

Assessing Graduate Programs

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Workshop Learning Outcomes

By the end of today's workshop, participants should be able to:

- Define learning outcomes for graduate students, and distinguish them from operational objectives;
- Articulate the concept, importance, and outline of an assessment plan for graduate programs; and
- Articulate a taxonomy of graduate assessment approaches and specific methods for graduate assessment.

Why Assess Graduate Programs?

- We are all interested in the quality and improvement of graduate education.
- “To change or improve an invisible system, one must first make it visible”
 - Schilling and Schilling, 1993, p. 172.
- To help satisfy calls for accountability
- Accreditation requirements for Institutional/Educational Effectiveness

Language

- At NCSU and Georgia Tech, language was a sticking point when we started discussing institutional effectiveness. Suggestions:
 - Feel free to develop and use your own terms
 - Keep it consistent across the institution
 - Produce and maintain a glossary of terms

Group Exercise: Departmental Climate Assessment

- What information about a department would you like to know?
- How might you get that information, and from whom?
- How would you share information within the department, and how would you use it to implement any changes deemed necessary?

Promoting IE



So What Do We Need to Do?

- Do our departments have a clear purpose statement linked to institutional mission?
- Do we have assessment plans to evaluate the effectiveness of our degree programs?
 - **Do our degree programs have clearly defined learning outcomes for students?**
 - **Are they published and are they measurable or observable?**
 - **Do we obtain data to assess the achievement of learning outcomes for students?**

So What Do We Need to Do?

(Cont.)

- **Do we document that assessment results are used to change or sustain the excellence of program activities and further student gains in professional and attitudinal skills and experiences?**
- **Based on assessment results, do we reevaluate the appropriateness of departmental purpose as well as the expectations for students?**

The amount of work needed to develop a successful institutional effectiveness process (or satisfy accreditation requirements) is proportional to the number of **'No'** responses to the above questions.

Operational Objectives

- Increase the number of quality applicants to the program.
- Increase yield rates.
- Decrease program time-to-degree.
- Increase the number of (funded!) research proposals.
- Increase graduate placements in tenure track positions in R1 universities.

Learning Outcomes

Student learning outcomes are directly related to student learning experiences within the degree program.

Focusing Efforts

It is important to achieve a **strategic focus** for the program, decide what knowledge, skills, abilities, and experiences should characterize students who graduate from a program...

Don't Overdo It!



Words to Remember When Starting an Assessment Plan

- The process **must** be meaningful to faculty.
- It may be best to tackle the modest expectations first.
- Assessment plans should recognize that students are active participants and share responsibility for their learning experience.
- It takes a long time to do assessment well, so be patient and be flexible.
- The overriding goal is to improve educational programs, not to fill out reports or demonstrate accountability.

Case Study

- MRU Physics Department's first assessment planning and data collection effort
- What's there? What's not there?
- What works? What doesn't?
- What would your group recommend?

Case Study: Debriefing Questions

- What do you see in the results?
- Is there linkage from the objectives and student learning outcomes to the assessment information?
- How would you describe the plan that this department used to guide the graduate assessment activities?
- How could that plan be improved? What should they do next time?

Develop an Assessment Plan

Desirable characteristics for assessment plans: (Palomba and Palomba, 1999)

- Identify experiences and assessment procedures to address learning expectations;
- Use procedures such as sampling student work and drawing on student experiences where appropriate;
- Include multiple measures;
- Describe the people, committees, and processes involved; and
- Contain plans for using assessment information.

Describing Graduate Program Learning Outcomes

- Think in terms of end results. What should students be able to know, do, or value when they finish the program?
- How would we know they know? What criteria would we use to form a judgment?
- What method would we use to see if our expectations have been met?
- When would we conduct measurements?
- What level of performance would we call a success?

