From Evaluation of Individual Students to Program Level Assessment of Learning – Implications for Graduate Programs
By Yao Hill, PhD, February 2015

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Assessment Office’s Mission

Improve student learning through academic program assessment

Website: manoa.hawaii.edu/assessment

We have two faculty specialists in the office: Monica Stitt-Bergh and me. We conduct workshops, provide individual consultations, and facilitate assessment work sessions. Check out our website for resources and past workshop materials.
Learning Outcomes

1. Tools and strategies to harness individual student evaluation for program assessment
2. Develop a feasible assessment plan

This workshop is developed based on our analysis of the Annual Program Assessment Reports. We saw collaborative faculty effort in evaluating and helping individual students in the graduate programs. We want to help these programs to harness the time and effort in individual student evaluation for program learning assessment and use the assessment results to make program improvement decisions. So, in this workshop, you will learn tools and strategies to do so. You will also have the opportunity to develop a feasible plan for your assessment project.

Agenda

1. Assessment cycle
2. Assessment examples, tools, and strategies
3. Your turn to develop assessment plan
4. Plan, share
5. Evaluation of the workshop
First, let me introduce the assessment cycle and explain some of the basic assessment terminologies. For those who are familiar with learning assessment, this will be a quick review. The cycle of learning outcome assessment starts by defining what the learning outcomes should be. That is, what knowledge, skills, and/or values we expect students to gain through the educational experience in the program. Then we examine whether our curriculum offers sufficient learning opportunities. We then collect and evaluate evidence of student learning, interpret the results, and use the results for program actions, which we hope will lead to program improvement.
Let’s take a look at the first step: defining learning outcomes. Learning outcomes are knowledge, skills, and/or dispositions that students are supposed to gain upon program completion.

The Graduate Education Office has worked over the past two years in establishing institutional learning outcomes, or ILOs, for the advanced degree programs. There are four categories of outcomes.

- Knowledge and understanding
- Intellectual and applied skills
- Communication skills
- Professional responsibility
Knowledge and Understanding

1. Demonstrate comprehensive knowledge in one or more general subject areas related to, but not confined to, a specific area of interest.
2. Demonstrate understanding of research methodology and techniques specific to one’s field of study.

Take a look at your program SLOs printed out for you. Give me a show of hands if your program has SLOs related to subject area knowledge. Which of you has SLOs related to knowledge of research methods?

Intellectual and Applied Skills

3. Apply research methodology and techniques specific to one’s field of study.
4. Critically analyze, synthesize, and utilize information and data related to one’s field of study.

The third proposed ILO is about applying research methods. Do you have SLOs related to this outcome? The fourth SLO actually has two components. The first is more often related to critically evaluating and synthesizing information in the literature review and the second is about critical analysis of data and interpretation of results. Who has SLOs related to critically reviewing literature? Who has ones related to data analysis and interpretation of results?
Communication Skills

5. Proficiently communicate and disseminate information and data orally, in writing, and through media related to field.

Professional Responsibility

6. Conduct research or projects as a responsible and ethical professional.
7. Interact professionally with others.
8. Provide guidance, mentor others, and collaborate when appropriate.

No. 6 is about conducting research ethically. Which of your programs has that SLO?
No. 7 is about contributing to the professional/scholarly field. Which of you has this one?
No. 8 is most often manifested as teaching ability. Raise your hand if your program has this SLO.
What doesn’t count as a SLO

- Degree requirement:
  - “Students must complete 18 credits.”
  - “Students must pass a comprehensive exam.”
  - “Students must complete a proposal and proposal defense.”
  - “Students need to independently teach an undergraduate course.”

Degree requirements tell students what they must do, not what they are expected to learn. However, we can rather easily transform these requirements into outcome statements by thinking about the purpose behind these requirements and what knowledge and skills are fostered during the process of requirement completion. For example, the requirement of the proposal and proposal defense is for students to demonstrate knowledge of the field and research methods, exhibit the ability to design and implement research, and communicate the research design in both oral and written form. The requirement of teaching is for students to gain the ability to prepare for and teach courses in a higher education context.
After we defined and understand our program outcomes, the next step is to examine our curriculum and look through degree requirements to see whether the program provides sufficient learning opportunities for our students. We do this through a tool called curriculum map.
The curriculum map that you see here is the most common and basic form of a curriculum map for a Ph.D. program. This one is from the Theatre Ph.D. program.

