Competency-Based Education and Assessment Model: Teaching, Learning, Assessment, and Feedback

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The new Essentials offer an opportunity to transform nursing education!
Benefits of CBE Approach

- Learner centered
- Improves quality of learning
- Expands access for non-traditional students
- Improves workforce readiness
- Clarity around competencies
- Connect with student centered missions
- Competencies are not fixed entities - change over time and contexts
- All students benefitted equally from engagement in CBE

How CBE Influenced Practice

- Communicating for better care
- Scientific inquiry and problem-solving skills for effective practice
- Critical thinking and evidence-based practice
- Professionalism:
  - Leadership and advocacy
  - Entrepreneurship and business management

Ash, Palermo, & Gallegos (2019)
The Domains, Competencies, and Sub-Competencies will require new ways to teach and assess learning.

Learning Outcomes for this Presentation

- Identify the components of an explicitly stated learning outcome
- Articulate strategies for creating learning experiences that are experiential
- Examine principles for creating competency-based performance assessments
- Develop strategies for providing quality feedback
A brief history of competency-based education at Alverno College

Education goes beyond knowing to being able to do what one knows!

Competency-Based Education: Connecting Student Learning Outcomes to Teaching, Assessment, and Curriculum

Outcomes
- Identify pertinent institutional outcomes
- Identify program outcomes
- Create course outcomes

Teaching
- Plan course teaching and learning activities
- Incorporate opportunities for practice and feedback

Assessment
- Design formative and summative performance assessments that include public criteria to judge student achievement
- Develop student self assessment prompts
- Plan feedback strategies
- Design course and program evaluation
The Essentials: Core Competencies for Professional Nursing Education can provide the framework for creating...or revising the existing...outcomes in your curriculum.

Characteristics of Learner-Centered Behavioral Outcomes

- Involve the whole person
- Are teachable
- Can be assessed (behavioral, measurable)
- Transfer across settings
- Are continually evaluated and redefined
How do the Essentials’ competencies align with any existing outcomes?

- **Alverno UG Program Outcome**: Applies leadership concepts and skills grounded in professional standards to support innovation and adaptation in evolving healthcare systems.

- **Essentials**: Domain 10: Personal, Professional, and Leadership Development, Domain 7: Systems-Based Practice

- **Competence**: 10.3 Develop capacity for leadership, 7.1 Apply knowledge of systems to work effectively across the continuum of care

- **Alverno Graduate Program Outcome**: Skillfully engage in collaborative and trans-disciplinary leadership to (re)construct strategies for innovative and transformative change in complex healthcare settings

- **Essentials**: Domain 10 Personal, Professional, and Leadership Development, Domain 7: Systems-Based Practice

- **Competence**: 10.3 Develop capacity for leadership, 7.3 Optimize system effectiveness through application of innovation and evidence-based practice

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Creating Course Outcomes: Questions to Ask

- What do you want your students to know and be able to do by the end of your course?
- What competencies do students need to demonstrate in the course/at the end of the course?
- What are the key concepts and disciplinary frameworks to be learned in the course?
- How is student performance evaluated with regard to both knowledge and application in this course?
- Why should a student not graduate without having had your course?
Next – How can we take outcomes and turn them into experiential learning experiences and observable assessments?

Active Learning

Involves making an action out of knowledge—using knowledge to reflect, analyze, judge, resolve, discover, interact, and create.

Requires clear information regarding what is to be learned, including guided practice in using that information to achieve a competency.

Requires regular assessment of progress towards mastery of the competency.

Requires frequent feedback on successes and areas needing development.

Students must learn how to assess their own performances to develop the skill of continual self-reflection in their own practice.

• (Essentials, pp. 4, 5)
Strategies: Cognitive, Affective, Psychomotor

Role playing  
Modeling  
Computer assisted learning programs  
Games  
Story telling  
Debate  
Concept mapping

Explanation  
Description  
Lecture  
One to one discussion  
Answering questions  
Demonstration  
Discovery  
Problem solving  
Case study  
Group discussion

High and low fidelity simulation  
Clinical experiences  
Practice synthesis experience  
Practice  
Printed audio visuals  
Simulate a Committee meeting  
Interview  
Reading  
Writing book, essay, article, your own eulogy  
Experiment  
Listening and responding: TED talk, music  
Student choice of any mode

Undergraduate Level Example

Course: Nursing Practice with Healthy Populations (Community health theory course and clinical practicum in settings such as subsidized housing for the elderly, churches, schools)

One Course Outcome: Use appropriate developmental theories and frameworks to inform and tailor teaching to healthy populations.

