Program Assessment
Incorporating Best Practices and Avoiding Common Pitfalls

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Introduction

• Higher Education
  • 24 years as a Program Director
  • 5 years in Institutional Effectiveness and Accreditation
    • SACSCOC Site Visitor

• JRCNMT
  • Site Visitor since 1998
  • Board Member since 2017
    • Chair, 2020 - 2022
    • Secretary/Treasurer, 2023 - current
Disclaimer

• The information provided represents professional observations, experiences, and ideas.

• For this presentation, I do not represent the JRCNMT in an official manner.
Objectives

Describe basics of assessment in the context of accountability.

Identify best practices and common pitfalls in assessment of student learning outcomes and program effectiveness.

Use practical tips and tools to make assessment more meaningful, manageable, and appropriate.
Recognition of Accrediting Agencies

- Council for Higher Education Accreditation (CHEA)
  - Non-governmental member organization
  - Recognizes the JRCNMT – serves as the accreditor of the accreditor
  - To be recognized, the JRCNMT must:
    - **Set expectations** for program performance, including student achievement
    - **Implement a process** to determine if students/graduates meet JRCNMT expectations
    - **Determine accreditation status** based on how well programs are meeting expectations
Emphasis on Assessment

- Assuring quality
- Workforce readiness
- Increased student debt
- Rebuild public trust
Why Assessment?

- Seek Improvement
Assessment Defined

• “Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning.” (Palomba and Banta, 1999)

• “Assessment is the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions that affect student learning. (Walvoord, 2010)
Standard D: Assessment

Measurement of a program’s effectiveness is based on the extent to which it achieves its mission and student learning outcomes. The program must demonstrate a systematic and sustained assessment process that is used to enhance student learning outcomes and program effectiveness.
Program Mission Statement

- The mission of an academic program must:
  - Align with institution’s mission
  - Set the stage for program-level student learning outcomes

- May include concepts such as:
  - Types of student served
  - Program responsibility in the community
  - A commitment to diversity
Program Student Learning Outcomes

- Outcomes identify the **knowledge, skills and attitudes** students are expected to acquire in the program
  - Should be aligned with college student learning outcomes
  - Serve as the basis for the assessment of the program
  - Review mission and program outcomes with advisory committee each year

- Apply critical thinking skills and independent judgement in the technical performance of nuclear medicine procedures.
- Demonstrate effective oral and written communication skills.
Program SLO vs. Program Goal

PROGRAM GOAL

▪ Focus on what the program will provide or do.
▪ The program will:
  ▪ Provides a clinical setting where students can achieve their competencies.
  ▪ Provide a curriculum that aligns with current practice.

PROGRAM SLO

▪ Focus on what the student will do or learn.
▪ The student or graduate will:
  ▪ Integrate professional skills with ethical and moral values.
  ▪ Demonstrate competency in the performance of nuclear medicine procedures.
Assessment Methods

Direct

Indirect
Direct

▪ Performance Based
  ▪ “demonstrates that actual learning has occurred relating to a specific content or skill” – Middle States Commission on Higher Education
  ▪ “tangible, visible, self-explanatory, and compelling evidence of exactly what students have and have not learned” – Linda Suskie

▪ Examples:
  ▪ Presentations and written work assessed with a rubric
  ▪ Scores on certification exams
  ▪ Scores on a multiple choice or essay test that has a test blueprint
  ▪ Assessment of students’ skills observed by experienced clinical instructors
Indirect

▪ Opinion or Perception Based
  ▪ “reveal characteristics associated with learning, but they only imply that learning has occurred.” – Linda Suskie
  ▪ “evidence consists of proxy signs that students are probably learning. ... [It is] less clear and less convincing than direct evidence.” – Linda Suskie

▪ Examples:
  ▪ Course grades and grade distributions
  ▪ Retention and graduation rates
  ▪ Student ratings of their knowledge or skills
  ▪ Attendance
Direct or Indirect

- Direct is preferable
  - Documentation to support
  - Difficult to dispute

- Indirect can provide helpful information also

- Assessment of student learning can use both but cannot rely solely on indirect assessment methods.
JRCNMT Forms