(Presenter reference notes) Theatre PhD’s five outcomes are:
1. Student is capable of researching and writing a major book-length original contribution to Western, Asian or Comparative Theatre scholarship.
2. Student demonstrates in-depth comprehensive knowledge of a chosen area of specialization of Theatre scholarship.
3. Student displays broad expertise in Theatre history, theory, and performance practices.
4. Student demonstrates teaching competence at the university level.
5. Student demonstrates reading knowledge of, and some spoken fluency in, the foreign language(s) relevant to the area of the dissertation.

A curriculum is a matrix that shows how each program components or core requirements contributes to student learning toward each outcome achievement. Each column header lists a SLO and each row header lists a degree requirement. Some requirements provide introduction learning opportunities. That’s the symbol “I” that you see on the map. Some courses reinforce the learning opportunities, represented by the letter “R”. Certain culminating student products such as comprehensive exams and dissertations or theses help students to master the outcome. The letter “M” means master in the map. We can also assess students’ achievement of the outcomes through these culminating products.

There are two main benefits of a collaboratively-developed curriculum map. First, it shows whether the program provides sufficient learning opportunities for students to achieve the learning outcomes. Let’s take a look at SLO 4: Teaching competence in this curriculum map. Although faculty mentoring and the teaching requirement are sufficient for students to achieve this competence, what if some faculty think it is not? Maybe adding TA training into this map...
will enhance learning, for example. Through collaborative discussion of the map, faculty may already be able to make program improvement. The second benefit of a curriculum map is that it shows where to collect evidence for program learning assessment. In this map, we can use dissertation and defense to assess SLO 1, comprehensive exams and dissertation to assess SLO2, and so on.

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This curriculum map shows a more detailed alignment between CIS Ph.D. program requirements and the SLOs.

(Reference Notes: CIS Ph.D. program SLOs are below.)
(SLO1) Demonstrate understanding of research methods and subject knowledge in the field of Communication and Information Sciences.
(SLO2) Synthesize diverse data, theories, and methods.
(SLO3) Demonstrate the ability to conduct research.
(SLO4) Propose and conduct original research.
(SLO5) Develop and articulate a professional identity as a contributing member of a research community.
The biggest challenge in most programs for learning assessment is to collect and evaluate learning evidence because this is often the most time-consuming component of program learning assessment. That being said, graduate programs have great advantages in collecting and evaluating student learning evidence as faculty have much more intimate knowledge of individual students’ performance. Instructors, academic advisers, and thesis/dissertation committee members already spend a lot of time reading and evaluating student work. There are often two or more faculty evaluating student culminating products such as:

This is also the precise reason that we decided to offer this workshop, which is to harvest and harness faculty’s time and effort in individual student evaluation to program learning outcome assessment.

On your handout, there is a sheet with the title “Outcome Categories and Possible Indicators.” You can see the kinds of evidence that are appropriate for each UHM advanced degree institutional learning outcome.
Harness Individual Student Evaluation Effort

• Faculty close knowledge of student’s ability/skills
• Faculty time spent on reading student work
• Faculty collaborative discussion and evaluation

