculum development priorities*

Student Portfolios with Reflections
• grounded in student assignments, projects, and other learning experiences
• student reflections convey self-reported learning outcomes and prioritized goals
• *Can code and analyze for aggregate assessment*
• *Leverage for student career and program marketing opportunities*

Case Studies of Critical Learning Experiences
Types of Metrics

Units of observation and analysis:
- Individuals and groups
- Aggregate for cohorts and cohort comparisons
- Disaggregate for sub-groups and sub-group comparisons – e.g. minoritized identities, prior work experience, etc.

Levels/Thresholds:
- Central tendencies (e.g. mean, median)
- % distribution across Likert scale

Yardsticks: benchmarks and targets
- e.g. 75% will achieve highest ratings by target date
- Increase ratings by 10% over 3 year period
- Close gap between sub-groups

Qualitative descriptions and characterizations with illustrations
Tufts University’s Urban & Environmental Policy & Planning SLO Assessment Journey

Are UEP students learning what we think we’re teaching?

A story of our how we developed our assessment strategy and the discussions it inspired....

Our Strategy: Use the feedback on assignments for our SLO assessment.

(Intended as an example of an SLO assessment design process rather than a model for what your program should do.)
“Competency Map” to Identify Key SLOs for Core Courses

<table>
<thead>
<tr>
<th>UEP competencies</th>
<th>UEP250</th>
<th>UEP251</th>
<th>UEP252</th>
<th>UEP254</th>
<th>UEP255</th>
<th>PAB new criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>General planning knowledge</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Human Settlements and History of Planning 4A1d</td>
</tr>
<tr>
<td>1 History, structure, and function of urban and metropolitan settlements</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td>Growth and Development 4A3d</td>
</tr>
<tr>
<td>2 Economic influences on policy and planning (e.g. ‘market’ and ‘polis’ relationships)</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td>Sustainability and Environmental Quality 4A3c</td>
</tr>
<tr>
<td>3 Environmental, social, and cultural influences on policy and planning</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td>Growth and Development 4A3d</td>
</tr>
<tr>
<td>4 Different roles of government, governance, and citizenship in policy and planning</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td>Governance and Participation 4A3b</td>
</tr>
<tr>
<td>5 History, theory, and processes of both policy making and planning together with implementation procedures and practices</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td>Purpose and Meaning of Planning 4A1a</td>
</tr>
<tr>
<td>6 Evaluation of policy and planning</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td>Planning Theory 4A1b</td>
</tr>
<tr>
<td>7 Administrative, legal, and political aspects of policy and plan-making</td>
<td>PC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Human Settlements and History of Planning 4A1d</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Plan Creation and Implementation 4A2d</td>
</tr>
</tbody>
</table>

UEP  PAB
<table>
<thead>
<tr>
<th>First Attempt in One Core Course ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharpened desired learning outcomes</td>
</tr>
<tr>
<td>Focused on 2 assignments</td>
</tr>
<tr>
<td>Developed 12 sets of criteria</td>
</tr>
<tr>
<td>Rubric for assessing assignments</td>
</tr>
<tr>
<td>System for reporting and tracking...</td>
</tr>
<tr>
<td>UEP 252 Cities in Space Place and Time</td>
</tr>
<tr>
<td>Introduces students to the history and theory of cities and metropolitan regions focusing specifically on the actions of planners and policy-makers and how these actions shape our communities, neighborhoods, cities, regions, and world.</td>
</tr>
</tbody>
</table>
Step 1: Review the Course Competencies

<table>
<thead>
<tr>
<th>PAB/UEP Competency</th>
<th>How we do this in UEP 252 Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>General planning knowledge</strong>: The comprehension, representation, and use of ideas and information in the planning field, including appropriate perspectives from history, social science, and the design professions</td>
<td>We look at how the growth of cities and metropolitan areas created new challenges, problems, and opportunities in the context of longer-term changes and trends; and how advocates responded, especially in calling for government/policy/planning actions and roles</td>
</tr>
<tr>
<td>a) Purpose and Meaning of Planning: appreciation of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expected to have.</td>
<td></td>
</tr>
<tr>
<td>b) Planning Theory: appreciation of the behaviors and structures available to bring about sound planning outcomes.  <em>History, theory, and processes of both policy making and planning together with implementation procedures and practices</em></td>
<td>In looking at responses (above), students will sort out the framing (theories/models) behind proposed solutions, alternatives, and favored approaches, and how this framing changed or did not change over time.</td>
</tr>
</tbody>
</table>
The problem...