Common Student Learning Outcomes at the Graduate Level

Students will demonstrate **professional** and **attitudinal** skills, including:

- Oral, written, and mathematical communication skills;
- Knowledge of concepts in the discipline;
- Critical and reflective thinking skills;
- Knowledge of the social, cultural, and economic contexts of the discipline;
- Ability to apply theory to professional practice;
- Ability to conduct independent research
- Ability to teach in a multimedia environment

Learning Outcome Example: Master's in Music Composition

- **Learning Outcome:** Master's composition graduates will synthesize the musical language of 20th Century composers in their work.
- **Some possible sources of evidence:** student portfolios, course portfolios which include student work
- **Possible ways to measure:** 3 faculty raters use a simple rubric designed for this purpose to rate student work - collected in student and/or course portfolios
- **When to Measure:** end of 1st year; master's performance of their works at end of 2nd year.
- **Possible Standard for Success:** successful synthesis (defined in rubric) of harmonic, rhythmic, formal and scalar materials into student's compositional vocabulary. Evidence may include student work from selected courses, culminating experiences (e.g., exam/performance).
- **Possible Uses of Results:** an instructor redesigns an assignment, the faculty restructures the sequencing of courses (adds a new course), the dean allocates resources for software or even a new faculty line.

Developing a Short List of Learning Outcomes

Top down or Bottom up (Palomba and Palomba, 2001)

- Top Down – As a group of scholars, decide what are the important learning expectations for the program.
- Bottom Up – Identify the primary learning expectations of the courses in the program and use this list to develop overarching program expectations.
- Combo Approach – Do both.

Your Turn!

Develop Learning Outcome

- Turn to the worksheet on page 8 of appendices.
- Take 5 minutes to develop a student learning outcome related to communication skills.
 - Make it measurable!
- Consider: What dimensions or aspects of communication are important for graduate students to demonstrate?

Taxonomy of Approaches to Graduate Program Assessment

- Episodic
- Annual Program Profile
- Assessment Plan
- Academic Program Review

Graduate Program Annual Profile

- Usually standardized, quantitative measures; usually lack measures of student learning
- Examples:
 - Colorado State,
<http://www.colostate.edu/dept/CMB/09%20annual%20report.pdf>
 - CSU Stanislaus,
http://www.csustan.edu/grad/documents/AnnualAssessmentChecklist_001.pdf

Graduate Program Assessment Plans

- Include student learning outcomes, measures, but typically no relationship to other aspects of the department
- Examples:
 - Communication Rhetoric and Digital Media, NCSU, <http://crdm.chass.ncsu.edu/policies/CRDM-AssessmentPlan.htm>
 - Technology Dept., Univ. of North Dakota, <http://business.und.edu/dept/technology/Graduate%20Assessment%20Plan%202010.pdf>

Graduate Program Review

- In-depth self study
- Multiple years of data
- Should feature student learning outcomes as an important element
- Example: Texas A&M University
 - <http://ogs.tamu.edu/faculty/program-review-self-study/APRGdIns-Oct08WEBVersion.pdf>

Program Review is...

- An important vehicle for strategic academic planning and alignment
- A mechanism for the initiation of departmental and institutional change
- A peer reviewed self-regulation process
- A major opportunity to develop a strategic roadmap to attain/retain departmental preeminence in student learning, in community outreach, and in the production of knowledge.

Even the Rally to Restore Sanity Supports Program Review...



Why Conduct Program Review?

- Understand how to achieve ongoing competitive advantage for the program
 - Strengths
 - Needs for improvement
 - Opportunities to move to the next level
- Understand and mitigate threats
 - Understand and improve market saliency
- Facilitate program-level student learning
- Avoid duplication of resources
- Meet accreditation requirements

Integrating Program Review and Outcomes Assessment

- Self-Study Outline:
 - description and history of the department
 - mission, vision and strategic direction of the program
 - curriculum and methods that facilitate learning outcomes
 - evidence of student performance
 - use of assessment results for improvement
 - student trends
 - market demand and response to industry trends
 - current and future resource, equipment and space needs
 - faculty credentials, accomplishments and professional development
 - alumni accomplishments

Potential Areas for Benchmarking Graduate Programs - 1

- Competitive environment and trends in the discipline
- Programs offered, curriculum (structure, goals, student learning outcomes, curriculum maps)
- Evidence of demand for program/career placement/success of grads
- Data from institutional files (enrollment, demographics, entrance test scores)
- Student performance, progression, retention and graduation trends by program
- Assessment and evaluation data (student performance, results of assessment data) by program
- Graduate student satisfaction
- Climate for research and (interdisciplinary) collaboration

Potential Areas for Benchmarking Graduate Programs - 2

- Student productivity data: awards, prizes, posters and papers presented, proposals, publications
- Community programming/outreach/impact
- Professional service/outreach/impact
- Faculty / student ratios by program
- Course credit-hour production by program
- Condition, age, size of facilities, technology, learning resources
- Adequacy of educational support services

