2013 AACP Institute

Student Learning
Constructing Assessments
Effective Teaching

Teaching Essentials: Building a Foundation for Student Learning, Constructing Assessments, and Effective Teaching

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American Association of Colleges of Pharmacy
Discover • Learn • Care: Improve Health
Reflections, evaluations, and technology

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Objectives

• Discuss best strategies of using reflective writing in assessment / student portfolios
• Discuss challenges and opportunities of direct observation in the clinical setting
• Identify strengths and limitations of feedback about teaching, including student, peer, and self-evaluations
• Recognize evolving role of technology in assessment
Reflective writing

• What is the purpose of reflection?
• What are important components of reflection?
• Do you use reflections? Or how can you use reflections in your teaching?
Reflective writing

• Meant for reflective thinking
• Looking back at something
• Analyzing the event or idea
• Thinking carefully about what the event or idea means for you and your ongoing progress as a learner and/or practicing professional
Why reflect?

“It is not sufficient simply to have an experience in order to learn. Without reflecting upon this experience it may quickly be forgotten, or its learning potential lost. It is from the feelings and thoughts emerging from this reflection that generalisations or concepts can be generated. And it is generalisations that allow new situations to be tackled effectively.”

Possible structure for reflective writing

- Description
- Interpretation
- Outcome
- Description
- Feelings
- Evaluation
- Analysis
- Conclusions (general)
- Conclusions (specific)
- Personal action plan
Reflective portfolios

“Reflective portfolios have been defined as the collection of evidence that attests to achievement as well as personal and professional development through a critical analysis and reflection of its contents”

• Authentic assessment
• Documentation of achievement of outcomes vs. showcasing best work

Plaza, et al. AJPE. 2007; 71 (2) Article 34
Reflective portfolios: Factors to consider

• Student and faculty buy-in
• Student-faculty link
• Reflection on each piece of evidence
• Do not use portfolio for reflection and learning or summative assessment
  – Create conflict for the student and reduced validity/reliability of assessment,
• Qualitative vs. quantitative factors
• Reliability and validity
Evaluations in the clinical setting

• What are your experiences?
• How is assessment/evaluation in the experiential setting different from didactic setting?
• What tools do you have for assessment/evaluation in the experiential setting?
Important elements of reflection

• Exploration more than a description
• Reveals writer’s anxieties, weaknesses, fears, successes, and strengths
• Reflect backwards into the past and forward into the future
Assessment/Evaluation in Experiential Setting

Opportunities?

Challenges?
## Assessment/Evaluation in Experiential Setting

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Subjective</td>
<td>• Direct observation</td>
</tr>
<tr>
<td>• Unclear expectations on the level of attainment of competencies and skills (1st APPE vs. last APPE)</td>
<td>• Specific and timely formative feedback</td>
</tr>
<tr>
<td>• Multiple trainees/students</td>
<td>• Modeling → coaching → facilitating</td>
</tr>
<tr>
<td>• Potentially poor validity and reliability of evaluation instruments</td>
<td>• Ability to assess and evaluate in all 3 domains (cognitive, affective, psychomotor)</td>
</tr>
<tr>
<td></td>
<td>• Development of valid and reliable instruments will improve evaluation process</td>
</tr>
<tr>
<td></td>
<td>• Reflections and self-assessment</td>
</tr>
</tbody>
</table>
Tips for providing effective feedback

- Goal-referenced
- Tangible and transparent
- Actionable
- Accurate
- User-friendly
- Timely
- Ongoing
- Consistent
- Focused on performance not performer

- Seek student input about their perceived performance
- Provide both positive and negative/constructive feedback
- Be sensitive to student self-esteem
- Encourage open dialogue
- Agree to a plan and follow-up
- Document

Feedback vs. evaluation

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good work!</td>
<td>Good work! You were able to explain to the patient how to use the inhaler avoiding the use of medical jargon and checking for understanding. Next time, ask patient to demonstrate how to use the inhaler.</td>
</tr>
<tr>
<td>That was a C performance on your Journal Club</td>
<td>You were able to summarize and critique the methods accurately; however, you missed reporting some of the secondary endpoint results and you did not interpret clinical significance of the study. Remember to calculate NNT and NNH when appropriate to determine clinical relevance of the results.</td>
</tr>
</tbody>
</table>
Evaluation instruments and rubrics