- We think the course is well-designed to “instill” the competencies in students
- But do we know if they are learning?
- Previous assignment assessment focused more on whether they can write a good paper or not
Revised Assignments: Highlight Competencies/Learning Objectives

*Drew on* Bloom’s taxonomy* of learning actions:*

**Describe** – from author’s perspective, learn content

**Relate** – make connections to historical and spatial context

**Reflect** – reflect on code of ethics and apply to future professional practice

* "Bloom’s Taxonomy of Measurable Verbs" from the National Institute for Learning Outcomes.
Rubric (drawing on the AAC&U’s VALUE Rubrics project)

<table>
<thead>
<tr>
<th>Component and Weight</th>
<th>Mastery Achieved: 90-100% of points are earned when:</th>
<th>Proficiency Achieved: 80% of points are earned when:</th>
<th>Proficiency Partially Achieved: 70% of points are earned when:</th>
<th>Not Proficient: 60% or less of points are earned when:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Describe from the author’s perspective (40%)</strong></td>
<td>You convey the author’s perspective on the issues being addressed, including how he/she framed the issue and its root and immediate causes; the public interest as the author sees it, the proposed reforms or policies, and the expected short and long-term consequences. Your narrative gives the reader a clear and empathetic understanding of the author’s thinking and justifications, and of how the author relates his/her work to the wider context (spatial, historical, political, economic, legal, social).</td>
<td>You clearly describe the issue as the author(s) saw it, you describe the policies they proposed, and you explain why they proposed them. You identity the ways in which the author(s) framed the public interest, as well as the expected benefits. But reading your paper doesn’t give the reader a clear understanding of how the author situates his/her proposals in the wider context.</td>
<td>You describe the immediate issues the author is addressing, why they saw these as issues needing to be addressed, and some proposed solutions. From reading your paper, however, we don’t know how the author framed the public interest nor what he/she viewed as the expected benefits. Nor do we have a clear or empathetic understanding of the author’s point of view and how he/she relates it to the wider context.</td>
<td>You describe what the author proposes and you give a few reasons why they are proposing that idea. You don’t provide a clear idea of how the author frames the problems, nor how the proposals are expected to solve these or address the public interest. From reading your paper, we don’t have a clear understanding of the author’s point of view and how he/she relates it to the wider context.</td>
</tr>
<tr>
<td><strong>Relate your document to its larger context beyond what the authors conveyed (15%)</strong></td>
<td>You use your knowledge, including that gained from class readings and lectures, to relate the document to its historical and spatial context, especially in ways that the author(s) either couldn’t have known about, failed to see, or purposely ignored. You (and the authors) now have a wider understanding of urban policy and planning history to draw on, so we expect you to discuss that.</td>
<td>You relate the document to its historical and spatial context and discuss what the author(s) might not have known about or ignored or preferred not to address, bringing in class readings and lectures. While you describe what happened or didn’t happen as a result of the document’s proposals, you don’t provide an account of the tensions and events that may have influenced outcomes.</td>
<td>You describe what you know of the historical and spatial context for your document, and talk about a few things the authors couldn’t have known about. You don’t discuss how events and trends may have influenced the issues the author is addressing, and your links to class readings and discussions are not explained clearly.</td>
<td>You list a few trends and events related to the issues discussed in your document. You don’t attempt to consider what the author(s) could have known or anticipated, nor the tensions they faced. You fail to make connections to our class readings and discussions.</td>
</tr>
</tbody>
</table>
Example of rubric returned to student
## Cities Assignment Rubric

<table>
<thead>
<tr>
<th>Competencies covered</th>
<th>Component and weight</th>
<th>A range: 90-100% of points are earned when:</th>
<th>B range: 80% of points are earned when:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A, B, C, D, F</td>
<td><strong>Describe from the author's perspective (40%)</strong></td>
<td>You convey the author's perspective on the issues being addressed, including how he/she framed the issue and its root and immediate causes, the public interest as the author sees it, the proposed reforms or policies, and the expected short and long-term consequences. Your narrative gives the reader a clear and empathetic understanding of the author's thinking and justifications, and of how the author relates his/her work to the wider context (spatial, historical, political, economic, legal, social).</td>
<td>You clearly describe the issue as the author(s) saw it, you describe the policies they proposed, and you explain why they proposed them. You identify the ways in which the author(s) framed the public interest, as well as the expected benefits. But reading your paper doesn’t give the reader a clear understanding of how the author situates his/her proposals in the wider context.</td>
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Benefits & Drawbacks