Give me a show of hands if your program organizes faculty discussions on individual graduate student performance. How many of you require 3 or more readers for a Master's thesis? How many of you require 4 or more committee members for Ph.D. dissertations?
Keep in mind that in program learning outcome assessment, we need to know, regarding each outcome, how many students met or exceeded our expectations, not how many students passed or failed their comprehensive exams or how many of them successfully met the milestones. It is often presented in the form of number and percentage of the students meeting the minimum success standard or acceptance level set by individual programs. The results from this program showed that students achieved best on the research methods outcome and least on the communication outcome. The results seem to suggest that more actions are needed to improve students’ ability in written and oral communication.
Individual evaluation results $\neq$ PLO assessment because
“all students passed comprehensive exam” doesn’t tell you:
- How many demonstrated knowledge mastery
- How many exceeded the expectation on research methods
- How many failed the expectation on oral presentation
Assessment is not meaningful if we just collect evidence without digesting the information and using the results. The power of the assessment is that the process and results help faculty to understand more about the program, not just the courses that they teach. The faculty teaching research methods may realize that they have to teach students how to critically evaluate research studies for them to be able to adopt and adapt viable and rigorous research methods in their own dissertation work. Or faculty who expect students to be master presenters at their thesis defense may realize that students weren’t given explicit and sufficient opportunities in the program to do so. These realizations need to come from collaborative interpretation of the results for faculty to be willing to act on the results.
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HOW TO HARNESS INDIVIDUAL STUDENT EVALUATION TO PROGRAM ASSESSMENT?

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THE KEY: EXPLICIT EVALUATION CRITERIA ALIGNED WITH PLOS
In this part of the workshop, we are going to look at how three programs did learning assessment. I labeled them as the bronze, silver, and gold assessment examples on your handout. The three examples represent different levels of the program assessment in the graduate programs with gold representing the highest level. However, programs may find it more manageable to start from the bronze or silver phase, which would still be award-winning if the program has never engaged in program assessment before.
Let’s look at the handout with three examples. First, let’s look at the Bronze example. You will notice that I covered all the steps in the assessment cycle in the examples. Let’s take a few minutes to read the example. [After a couple of minutes] What are the features in this example that make it a bronze? Anyone?

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Bronze Example

**Advantages**
- Utilizing faculty’s existing knowledge of the graduate students
- Utilizing the time and effort in evaluating individual students

**Challenges**
- The evaluation is subjective
- The expectation may be inconsistent among faculty
- Hard to pin-point how to use the results

[Point out the advantages and challenges of doing assessment this way...]
Silver Example

**Advantages**
- Utilizing time and effort of dissertation committee members reading and evaluating dissertation work
- Minimum additional workload for faculty
- Easier to pin-point changes needed

**Challenges**
- Faculty may resist the rubric
- Faculty/students need time to understand the rubric beforehand
- Need faculty engagement and contribution to interpret and use the results

[Point out the advantages and challenges of doing assessment this way...]

Gold Example

**Advantages**
- All faculty are involved
- Multiple evidence used
- Assessment is sustainable, cyclical, and meaningful

**Challenges**
- Takes time to build a commonly agreed-upon system
- Takes time to engage all faculty
- Extensive human and technology resources

[Point out the advantages and challenges of doing assessment this way...]
First, work individually to think about strategies for an assessment project in your program. Use the handout on strategies as your guide. This is a front-and-back two-page handout. After you are done, share with the person next to you to gather feedback and provide suggestions for your partner.
Advanced Degree Institutional Learning Outcomes (ILO)  
(02/10/2014 Draft)

Similar to the WASC driven need for undergraduate institutional learning outcomes, there is also a corresponding need at the graduate level. Many graduate programs already have program specific student learning outcomes that guide their programs. Additionally, all graduate programs share some common required outcomes (e.g., thesis, dissertation, other creative or scholarly work). The statements have undergone three rounds of feedback: two via the Graduate Council and one via all graduate chairs. Statements were formulated from information collected by the Mānoa Assessment Office from graduate programs.

Knowledge and Understanding

1. Demonstrate comprehensive knowledge in one or more general subject areas related to, but not confined to, a specific area of interest.
2. Demonstrate understanding of research methodology and techniques specific to one’s field of study.

Intellectual and Applied Skills

3. Apply research methodology and techniques specific to one’s field of study.
4. Critically analyze, synthesize, and utilize information and data related to one’s field of study.