Benchmarking Challenges

- Mostly institutional level, not discipline level
- More available on program inputs (facilities, technology), much less on outcomes
- Getting meaningful benchmarking data at the discipline level is time consuming and typically necessitates creation of consortium agreements
- Comparisons at the discipline level are difficult due to variance in data definitions
- Most data exchange consortia are very closely guarded

Internal Benchmarking: Data Sources

- What gets measured gets managed!
 - Achievement of learning competencies by program
 - Program enrollment/attractiveness
 - Program retention and progression rates
 - Graduation rate by program and time to graduate from passing preliminary exams
 - Placement rate by program of graduates
 - Career satisfaction, advancement
 - Professional society participation
 - Awards, prizes, fellowships, publications



Content Framework for Graduate Assessment

Multiple data sources yield a more
substantial picture

General Content Framework for Graduate Assessment

Use multiple data sources:

- Actuarial Indicators
- Attitudinal Measures
- Direct/Embedded Measures
- Productivity Measures
- See Framework, page 9 in Appendices

What is Important to Measure?

To decide this, it is first vital to ask:

- What are our strong areas?
- What are our limitations?
- What do we want to accomplish in
 - Education of students?
 - Research?
 - Service?

Principles of Graduate Assessment

- Decide what is important to measure.
- Clearly differentiate levels of expectations among degree types (i.e., master's, first professional, doctoral level).
- Make assessment responsive to more individualized nature of programs.
- Assessment of real student works is preferable - see rubric example in Appendices

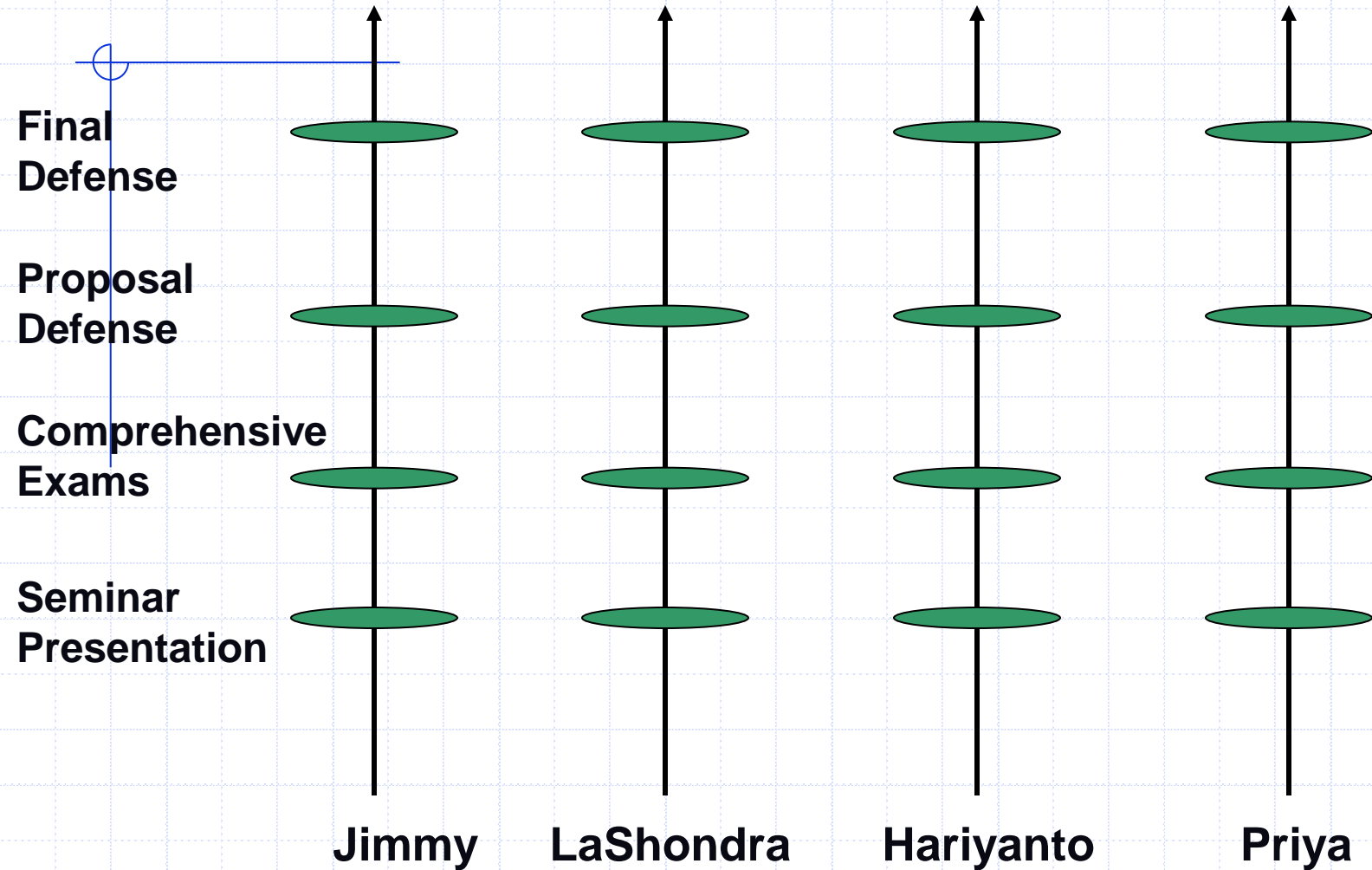
Principles of Graduate Assessment (continued)