- Part of the Annual Report
  - **Form J**: Assessment of Program Student Learning Outcomes (APSLO)
  - **Form L**: Program Effectiveness Data (PED)
  - Reviewed by a board member and an assessment expert
## PROGRAM STUDENT LEARNING OUTCOMES

### SLO #1:

<table>
<thead>
<tr>
<th>Assessment Method(s)</th>
<th>Frequency of Assessment</th>
<th>Benchmark(s)</th>
<th>Results</th>
<th>Action Plan</th>
</tr>
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Analysis of results from the previous year to this year:

### SLO #2:

<table>
<thead>
<tr>
<th>Assessment Method(s)</th>
<th>Frequency of Assessment</th>
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Analysis of results from the previous year to this year:
## Form L

### Graduation rate (D3.1a)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Frequency of Assessment</th>
<th>Results &amp; Analyses</th>
<th>Action Plan</th>
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Analysis of changes since previous year:

### Graduate performance on national certification exams (D3.1b)

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<thead>
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80% pass rate over three consecutive year periods for first-time examinees

Analysis of changes since previous year:

### Job placement of graduates (D3.1c)

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Analysis of changes since previous year:

### Faculty retention (D3.1d)

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Analysis of changes since previous year:
## Form L

### Student assessments of individual didactic courses, clinical experiences and faculty (D3.1e)

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Analysis of changes since previous year:

### AES assessment of student performance (D3.1f)

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Analysis of changes since previous year:

### Graduate assessment of program effectiveness (D3.1g)

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Analysis of changes since previous year:

### Employer assessment of graduate preparedness to enter the workforce (D3.1h)

May have no benchmark, can be a qualitative summary

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Analysis of changes since previous year:

### Advisory Committee feedback (D3.1i)

No benchmark, this is a qualitative summary

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Analysis of changes since previous year:

### Affiliate visit notes of PD/CC (D3.1j)

No benchmark, this is a qualitative summary

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Analysis of changes since previous year:
Best Practices for Program Assessment

- Assessment is a continual process
- All faculty are involved... not just a Program Director responsibility
- The assessment methods are routinely evaluated to see if they are still useful
Best Practices for Program Assessment

- Multiple measures per SLO
  - Didactic
  - Clinical

- Method measures the SLO

- Methods are explained

- SLO measured near the end of the program
Best Practices for Program Assessment

- Benchmarks/Targets
  - Review results from previous years
  - Reasonable, achievable, aspirational
  - It’s ok to not meet all benchmarks
  - Even if all are met, still look for areas of improvement
Data Sources

- Course Assignments (exams, papers, case studies)
- Clinical Competencies
- Clinical Evaluations
- Graduate and Employer Surveys
- National Surveys
- Institution-wide Assessments
SLO #3: Demonstrate effective oral and written communication skills.

<table>
<thead>
<tr>
<th>Assessment Method</th>
<th>Frequency of Assessment</th>
<th>Benchmark</th>
<th>Results</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Case Study – oral presentation</td>
<td>Every Year – Spring</td>
<td>Class will average 90 on both the</td>
<td>Benchmark met – Class average of 94 for</td>
<td>Written grades were lower than oral presentation grades for the past two</td>
</tr>
<tr>
<td></td>
<td></td>
<td>presentation and paper</td>
<td>presentation and 91 for paper</td>
<td>years. Next year, students will be advised to seek assistance from writing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(n=8)</td>
<td>center earlier</td>
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</tbody>
</table>
## SLO #5: Integrate professional skills with ethical and moral values.

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<th>Results</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summative Clinical Evaluation – Item #4 - Professional Ethics (4 point scale)</td>
<td>Spring Semester</td>
<td>All students earn a 3 or 4 (on a 1-4 scale)</td>
<td>Met: All students (10/10) earned a 3 or 4.</td>
<td>Will continue to measure and investigate additional assessments that can be used for this outcome.</td>
</tr>
</tbody>
</table>
Pitfall

- Relying solely on methods from one source
  - Didactic only or clinical only
Pitfall

- Method is not described clearly
  - Reviewers do not know your program
Methods do not measure the entirety of SLO

“The graduate will apply critical thinking skills in a variety of situations.”