Communication Skills

5. Proficiently communicate and disseminate information and data orally, in writing, and through media related to field.

Professional Responsibility

6. Conduct research or projects as a responsible and ethical professional.
7. Interact professionally with others.
8. Provide guidance, mentor others, and collaborate when appropriate.
**Potential Indicators** (i.e., may be used in assessment and evaluation of ILOs)

| 1. Comprehensive knowledge                      | • comprehensive exam  
|                                                | • oral defense  
|                                                | • written review of the literature. |
| 2. Understanding of research methodology        | • course exam  
|                                                | • comprehensive exam  
|                                                | • research proposal  
|                                                | • written review of the literature  
|                                                | • thesis/dissertation, oral defense |
| 3. Research methodology and techniques          | • original research project  
|                                                | • written critiques of journal articles  
|                                                | • research or grant proposal |
| 4. Critically analyze and synthesize information and data | • written review of the literature  
|                                                | • written analysis and discussion of data  
|                                                | • policy paper |
| 5. Communicate orally, in writing, and through media | • written projects  
|                                                | • oral presentations  
|                                                | • online communications  
|                                                | • television and film productions  
|                                                | • photo, image, picture projects  
|                                                | • recitals and performances |
| 6. Responsible, ethical, professional conduct of research | • observation of students’ adherence to timelines, ability to set appropriate priorities, ability to follow through on commitments  
|                                                | • written description of ethical considerations in student’s research, approval to conduct research  
|                                                | • critique of research designs’ adherence to ethical principles  
|                                                | • appropriate conclusions drawn from data; appropriate use of data and treatment of participants  
|                                                | • written policy of and application of the ethical responsibilities of authors, including issues concerning ghost authorship, collaborative research, and conflicts of interest |
| 7. Interact professionally                      | • observation of student performance during conference/poster presentation Q&A  
|                                                | • supervisor/director evaluation of professional performance  
|                                                | • evaluation of students’ cultural competence during professional interactions |
| 8. Guide, mentor, collaborate                   | • written self-reflections  
|                                                | • evaluations from mentees and collaborators  
|                                                | • recitals and performances |
Program Learning Outcome Assessment: Bronze Example

Program Learning Outcomes:
SLO 1: Demonstrate knowledge of the theories and research methods
SLO 2: Demonstrate ability to design research projects.
SLO 3: Demonstrate ability to carry out an independent research project to collect, analyze, and interpret data.
SLO 4: Demonstrate effective oral and written communication skills.

Type and Location of Evidence: Faculty observation and discussion of student performance in classes, comprehensive exam, proposal/dissertation or thesis defense.

Person Evaluating the Evidence: All graduate faculty at a faculty meeting.

Evaluation tool: Faculty discussion and rating of student performance based on a simple rubric.

<table>
<thead>
<tr>
<th>Individual Evaluation Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student:</strong> Jennifer</td>
</tr>
<tr>
<td><strong>Evaluation</strong></td>
</tr>
<tr>
<td><strong>Feedback to students</strong></td>
</tr>
<tr>
<td><strong>Recommended Actions</strong></td>
</tr>
</tbody>
</table>

Data Interpretation & Planned Use of Results: The Assessment Coordinator (AC) alone summarized the results and recommended changes.

<table>
<thead>
<tr>
<th>Program Outcome Assessment Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SLOs</strong></td>
</tr>
<tr>
<td>SLO 1: Knowledge</td>
</tr>
<tr>
<td>SLO 2: Research Design</td>
</tr>
<tr>
<td>SLO 3: Collect &amp; Analyze Data</td>
</tr>
<tr>
<td>SLO 4: Written Communication</td>
</tr>
<tr>
<td>SLO 5: Oral Communication</td>
</tr>
</tbody>
</table>

You may use these materials only for nonprofit educational purposes.
Please give credit/cite appropriately.
Program Learning Outcome Assessment: Silver Example

Program Learning Outcomes (Same as in the Bronze Example):
SLO 1: Demonstrate knowledge of the theories and research methods
SLO 2: Demonstrate ability to design research projects.
SLO 3: Demonstrate ability to carry out an independent research project to collect, analyze, and interpret data.
SLO 4: Demonstrate effective oral and written communication skills.

Type and Location of Evidence: Dissertation and defense

Person Evaluating the Evidence: Dissertation committee members evaluated student performance. Secretary collected the evaluation forms. The (AC) summarized the results for program learning outcome achievement.