Barbara’s Gleanings: “Gut response: We know what they know! We enjoyed reading their papers! And they seem to know what they know…”

Challenge of reporting and analyzing learning outcomes for each competency.
Competency Aligned Rubric & LMS:  
(UEP 250) Foundations of Public Policy & Planning:

• Similar process: competencies \(\rightarrow\) criteria in a rubric
• Two assignments; Draft and Final
• More distinct delineation of each competency
• Easier to record, aggregate, and compare – across assignments, overtime, other courses
• Use of Learning Management System (Canvas)
# Draft Debate Critique Essay Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Ratings</th>
</tr>
</thead>
</table>
| Articulation of the Central Argument of the Debate | **Exemplary**  
You clearly and concisely articulate the argument(s) and explain why it is (or they are) contestable and significant.  
Your debate may involve more than one argument.  
**Competent**  
You clearly and concisely articulate the argument(s) and explain why it is (or they are) contestable and significant, yet not as clearly or concisely as you might have.  
**Partly Competent**  
You've articulated the argument(s) yet your explanation of why it is (or they are) contestable and/or significant is not clear.  
**Not Yet Competent**  
You did not articulate a contestable argument. |
| Situating the Debate in the Broader Discourse | **Exemplary**  
You situate your topic in the broader discourse and succinctly describe the accepted understanding of the problem (pervasiveness and causes) and/or widely-recognized ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.).  
**Competent**  
You situate your topic in the broader discourse and describe the accepted understanding of the problem (pervasiveness and causes) and/or widely-recognized ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.) yet your discussion could be more succinct or more nuanced.  
**Partly Competent**  
Your discussion of the broader discourse in which your debate is situated is missing attention to either the accepted understanding of the problem (pervasiveness and causes) or widely-recognized ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.)  
**Not Yet Competent**  
Your discussion of the broader discourse in which your debate is situated is overly general and lacks attention to the accepted understanding of the problem (pervasiveness and causes) and/or widely-recognized ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.). |
| Reasons and Underlying Assumptions | **Exemplary**  
You clearly identify reasons offered to support the argument(s) and/or acknowledge the underlying assumptions guiding the authors' analysis.  
**Competent**  
You identify reasons offered to support the argument(s) yet your attention to the underlying assumptions guiding the authors' analysis could be more clear.  
**Partly Competent**  
You identify reasons offered to support the argument(s) yet you gloss over the key underlying assumptions guiding the authors' analysis.  
**Not Yet Competent**  
You have not identified reasons to support the argument(s) and/or you have not discussed underlying assumptions that guide the authors' analysis. |
SpeedGrader in Canvas (Learning Management System)

For each criterion:
- Click on the rating
- Add a comment for more specific comments, as necessary

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Exemplary</th>
<th>Competent</th>
<th>Partly Competent</th>
<th>Not Yet Competent</th>
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<tr>
<td>Articulation of the Central Argument of the Debate</td>
<td>You clearly and concisely articulate the argument(s) and explain why it is (or they are) contestable and significant.</td>
<td>You clearly and concisely articulate the argument(s) and explain why it is (or they are) contestable and significant, yet not as clearly or concisely as you might have.</td>
<td>You've articulated the argument(s) yet your explanation of why it is (or they are) contestable and/or significant is not clear.</td>
<td>You did not articulate a contestable argument.</td>
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<tr>
<td>Situating the Debate in the Broader Discourse</td>
<td>You situate your topic in the broader discourse and succinctly describe the accepted understanding of the problem (pervasiveness and causes) and/or widely-established ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.)</td>
<td>You situate your topic in the broader discourse and describe the accepted understanding of the problem (pervasiveness and causes) and/or widely-established ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.) yet your discussion could be more succinct or more nuanced.</td>
<td>Your discussion of the broader discourse in which your debate is situated is missing attention to either the accepted understanding of the problem (pervasiveness and causes) and/or widely-established ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.).</td>
<td>Your discussion of the broader discourse in which your debate is situated is overly general and lacks attention to the accepted understanding of the problem (pervasiveness and causes) and/or widely-established ideas about solutions to the problems (e.g., effectiveness, efficiency, equity, etc.).</td>
</tr>
</tbody>
</table>
Aggregate Scores by Competency:

*Critical Reasoning:* Debate Critique Essays (2021)

<table>
<thead>
<tr>
<th></th>
<th>Exemplary</th>
<th>Competent</th>
<th>Partially Competent</th>
<th>Not Yet Competent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reasons and Underlying Assumptions</strong></td>
<td>57%</td>
<td>34%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Evidence Critique</strong></td>
<td>36%</td>
<td>47%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td><strong>Attributed vs. Normative Claims</strong></td>
<td>74%</td>
<td>19%</td>
<td>6%</td>
<td></td>
</tr>
</tbody>
</table>