- Use natural points of contact with program processes for assessment.
- Often the most useful comparisons are those made to the program itself over time.
- Use assessment both as an evaluative and a self-reflection tool.
- Triangulate data collection: assessment is at least a three-legged stool.

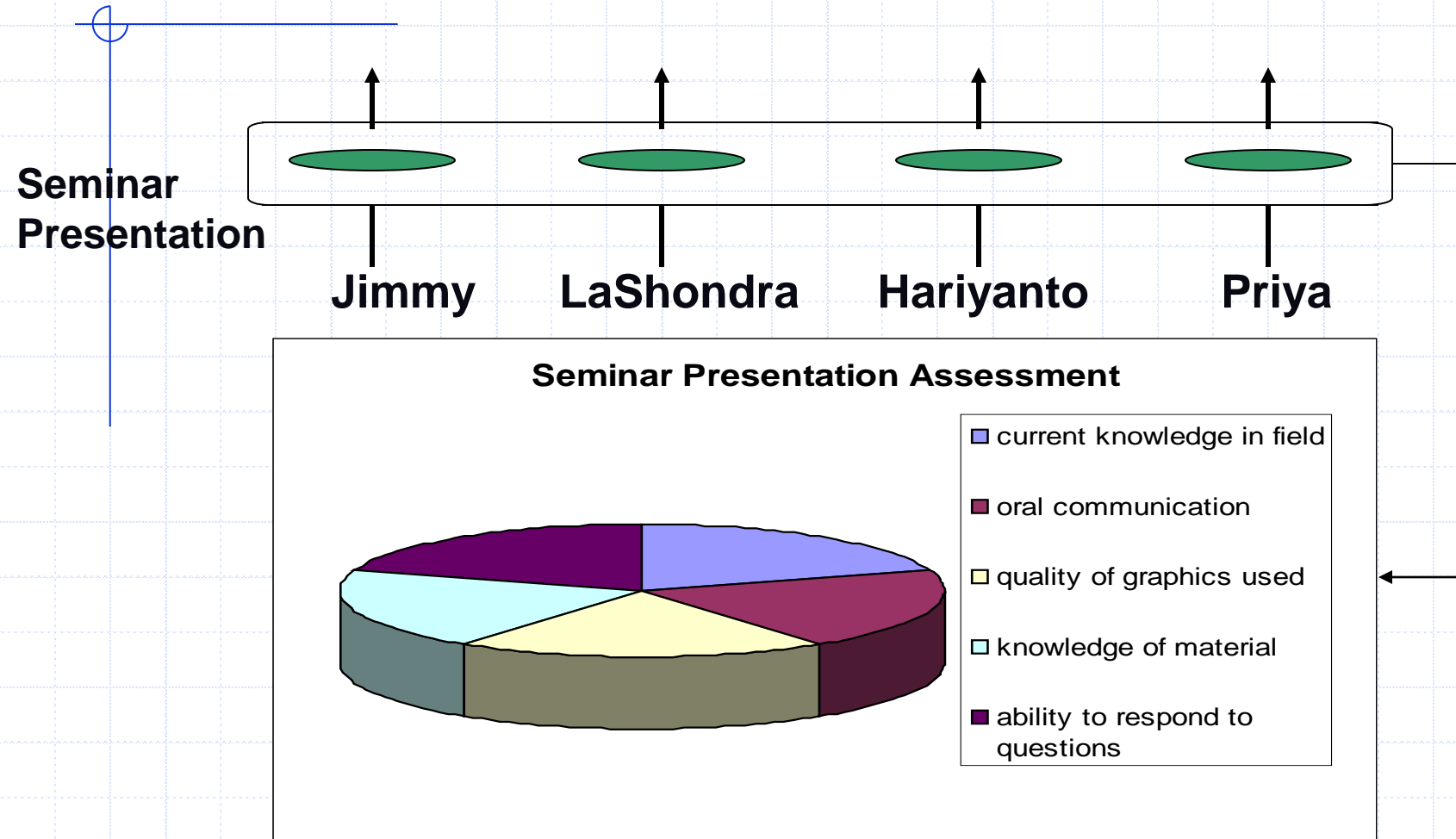
Varied Perspectives on Assessment (Suskie, 2004)