<table>
<thead>
<tr>
<th>Example 1</th>
<th>Example 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communicates effectively with patients, caregivers, health care professionals, and the public (circle)</strong></td>
<td><strong>Communicates effectively with patients, caregivers, health care professionals, and the public</strong></td>
</tr>
<tr>
<td>1</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>2</td>
<td>Requires consistent guidance but does not consistently meet expectations</td>
</tr>
<tr>
<td>3</td>
<td>Requires occasional guidance to meet expectations</td>
</tr>
<tr>
<td>4</td>
<td>Requires minimal guidance and consistently meets expectations</td>
</tr>
<tr>
<td>5</td>
<td>Independently and consistently meets expectations</td>
</tr>
<tr>
<td>6</td>
<td>Needs refinement</td>
</tr>
<tr>
<td>7</td>
<td>Needs Development</td>
</tr>
<tr>
<td>8</td>
<td>Needs Significant Development</td>
</tr>
<tr>
<td>9</td>
<td>Unable to meet expectations despite consistent guidance</td>
</tr>
<tr>
<td>10</td>
<td>Requires consistent guidance but does not consistently meet expectations</td>
</tr>
<tr>
<td></td>
<td>Requires occasional guidance to meet expectations</td>
</tr>
<tr>
<td></td>
<td>Requires minimal guidance and consistently meets expectations</td>
</tr>
<tr>
<td></td>
<td>Independently and consistently meets expectations</td>
</tr>
</tbody>
</table>
Your experiences with evaluations

• Where are you getting feedback?
• What feedback do you find most valuable?
• How and when do you respond to feedback?
Fact or fiction regarding student ratings?

- Students cannot make consistent judgments
- Student ratings are unreliable and invalid
- The time of day the course is offered affects ratings
- Students will not appreciate good teaching until they are out of college a few years
- Students just want easy courses
- Student feedback cannot be used to help improve instruction
- Emphasis on student ratings has led to grade inflation

http://studentratings.byu.edu/info/faculty/myths.asp
Reliability and validity of student ratings

• Student ratings are significantly and consistently related to
  – Student achievement
  – Teacher self-ratings
  – Administrator and colleague ratings
  – Ratings by trained observers
  – Student written comments

• 5 IDEA teaching approaches explain 85% variance in “excellent teacher” item
  – Stimulating Student Interest
  – Fostering Student Collaboration
  – Establishing Rapport
  – Encouraging Student Involvement
  – Structuring the Classroom

Variable that do not influence teachers ratings

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Students</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &amp; teaching experience</td>
<td>Age</td>
<td>Time of day course is offered</td>
</tr>
<tr>
<td>Gender</td>
<td>Gender</td>
<td>Time (second half term) when ratings are</td>
</tr>
<tr>
<td>Race</td>
<td>Level of student GPA</td>
<td>collected</td>
</tr>
<tr>
<td>Personality</td>
<td>Personality</td>
<td></td>
</tr>
<tr>
<td>Research productivity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Possible bias may exist

• Slightly higher ratings
  – Smaller size classes
  – Lower level vs. upper level courses
  – Higher vs. lower ranked faculty
  – Major vs. non-major courses
  – Electives vs. required courses
  – Higher expected grades
  – Higher difficulty of the course
  – Non-anonymous ratings
  – Instructor present during evaluations

## Online vs. paper

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Done out of class</td>
<td>• Response rates are low</td>
</tr>
<tr>
<td>• Responses to open-ended questions are more frequent and more</td>
<td>• Communicate importance</td>
</tr>
<tr>
<td>specific/descriptive</td>
<td>• Reminders</td>
</tr>
<tr>
<td>• No response bias has been found</td>
<td>• Acknowledge and reward high response rates</td>
</tr>
<tr>
<td></td>
<td>• Ensure anonymity</td>
</tr>
</tbody>
</table>


Student evaluations: recommendations

• Ask the right questions
  – course organization and planning
  – clarity, communication skills
  – teacher student interaction, rapport
  – course difficulty, workload
  – grading and examinations
  – student self-rated learning

• Use feedback properly
  – Consultation with peer/ expert to improve teaching is highly recommended

Considerations when designing a peer evaluation process/policy

• Establish clear vision and goals
• Differentiate between formative and summative
• Identify program leader and coordinator
• Identify participants and peer observers
• Establish a process
POE process discussions

• Webb and McEnerney’s stepwise approach
  – Clear vision
  – Formative vs. summative
  – Leadership in the process
  – Identification of participants and peer observers
  – Establishing POE process
  – Identifying instrument
  – Training
  – Logistics, incentives and consequences, and record keeping

12. If a colleague observed your classroom teaching, which of the following areas you like to receive feedback on? Please rank on the scale of 1 (do not need feedback) to 4 (need the most feedback)