These slides are excerpted from a presentation at a UEP faculty meeting that informed discussion about curriculum revisions.
Different aspects of competencies in different assignments

Persuasion Strategies -- Policy/Planning Brief 2021

Supporting Evidence
- Exemplary: 44%
- Competent: 42%
- Partially Competent: 14%

Framing Strategy & Use of Examples, Images, Metaphors, Symbols, and Other Narrative Devices
- Exemplary: 47%
- Competent: 42%
- Partially Competent: 11%

* Based on 73% of assignments for which data is available.
Capture Learning Progress:

**Evidence Critique:** Draft vs. Final Debate Critique Drafts (2021)

<table>
<thead>
<tr>
<th></th>
<th>Exemplary</th>
<th>Competent</th>
<th>Partially Competent</th>
<th>Not Yet Competent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft 2021</td>
<td>14%</td>
<td>32%</td>
<td>41%</td>
<td>14%</td>
</tr>
<tr>
<td>Final 2021</td>
<td>36%</td>
<td>47%</td>
<td>15%</td>
<td>2%</td>
</tr>
</tbody>
</table>

0.72 increase in mean points
# Using Assessment to Improve Assignments & Teaching

<table>
<thead>
<tr>
<th>DEFICIENCY</th>
<th>IMPROVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cities</strong></td>
<td></td>
</tr>
<tr>
<td>Critiquing without describing and explaining</td>
<td>Clearer guidance in assignments to describe and explain differences in perspectives and context</td>
</tr>
<tr>
<td>Class activities to practice describing with clarity and understanding vs. sharing own opinions</td>
<td></td>
</tr>
<tr>
<td><strong>Foundations</strong></td>
<td></td>
</tr>
<tr>
<td>Analysis of Assumptions and Evidence</td>
<td>New Argument Critique Assignment</td>
</tr>
<tr>
<td>Writing skills</td>
<td>Mandatory Writing Center Consultations</td>
</tr>
</tbody>
</table>
Using Assessment to Improve Curriculum

• **Core Course Focus:**
  - Global dimensions of planning moved from Cities to Foundations

• **New Course:**
  - Thesis design course to further develop research design skills

• **Align learning across core courses:**
  - Discussions with students and faculty about common themes – e.g. inter-subjectivity in Cities and Foundations
  - *Track development of critical thinking and written communication across courses and thesis/capstone exam (Aspiration!)*
Exam Questions as SLO Measurements

UEP 251 Economics for Planning & Policy Analysis

- Exam questions for each competency
- Mean scores and % for 4 levels
- Aggregate scores for multiple questions for each competency

An excerpt from a rubric with additional learning outcomes.

### Exam Questions as SLO Measurements

#### Assessment of Student Learning Outcomes: (UEP 251) Economics for Policy and Planning Spring 2017 (M.A. only)

This assessment is based on composites of multiple choice, short answer, and essay exam questions on mid-term and final exams.