Evaluation tool: A simple rubric developed by one person – the AC.

<table>
<thead>
<tr>
<th>Ph.D. Student Dissertation and Defense Evaluation Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student ID: _____________________  Student Name: _____________________  Date of Defense: _____________________________________________</td>
</tr>
</tbody>
</table>

Assessment Criteria

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Score:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrates mastery of fundamental knowledge in the field by consistently applying fundamental and advanced concepts to topics in subject area. (SLO 1: Knowledge)</td>
<td>1 = Unacceptable  2 = Marginal  3 = Acceptable  4 = Exceptional</td>
</tr>
<tr>
<td>2. Ability to access and integrate information into a cohesive overview of current knowledge; ability to critically evaluate the meaning, value, and contribution of published literature in the field. (SLO 1: Knowledge)</td>
<td></td>
</tr>
<tr>
<td>3. Ability to utilize sounds research methods to answer research questions or test hypothesis through a thorough review and critical analysis of the methods used in relevant studies. Provide just and well-thought-out rationales for data collection and analysis. (SLO 2: Research design)</td>
<td></td>
</tr>
<tr>
<td>4. Ability to implement an appropriate collection and analysis of data. Data interpretation is appropriate; creatively uses correct methodology; identifies limitations in interpretation. Discussion was accurate and engaging. Conclusions/summaries are appropriate and clearly based on outcomes (SLO 3: data collection, analysis, and interpretation)</td>
<td></td>
</tr>
<tr>
<td>5. Masterfully defends research by providing clear and insightful answers to questions; Uses presentation resources as a guide, gives detailed explanations, is easily understandable, and keeps appropriate eye contact with the audience. (SLO 4: Communication)</td>
<td></td>
</tr>
</tbody>
</table>

(to be continued)
Program Learning Outcome Assessment: Silver Example (Continuing)

Data Interpretation & Planned Use of Results:
The AC summarized the results and made recommendations on how to use the results.

<table>
<thead>
<tr>
<th>Program Outcome Assessment Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SLOs</strong></td>
</tr>
<tr>
<td><strong>(Data collected across 2 years)</strong></td>
</tr>
<tr>
<td>SLO 1: Knowledge</td>
</tr>
<tr>
<td>SLO 2: Research Design</td>
</tr>
<tr>
<td>SLO 3: Collect, Analyze, and Interpret Data</td>
</tr>
<tr>
<td>SLO 4: Communication</td>
</tr>
</tbody>
</table>

Program Learning Outcome Assessment: Gold Example

Target Program Learning Outcomes
SLO 2: Educational Psychology graduate students have inquiry skills to conduct scholarly research effectively. (Assessment focus: literature review)
SLO 3: Educational Psychology graduate students present scholarly research effectively. (Assessment focus: oral communication)

Type and Location of Evidence: Course embedded assignment, dissertation and defense

Person Evaluating the Evidence: Course instructors evaluated research papers and oral presentations aligned with the target SLOs using the commonly agreed upon rubric and the dissertation committee members collaboratively evaluated dissertation and oral defense using the rubric.

Evaluation tool: An elaborated rubric developed by all faculty members in the program (See example rubric on the next page)

Data Interpretation & Planned Use of Results:
- The AC summarized the results and presented them at the faculty meeting. All faculty participate in the data interpretation.
- Faculty used the results to add oral presentation requirements in several courses and provide students with the rubric to guide their preparation.
## Final Literature Review Assessment Rubric
(revised 05/02/09)