<table>
<thead>
<tr>
<th>Area</th>
<th>Do not need feedback</th>
<th>Need the most feedback</th>
<th>Rating Average</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of active learning</td>
<td>15.8% (3)</td>
<td>47.4% (9)</td>
<td>15.8% (3)</td>
<td>2.63</td>
</tr>
<tr>
<td>Assessment of learning</td>
<td>0.0% (0)</td>
<td>63.2% (12)</td>
<td>10.5% (2)</td>
<td>2.84</td>
</tr>
<tr>
<td>Lecture content</td>
<td>0.0% (0)</td>
<td>52.6% (10)</td>
<td>5.3% (1)</td>
<td>2.63</td>
</tr>
<tr>
<td>Presentation style/skills</td>
<td>5.3% (1)</td>
<td>47.4% (9)</td>
<td>10.5% (2)</td>
<td>2.63</td>
</tr>
<tr>
<td>Classroom climate / learning atmosphere</td>
<td>5.3% (1)</td>
<td>57.9% (11)</td>
<td>5.3% (1)</td>
<td>2.63</td>
</tr>
</tbody>
</table>
POE process

1 week

Pre-observation meeting → Lecture observation

1 week

Lecture observation → Post-observation meeting

2 weeks post exam

Post-observation meeting → Post-assessment meeting
Elements of Educational Philosophy at NEU SOP DPP

• Faculty serve as active facilitators to students of different backgrounds as they construct ways to achieve ability based outcomes necessary for a lifetime practice of pharmacy.

• Faculty create active, reflective, student-centered learning environments that encourage critical thinking, problem solving, and integration of practice and didactic experiences.
POET

• Pre-observation visit
  – 8 items and pre-scripted interview questions
• Classroom observation
  – 5 items – content; 17 items - teaching strategies and presentation skills; 5 items – classroom climate
• Post-observation meeting
  – No ranked items, contains a guiding questions for reflection
• Post-assessment meeting
  – 4 items
Implementation steps

• TRAINING

• Department policy and procedure
  – Formative
  – Mandatory once a year participation
  – Central person to match observer and instructor
    • Observers must be trained
    • Instructor suggests 3 possible observers and have one right of refusal if they do not like match

• Implemented with 2008 calendar-year based merit cycle
Program evaluation

- 2 years post implementation faculty surveyed
  - Frequency of participation in POE both as observers and instructors
  - Adherence to POE policies and procedures
  - Types and perceived value of POE feedback received
  - Impact of POE on teaching
  - Perceptions/ attitude questions similar to pre-implementation survey

DiVall et al. AJPE 2012; 76 (4) Article 61
Results

Participation and adherence to POE P&P

• 22 faculty (76%) responded to program evaluation survey
  – 16 were pre-2008 hires and participated in initial training
• 32 distinct peer observations over 2 years
  – 14 had 2 POE visit
  – 8 had 1 POE visit
  – 14 served as peer observer at least once (mean visits=2.8)

<table>
<thead>
<tr>
<th>POE steps (N=32 observations)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pre-observation meeting</td>
<td>100</td>
</tr>
<tr>
<td>2. Lecture attended</td>
<td>100</td>
</tr>
<tr>
<td>3. Post-observation meeting</td>
<td>94</td>
</tr>
<tr>
<td>4. Instructor completed self-reflection using POET</td>
<td>84</td>
</tr>
<tr>
<td>4. Post-student assessment meeting</td>
<td>47</td>
</tr>
</tbody>
</table>
Results

Types of feedback and impact on teaching

• 100% reported receiving balance of positive and constructive feedback
• 100% agreed with assessment of strength and 94% agreed with assessment of areas for improvement
• 72% agreed POE made them more aware of strength
• 72% agreed POE identified areas for improvement
• 78% agreed POE gave concrete suggestions for improvement
• 71% incorporated reflection on POE into annual performance review
• 89% agreed that overall the benefits of POE outweigh the effort of participation
## Results

*Types of feedback and changes made*

<table>
<thead>
<tr>
<th>N=30 observations</th>
<th>Type of feedback (%)</th>
<th>Changes made* (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content/lecture organization</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>Presentation style</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Teaching methods</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Student interaction</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Lecture assessment</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>Balance of the above</td>
<td>43</td>
<td>23</td>
</tr>
<tr>
<td>Did not make changes</td>
<td>N/A</td>
<td>13</td>
</tr>
</tbody>
</table>
Results

Experience of Peer Observers

• 64% reported adhering to all 4 steps
• 71% adhered to all timelines
• Most frequently missed step – post-assessment discussion
  – Workload/time issue most common barrier
• Average time spent on POE cycle was 4.3h
Conclusions from program evaluation survey

- Faculty participation and adherence to process was high in the first 2 years
  - With the exception of the post-assessment step
- Faculty felt they received balanced and valuable feedback and benefits of POE outweighed the efforts of participation
- POE process is not time consuming once learned
- Faculty indicated desire for additional training
- New hires did not consistently get oriented and trained on POE
- Need to continue to provide training
- Further discussions about summative evaluations
Figure 1. Teaching performance evaluation model.
Team time suggestions

• Review your existing evaluation instruments & rubrics
  – Are they appropriate? Do you have any changes you would like to make/ recommend?

• For peer evaluation of teaching & student portfolios
  – Consider desirability and structure if not in place
  – What changes/ improvements would you like to see if already exist