<table>
<thead>
<tr>
<th>PAB Criteria &amp; Specific competency</th>
<th>Topics covered within this competency:</th>
<th>Median correct</th>
<th>Mastery Achieved: 90-100%</th>
<th>Proficiency Achieved: 80-89%</th>
<th>Proficiency Partially Achieved: 70-79%</th>
<th>Not Proficient: &lt;70%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4A3a: Growth and Development (Economic influences on policy and planning)</strong></td>
<td>Role of markets and market power: Introduction to macroeconomic analysis and the neoclassical model, comparisons to alternative concepts of value phrased in quantities; market supply and demand, price elasticity, market equilibrium (short and long run), market shortage and surplus; efficiency vs. equity; market concentration, market failure, and market types, including perfect competition, monopolies, and natural monopolies.</td>
<td>Exam 1: 85%</td>
<td>Exam 2: 92%</td>
<td>Exam 1: 24%</td>
<td>Exam 2: 77%</td>
<td>Exam 1: 15%</td>
</tr>
<tr>
<td>Consumer and producer economic theory: Principles of neoclassical utility theory, indifference curves, budget constraints, and consumer equilibrium; price discrimination; economic measures of social welfare, including consumer and producer surplus and deadweight losses; producer cost, revenue, and profits; producer output and pricing decisions; economies of scale and optimal firm size.</td>
<td>Exam 1: 87%</td>
<td>Exam 2: 73%</td>
<td>Exam 1: 26%</td>
<td>Exam 2: 77%</td>
<td>Exam 1: 15%</td>
<td>Exam 2: 22%</td>
</tr>
<tr>
<td><strong>4A3d: Sustainability and Environmental Quality (Environmental, social, and cultural influences on policy and planning)</strong></td>
<td>Environmental economics: Externalities, environmental damage, and related market failures; public goods and common property resources; role of government in market failures (provision of public goods, taxation, regulation, property rights enforcement, etc.); non-market valuation strategies; cost-benefit and life cycle analysis, discounting and the discount rate.</td>
<td>Exam 1: 85%</td>
<td>Exam 2: 95%</td>
<td>Exam 1: 26%</td>
<td>Exam 2: 77%</td>
<td>Exam 1: 15%</td>
</tr>
<tr>
<td>Urban economics: Economic rationale for the existence of cities; scale and agglomeration economies; monocentric and polycentric city models; transportation costs and public transportation.</td>
<td>Exam 1: 85%</td>
<td>Exam 2: 95%</td>
<td>Exam 1: 26%</td>
<td>Exam 2: 77%</td>
<td>Exam 1: 15%</td>
<td>Exam 2: 22%</td>
</tr>
<tr>
<td><strong>4A3x: Governance and Participation (Different roles of government, governance, and citizenship in policy and planning)</strong></td>
<td>Government taxation and regulation: Effect of taxes on market outcomes (price/quantity) and welfare (consumer/producer surplus); distributional consequences of taxation; price elasticity, tax revenue and tax burden.</td>
<td>Exam 1: 85%</td>
<td>Exam 2: 95%</td>
<td>Exam 1: 26%</td>
<td>Exam 2: 77%</td>
<td>Exam 1: 15%</td>
</tr>
<tr>
<td><strong>4A3b: Equity, Diversity, Social Justice (UEP competency: Political and economic power mapping)</strong></td>
<td>Inequality and Gini coefficients: Trends in income inequality, and income redistribution efforts; Lorenz curves and Gini coefficients; normative standards of equity; spatial concentrations of poverty and inequality.</td>
<td>Exam 1: 85%</td>
<td>Exam 2: 95%</td>
<td>Exam 1: 26%</td>
<td>Exam 2: 77%</td>
<td>Exam 1: 15%</td>
</tr>
</tbody>
</table>
Group-Level Metrics -- UEP 255 Field Projects, a planning studio

- Assessment by faculty and TAs and student team members
- Informed by community partner feedback
- Compute fraction of teams at each of 4 levels of proficiency for each competency

<table>
<thead>
<tr>
<th>GBCLTN</th>
<th>Mastery Achieved</th>
<th>Proficiency achieved</th>
<th>Proficiency partially achieved</th>
<th>Not proficient achieved</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAB2D</td>
<td>Collaborative Skills: project management</td>
<td>3 Plan is developed with realistic scope of work, detailed tasks, timeline, and person responsible.</td>
<td>Plan is developed lacking only 1 of following: realistic scope of work, detailed tasks, timeline, and person responsible.</td>
<td>Plan is developed lacking 2 of following: realistic scope of work, detailed tasks, timeline, and person responsible.</td>
<td>Plan is not well developed, and lacks a realistic scope of work, detailed tasks, timeline, and person responsible. A lot was on Allison's shoulders initially. Seemed like Allison and Stefan took on more overall.</td>
</tr>
<tr>
<td>2L</td>
<td>Division of labor among team is equitable and makes best use of member strengths and interests.</td>
<td>Division of labor among team is equitable and makes moderate use of member strengths and interests.</td>
<td>Division of labor among team is inequitable and makes moderate use of member strengths and interests.</td>
<td>Division of labor among team is inequitable and makes poor use of member strengths and interests.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Team monitors progress regularly and makes timely adjustments most of the time.</td>
<td>Team monitors progress regularly and makes timely adjustments some of the time.</td>
<td>Team monitors progress irregularly and makes timely adjustments some of the time.</td>
<td>Team monitors progress irregularly and does not make timely adjustments most of the time.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Team completes all deliverables and meets deadlines all of the time.</td>
<td>Team completes all deliverables and meets deadlines most of the time.</td>
<td>Team completes most deliverables and meets deadlines some of the time.</td>
<td>Team completes some deliverables and meets deadlines some of the time.</td>
<td></td>
</tr>
</tbody>
</table>

An excerpt from a more extensive spreadsheet with additional learning outcomes – completed for each team.
Assessment of Student Learning Outcomes: (UEP 255) Field Projects: Planning and Practice, Spring 2017

This assessment draws on the written work, oral presentations, self- and team-assessment reports, and faculty observations of individual students and teams. The learning outcomes highlighted are those whose alumni have told us are among the most critical to successful practice in their policy and planning careers. The table reports on ratings at the team level for each of the eight teams.