- Most likely need more than one measure
  - Didactic and clinical

A single patient transfer lab assignment does not reflect and evaluation of the totality of patient care

- Better to use a comprehensive final in patient care course
Pitfall

- Method is too broad
  - Using the entire clinical evaluation score to measure patient communication skills in a clinical setting
    - Identify specific sections of evaluation that evaluate this skill
  - Using an entire mock certification exam to measure specific SLO (ex. radiation safety, procedures, patient care)
    - Identify specific questions related to that area
Pitfall

- Benchmark and Results do not align
  - Benchmark – 80% of students will score 80 or higher on the assignment
  - Results – The class average was 83%
Pitfall

- Benchmark unclear
  - “The students will pass the exam”
    - Reviewer does not know what passing is
    - “All students will receive a grade of 90 or higher on the exam”
Pitfall

- Benchmarks need updating
  - "80% of students will earn an 80% or higher on the assignment."
  - However, the lowest percentage of students that met this criteria over the past three years is 95%. 
Pitfall

- Results not given
  - Benchmark - The class will average 85% or higher on this exam
  - Results – The class average was greater than 85%
    - Give the specific average (The class average was 92%)
Pitfall

- Benchmarks not met with no action plan listed
  - “Continue to monitor” or “the faculty will discuss” is not an action
    - “Faculty met and updated the course content to include more exposure to…”
No changes to assessment methods or no actions taken over many years

With small cohorts, getting additional data can make sense. However, multiple years of not making changes is not appropriate.
Pitfall

- Using binary measures or graduation requirements
  - Pass/fail evaluations
    - Look for evaluations that have more “levels”

- Completion of required competencies regardless of attempts
  - Could use the percentage of students who are successful on first attempt
Pitfall

- Not including the “n”
  - All students exceeded the benchmark of 80%
    - All students (10 out of 10) or (n=10) exceeded the benchmark
Pitfall

- Using attendance or participation to measure learning
  - Student attendance at an event, membership in a professional organization, or signature confirming review of records do not necessarily reflect learning
  - This can be an indirect measure but cannot be used alone.
Pitfall

- Not incorporating feedback from JRCNMT
Pitfall

- Not viewing assessment as a continual process
  - Assessment is not a snapshot of one year
Pitfall

- Disconnect between SLO assessment and program effectiveness
  - All SLO’s are met every year yet program pass rate is low
  - Look for other methods of measurement
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</table>
| Overall 3.4 score (on a 4-point scale) on course/instructor evaluations for all classes | End of each semester    | Met: NMT 101: 3.7  
NMT 102: 3.8  
NMT 105: 3.8  
NMT 106: 3.7  
NMT 201: 3.7  
NMT 202: 3.8  
NMT 205: 3.9 | New instructor for NMT 101 this year and the average score went up as compared to the last two years.  
The college may be changing the course/instructor forms. New benchmarks will be set if need be. |
Pitfall

- Not measuring all components
  - Student evaluations of didactic courses only
Pitfall

- No “analysis of changes since previous year included”
Pitfall

- Benchmark is a return rate on a survey
  - It is important to evaluate what the responses say regarding program effectiveness.
Results should be quantitative for all items except Advisory Committee Feedback, Affiliate Visits, and possibly Employer Assessment on Graduate Preparedness.

- Advisory Committee Input - provide information on key issues raised by the AC during the year under review and the status of the program’s efforts to address the issues.

- Affiliate Visits - summarize trends and major issues noted at visits during the year under review.
Assessment is about continuous improvement
- Assessment is not Pass/Fail
- Being perfect is not an expectation

Reach out for assistance
- Seek guidance from the assessment office at your institution
- Peers
- JRCNMT office

Check to see what data you already have before creating new assessments – brainstorm
- Reverse engineer - why did we make that change?
- Review the directions
Resources

Books

- Assessment Essentials (2014) by Banta and Palomba
- Assessment Clear and Simple (2010) by Barbara Walvoord