<table>
<thead>
<tr>
<th>Rubric Component</th>
<th>Standards</th>
<th>Unacceptable (0)</th>
<th>Satisfactory (1)</th>
<th>Exemplary (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Statement of research question</td>
<td>EDEP graduate students are knowledgeable about inquiry methods.</td>
<td>The statement of the research question is unclear. The question is not feasible or broad enough in scope for a master’s project/thesis or doctoral dissertation. The practical and/or scholarly significance for educational psychology is not discussed.</td>
<td>The research question is clearly stated. The question is feasible, but the scope may not be appropriate for a master’s project/thesis or doctoral dissertation. The practical and scholarly contributions of the research for educational psychology are critiqued.</td>
<td></td>
</tr>
<tr>
<td>2. Context</td>
<td>EDEP graduate students are knowledgeable about inquiry methods.</td>
<td>The literature review does not adequately contextualize the research question, and/or there is no indication of what literature was included and excluded.</td>
<td>The literature review adequately contextualizes the research question, indicating what literature was included and excluded.</td>
<td>The literature review adequately contextualizes the research question and includes a critique and synthesis of the literature.</td>
</tr>
<tr>
<td>3. Organization</td>
<td>EDEP graduate students are knowledgeable about inquiry methods.</td>
<td>The writing is not clear. There are many problems with the organization of the paper.</td>
<td>For the most part, the writing is clear and organized.</td>
<td>The writing is clear and well organized.</td>
</tr>
<tr>
<td>4. Style and writing conventions</td>
<td>EDEP graduate students are knowledgeable about inquiry methods.</td>
<td>There are many errors of APA style and other writing conventions.</td>
<td>There are some errors of APA style and other writing conventions.</td>
<td>There are relatively few errors of APA style and other writing conventions.</td>
</tr>
<tr>
<td>5. Revision</td>
<td>EDEP graduate students are knowledgeable about inquiry methods.</td>
<td>The advisor’s and/or Committee’s comments and suggestions are not addressed.</td>
<td>Some of the advisor’s and/or Committee’s comments and suggestions were not addressed.</td>
<td>All of the advisor’s and/or Committee’s comments and suggestions were addressed.</td>
</tr>
</tbody>
</table>
## Sample Exemplary Graduate Program Assessment Practices

<table>
<thead>
<tr>
<th>Program</th>
<th>Feature</th>
<th>2014 Report URL</th>
</tr>
</thead>
</table>
Strategies for Assessment Project

1. Choose 1 or more of your program student learning outcomes (SLOs).
   Tip: choose an outcome(s) that faculty really care about right now
   Outcome(s) selected =

2. What type of direct evidence will answer the assessment question, is credible to faculty, and feasible to collect and evaluate? [select more than one if desired]
   □ Dissertation/Thesis/Scholarly Paper
   □ Dissertation defense
   □ Dissertation/Thesis/Research proposal
   □ Dissertation proposal defense
   □ Comprehensive Exam
   □ Qualifying exam
   □ Licensure exam
   □ Course assignment(s): ____________________________ (e.g., literature review, article critique paper)
   □ Observation: ____________________________ (e.g., student performance during conferment/poster presentation; professional interactions; recitals; dance performances)
   □ Portfolio/Collection of student work/performances
   □ Student evaluations of TAs
   □ Written self-reflections
   □ Other. Please name ____________________________

3. Collect data
   □ Using existing data: (e.g., UHM Dissertation and Thesis Database; recorded student performance)
   □ We will need to take steps to collect and store data:
   Briefly describe possible steps:
   _____________________________________________________________
   _____________________________________________________________

4. Who will evaluate the evidence? [Note: this may not apply to standardized exams which are typically evaluated by the organization that administers the exam]
   _____________________________________________________________
   _____________________________________________________________

(Page 1 of 2)
5. What evaluation tool/method will be used?
   - [ ] Rubric
   - [ ] Exam scoring guide
   - [ ] Observation checklist
   - [ ] Other: ____________________________________________________________

6. How will the data be summarized?
   
   **Example**
   
<table>
<thead>
<tr>
<th>SLO</th>
<th>% meeting or exceeding expectations (Total Number = 80)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 2. Research Methods</td>
<td>100%</td>
</tr>
<tr>
<td>SLO 3. Lit Review</td>
<td>75%</td>
</tr>
<tr>
<td>SLO 4. Communication</td>
<td>50%</td>
</tr>
</tbody>
</table>

   ![Diagram showing percentage distribution for SLOs 2, 3, and 4]

   - [ ] Approaching
   - [ ] Meeting
   - [ ] Exceeding

7. Plan for collaborative result interpretation and use. *(e.g., share and discuss at the department/curriculum committee meeting)*

   ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________

   ________________________________

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