<table>
<thead>
<tr>
<th>PA8 Criterion</th>
<th>Explanation of learning assessed</th>
<th>Mastery Achieved</th>
<th>Proficiency Achieved</th>
<th>Proficiency Partially Achieved</th>
<th>Not Proficient</th>
<th># teams/8 teams</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4A2d Plan Creation and Implementation and 4a2e Planning Process Methods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborative Skills: project management</td>
<td>Plan is developed with realistic scope of work, detailed tasks, timeline, and person responsible.</td>
<td>5/8</td>
<td>5/8</td>
<td>0</td>
<td>0</td>
<td>5/8</td>
</tr>
<tr>
<td></td>
<td>Division of labor among team is equitable and makes best use of member strengths and interests.</td>
<td>4/8</td>
<td>1/8</td>
<td>2/8</td>
<td>1/8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team monitors progress regularly and makes timely adjustments.</td>
<td>4/8</td>
<td>4/8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team completes all deliverables and meets deadlines.</td>
<td>5/8</td>
<td>3/8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Collaborative Skills: communication and relationship building</td>
<td>Communication within team is timely, succinct, complete, and clear.</td>
<td>5/8</td>
<td>2/8</td>
<td>2/8</td>
<td>1/8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication between team and partner is timely, succinct, and clear.</td>
<td>6/8</td>
<td>2/8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team takes time to check in as people with each other and with partner.</td>
<td>4/8</td>
<td>3/8</td>
<td>1/8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team provides appropriate, direct, and honest feedback (both positive and negative) to each other and to partner.</td>
<td>4/8</td>
<td>2/8</td>
<td>1/8</td>
<td>1/8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trust and working relationships between team members.</td>
<td>6/8</td>
<td>1/8</td>
<td>0</td>
<td>1/8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trust and working relationships between team and partner.</td>
<td>6/8</td>
<td>2/8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>4A2f Leadership and Management:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team problem solving: adapting to the unexpected and obstacles</td>
<td>Team members have deep understanding of each other’s strengths and challenges, including each other’s preferred style in managing unanticipated problems.</td>
<td>2/8</td>
<td>5/8</td>
<td>1/8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team always discusses, identifies, records, and plans for time availability and constraints of individual members.</td>
<td>6/8</td>
<td>2/8</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team members are as flexible with their schedules as possible and assume additional duties as necessary when unanticipated demands arise.</td>
<td>3/8</td>
<td>4/8</td>
<td>1/8</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All potential solutions for unanticipated problems generated within the group are considered.</td>
<td>2/8</td>
<td>4/8</td>
<td>1/8</td>
<td>1/8</td>
<td></td>
</tr>
</tbody>
</table>
Surveys as SLO Measurement Mechanisms:

• Questions linked to relevant competencies

• Retrospective pre-post self-assessments

• Internship supervisors as external assessors

*These are reported learning outcomes, tied to the internship activities.*
Student’s Internship Self-Assessment Surveys (2016-2022)
Effectively manage project tasks

- Effectively manage project tasks
  - Not Confident
  - Slightly Confident
  - Moderately Confident
  - Extremely Confident

Bar chart showing levels of confidence before and after the internship.
Collect and organize information and/or data

- Not Confident
- Slightly Confident
- Moderately Confident
- Extremely Confident

[Bar chart showing confidence levels before and after internship]
# Internship Supervisor Surveys (2016-2022)

## Project Management Competencies

<table>
<thead>
<tr>
<th>Competency</th>
<th>Not ready for professional practice</th>
<th>Not ready yet, but improving</th>
<th>Ready but could use more practice</th>
<th>Clearly ready for professional practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work Independently and Meet Deadlines</strong></td>
<td>3%</td>
<td>15%</td>
<td>81%</td>
<td></td>
</tr>
<tr>
<td><strong>Manage Project Tasks</strong></td>
<td>3%</td>
<td>21%</td>
<td>75%</td>
<td></td>
</tr>
</tbody>
</table>
Internship Supervisor Surveys (2016-2022)
Data Collection & Analysis

Collect and Organize Data and/or Information (N=250)
- Not ready for professional practice: 2%
- Not ready yet, but improving: 16%
- Ready but could use more practice: 82%