- Benchmark
- Standards-based (internal/external)
- Peer or Norm-referenced
- Best in class
- Value-added/pre-post test
- Historical trends
- Strengths/weaknesses
- Capability/potential
- Productivity/return on investment

Using Student Works for Assessment



Using Student Works for Assessment



Program Activities and Assessment Options to Consider

- Departmental seminar: presentation evaluation form (see example)
- Coursework: portfolio, presentations, project/paper evaluation by raters, 360^o teamwork evaluation form, simulation
- Comprehensive exams: rubric (see example)
- Internship: checklists, behavioral assessments, supervisor evaluation
- Thesis/dissertation proposal: rubric (see example)
- Thesis/dissertation defense: rubric
- Program exit: exit survey, exit interview
- Long-term follow-up: alumni survey; periodic request for vitas; citation indices

One Example: Graduate Medical Education

- ACGME has defined standards (competencies) and required skills associated with each broad competency.
- Matrix lists suggested best methods for assessment.
- Individual programs determine when to best conduct assessments, and how to use information for continuous improvement.
- See <http://www.acgme.org/outcome/comp/GeneralCompetenciesStandards21307.pdf> also in the session appendices

UA Law School: Assessment Plan and Results

- Law School assessment plan: (also see appendix) http://uaops.ua.edu/right_arm.cfm?col=9&dpt=114
- Measurable student learning outcomes for each degree program.
- Assessment results: Measures used and detailed results of assessments are provided for all degree programs.
- Unit improvements: tremendously detailed and rich picture of how the Law School is actively using assessment to maintain and enhance the excellence of its programs. An example for others to follow.

Developing an MBA Assessment Program

- See AACSB Assessment Resource Center, http://www.aacsb.edu/resource_centers/assessment/
- AIR/AACSB joint publication: *Assessment of Student Learning in Business Schools: Best Practices Each Step of the Way* (ed. Martell and Thomas), <http://www.airweb.org/page.asp?page=204>
- MBA assessment plan example from SDSU: <http://www-rohan.sdsu.edu/~cba/assessment/AssessmentPlan-MBA.pdf>

Your Turn!

Develop Assessment Plan

- Look back at our Communications student learning outcome
 - What method(s) would we use to see if our outcomes have been met?
 - When and where would we conduct assessments?
 - What would our standards be?
 - How would we use results for adjustments?

Summary

- Regional accreditation requires assessment of graduate programs.
- Make it relevant to the program and faculty.
- Keep it simple and focused.
- Consider different assessments for each stage of student progress.
- Start now: it takes several years to fine tune.

Summary (Cont.)

- Needed to Succeed:
 - The department must want to do this process.
 - The **department** must use the information collected.
 - The **institution** must use the information collected.
 - **The process must be meaningful to faculty.**

Sample Forms and Rubrics; and References

- See sample rating forms and rubrics for graduate assessment in Appendices
- See references in back of Appendices

Relevant Publications

- Maki and Borkowski (eds.) The Assessment of Doctoral Education (Stylus)
- Spurlin, Rajala, and Lavalley (eds.) Designing Better Engineering Education Through Assessment (Stylus)
- Palomba and Banta (eds.) Assessing Student Competence in Accredited Disciplines (Jossey-Bass)
- Council of Graduate Schools: Assessment and Review of Graduate Programs (CGS Publications)



Thank You!

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