Perform Quantitative Analysis (N=182)
- Not ready for professional practice: 4%
- Not ready yet, but improving: 23%
- Clearly ready for professional practice: 73%

Perform Qualitative Analysis (N=199)
- Not ready for professional practice: 1%
- Not ready yet, but improving: 26%
- Clearly ready for professional practice: 73%

Slight increase in quantitative preparedness over time
## Exit Survey - Retrospective Pre-Post Self-Assessment

<table>
<thead>
<tr>
<th>KNOWLEDGE COMPETENCIES (Selected)</th>
<th>BEFORE ENROLLMENT</th>
<th>Gained Considerable Confidence</th>
<th>Gained Limited Confidence</th>
<th>Not Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamics of race, class, and gender in policy and planning</td>
<td>24%</td>
<td>79%</td>
<td>18%</td>
<td>3%</td>
</tr>
<tr>
<td>History, structure, function of urban/metro settlements</td>
<td>15%</td>
<td>68%</td>
<td>26%</td>
<td>6%</td>
</tr>
<tr>
<td>Global dimensions of planning/policy</td>
<td>15%</td>
<td>48%</td>
<td>40%</td>
<td>12%</td>
</tr>
</tbody>
</table>

| RESEARCH & COMMUNICATION SKILLS (Selected)                            |                   |                                |                           |              |
|-----------------------------------------------------------------------|                   |                                |                           |              |
| Spatial analysis                                                       | 18%               | 79%                            | 15%                       | 6%           |
| Quantitative analysis                                                  | 21%               | 76%                            | 18%                       | 6%           |
| Critical thinking                                                      | 76%               | 68%                            | 32%                       | 0%           |
| Written, oral, and visual communication                                | 74%               | 56%                            | 44%                       | 0%           |
Some examples from other planning programs
Comprehensive Exams

(communications with several programs)

*Designed to assess core learning outcomes for ALL students*

**Types of questions:** most multiple choice or short answers;

**How design:** most faculty of each course, some AICP prep materials

**When administered:**
- culmination of degree or mid-point as check point
- set times or by arrangement w. graduate advisor as proctor
- pre-post: beginning and end of program

**Assessment:** most pass/fail, 2-3 chances to pass

Univ. of Kansas has a two-day (weekend) test. Students prepare a consultant’s report guided by prompts designed by core faculty. Evaluated by those faculty.
### Pros and Cons of Comprehensive Exams

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DRAWBACKS &amp; QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient to administer</td>
<td>Agreeing on the questions</td>
</tr>
<tr>
<td>Efficient to analyze (multiple choice, short answer)</td>
<td>Updating questions: changes in curriculum, instructor focus</td>
</tr>
<tr>
<td>Can identify gaps in curriculum</td>
<td>May emphasize recall vs. critical thinking, creativity (multiple choice, short answer)</td>
</tr>
<tr>
<td>Facilitate pre-post analysis and tracing trends</td>
<td></td>
</tr>
</tbody>
</table>
Student Reflections

Student Reflections and Self-Assessment (e.g. Univ. of New Mexico)
- Mid-program self-assessment and discussion with faculty advisor
- Progress assessment at final capstone defense (professional project or thesis)

Case Studies of specific questions  -- *an example from UEP’s mid-career program.*
- **Question:** To what extent and in what ways are our students leveraging their work experience to deepen their learning?
- Content analysis of a sample of assignments
- Focus group to discuss benefits and ideas for deepening the learning
Student Portfolios

**Portfolio** (e.g. Florida Atlantic University)

- Reflections on graduate education and professional planning experiences:
  - Define specific learning outcomes: planning knowledge, skills, and values & ethics
  - Demonstrate attainment of learning outcomes with discussion of evidence from capstone projects, course assignments, internship/work projects, etc.
  - Faculty feedback on drafts and revisions
  - Linked to final grade for culminating capstone course (Planning Project or Master’s Thesis)

---

E-Portfolio example from a Boston College M.A. in Higher Education student. [https://hannahjuneklein.wixsite.com/portfolio/competency-narratives](https://hannahjuneklein.wixsite.com/portfolio/competency-narratives)

---

Ann Forsyth’s 2008 blog post on planning portfolios in Planetizen.
<table>
<thead>
<tr>
<th>Assessment Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHALLENGE</strong></td>
</tr>
<tr>
<td>Lack of Resources</td>
</tr>
<tr>
<td>(especially time!)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Reluctance or Resistance</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Example of LMS generated aggregation

**4A1e) The Future**
Analyzes the potential influences of the planning document on issues and conditions over time leading to today, including influences on planning/policy practice.

Mastery set at: 3

Calculation Method: Highest Score

**4A2b) Written Communication**
Uses clear and concise language and a compelling narrative structure to persuasively communicate meaning to the intended audience, using appropriate terminology and citations.

Mastery set at: 3

Calculation Method: Highest Score
LMS generated comparison across years

Policy / Plan Analysis Elements

- Rating: Mechanics and Citations
- Rating: Organization & Flow
- Rating: Reflect - Lessons learned
- Rating: Reflect - Social Justice, governance, and...
- Rating: Reflect - Interrelatedness of decisions
- Rating: Reflect - Long term consequences
- Rating: Relate
- Rating: Describe

2022 Avg, 2021 Avg, 2020 Avg
## Assessment Challenges

<table>
<thead>
<tr>
<th>CHALLENGE</th>
<th>SUGGESTIONS &amp; QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in Assignments or Faculty</td>
<td>Apply same criteria to new assignments</td>
</tr>
<tr>
<td></td>
<td>Adapt assessment instruments to fit new</td>
</tr>
<tr>
<td></td>
<td>Record explanations of criteria &amp; process to pass along</td>
</tr>
<tr>
<td>Consistency across cohorts, faculty, courses</td>
<td>Confer and adjust</td>
</tr>
<tr>
<td>(for comparison, tracking progress)</td>
<td>Compare <em>findings</em></td>
</tr>
</tbody>
</table>
## Assessment Challenges

<table>
<thead>
<tr>
<th>CHALLENGE</th>
<th>SUGGESTIONS &amp; QUESTIONS</th>
</tr>
</thead>
</table>
| **Lack Variation** to track progress; compare subgroups | Refine criteria  
Reserve highest rating for exemplary  
? May reflect consistency! |
| **Attribution** - our teaching vs. other factors | **Really hard to do!**  
Before and after comparisons (draft to final, pre- and post assessments)  
Link to learning activities  
Discuss implications of other factors |
Planning Your SLO Design and Implementation

1. **Goal setting:** Which Student Learning Outcomes will you assess?
2. **Design the approach:**
   - Direct observation opportunities: class assignments, projects, etc.
   - Types of instruments: rubrics, surveys, self-assessment, portfolios ...
3. **Data Collection** (and who will do it)
4. **Data Analysis and Interpretation** (and stakeholder engagement)
5. **Plans for Using the Findings**
Ideas for assessing your priority SLOs

GoogleDoc IV

Choose one of your key student learning outcomes (IV on the google doc)

1. What class assignment/s, project/s, or other activities might you use for assessing that learning outcome?

2. What types of measurement mechanisms or metrics might you use in your assessment?
Small group discussion

In your group, focus on one or two student learning outcomes that are important to all.

• Discuss possible measurement mechanisms and metrics (from step III).

• What challenges of collecting the data do you anticipate? What suggestions do you have for contending with them?

• What challenges of analyzing and interpreting the data do you anticipate? What suggestions do you have for contending with them?

• Share ideas for using the assessment to improve curriculum or pedagogy in your program?
A guide & template for you and your colleagues

Planning a Student Learning Outcomes Assessment Design for Your Planning Program

Questions and a template to help you plan the next steps for your program.

Prepared by Laurie Goldman, Ph.D., Dept. of Urban & Environmental Policy & Planning, for the Planning Accreditation Board, October 21, 2023 at the ACSP Conference in Chicago.
A Few Useful Resources

Planning Accreditation Board resources on Student Learning Outcomes:

• Noteworthy Student Learning Outcomes Assessment Practices
• Previous presentations and other resources on Outcomes Assessment

National Institute for Learning Outcomes
The National Institute for Learning Outcomes Assessment (NILOA), established in 2008, is a research and resource-development organization, dedicated to documenting, advocating, and facilitating the systematic use of learning outcomes assessment to improve student learning.

Their searchable website aggregates relevant publications, case studies, and tools for learning outcomes assessment.

VALUE Rubrics – Valid Assessment of Learning in Undergraduate Education (VALUE) is a compendium of rubrics on a wide range of learning outcomes researched, designed, and assembled by the American Association of Colleges and Universities (AAC&U). These rubrics can be adapted to graduate-level courses addressing planning-specific foci.

Your input!
Please share your ideas, comments, and questions with Laurie Goldman, Ph.D. laurie.goldman@tufts.edu. She’ll integrate your input into materials that will be shared with workshop participants and others pursuing Student Learning Outcomes Measurement for planning programs.