Domains:  
1: Knowledge for Nursing Practice,  
2: Person-Centered Care,  
3: Population Health  
6: Interprofessional Partnerships

Teaching/Learning Strategies:  
Faculty presentation on known health risks in elderly populations  
Faculty presentation and student worksheets on assessing health literacy and learning needs  
Faculty presentation and student practice on developing an age-appropriate teaching plan using evidence-based teaching principles

Competencies: 1.2: Apply theory and research-based knowledge from nursing, the arts, humanities, and other sciences,  
2.2: Communicate effectively with individuals, 2.3: Integrate assessment skills in practice, 2.4: Diagnose actual or potential health problems and needs,  
2.5: Develop a plan of care, 3.1: Manage population health, etc.
Assessment OF, FOR, and AS Learning (Stiggins, 2005)

Assessment-OF-Learning: Standards-based measurement for accountability, certification, progression

Assessment-FOR-Learning: Diagnostic measurement to provide developmental feedback to learner and teacher

Assessment-AS-Learning: Metacognitive process whereby self assessment, peer feedback, and instructor feedback are used to help students set and monitor progress toward learning goals

Comparative Learning Assessment Practices

<table>
<thead>
<tr>
<th>Why assess?</th>
<th>Content Framework</th>
<th>Competency/Outcomes Framework</th>
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<tbody>
<tr>
<td>To give a grade</td>
<td>To assist the student</td>
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<td>To advance the students</td>
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<tr>
<td>To adjust the program or course</td>
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<td>To allow students to extend &amp; deepen learning</td>
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<table>
<thead>
<tr>
<th>What is assessed?</th>
<th>Knowledge</th>
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<td>100% or top students</td>
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<tr>
<th>What is the standard?</th>
<th>Integrated work projects</th>
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<td>Clearly identified qualitative criteria</td>
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<table>
<thead>
<tr>
<th>Who assesses?</th>
<th>The instructor</th>
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<tr>
<td>Instructors and test developers</td>
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<thead>
<tr>
<th>Who sets the standard?</th>
<th>Students, peers, instructors, other stakeholders</th>
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<tbody>
<tr>
<td>Students, peers, instructors, other stakeholders</td>
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<tr>
<th>Who knows what will be expected?</th>
<th>It is public knowledge</th>
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<tr>
<th>How assessed?</th>
<th>Quiz or objective test</th>
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<td>Exhibits, presentations, projects, portfolios....</td>
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<tr>
<th>When assessed?</th>
<th>Weekly, midterm, final</th>
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<tr>
<td>Continuously and summatively</td>
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<tr>
<th>Where assessed?</th>
<th>Classroom</th>
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<tr>
<td>(Stiehl, 2008)</td>
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<tr>
<td>Wherever work is demonstrated</td>
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Framework for Designing a Competency-Based Assessment

<table>
<thead>
<tr>
<th>Identify</th>
<th>Identify relevant course outcomes</th>
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<tr>
<td>Design</td>
<td>Design developmentally appropriate performance assessment instrument/process and create criteria</td>
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<tr>
<td>Design</td>
<td>Design self assessment prompt (a self assessment is not necessary for every assessment)</td>
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<tr>
<td>Determine</td>
<td>Determine who will judge the performance</td>
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<tr>
<td>Determine</td>
<td>Determine the feedback process</td>
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<tr>
<td>Create</td>
<td>Create process for evaluation of the instrument and the learning patterns</td>
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Assessment Design

A. Identify the assessment context or situation
B. Identify a mode for student response
C. Create the assessment prompt and instructions

Examples of Modes of Performance Assessment

<table>
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<tr>
<th>Mode</th>
<th>Examples</th>
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<tbody>
<tr>
<td>WRITTEN</td>
<td>Essay, report, case study, in-basket, literary work, letter, progress notes, journals</td>
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<tr>
<td>ORAL</td>
<td>Individual presentation, group presentation, discussion, interview, debate</td>
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<tr>
<td>VISUAL</td>
<td>Digital film, photograph, poster, digital presentation (PowerPoint)</td>
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<tr>
<td>INTEGRATED</td>
<td>Clinical assessment, exhibit, research project, psychomotor skill</td>
</tr>
<tr>
<td>PROCESS</td>
<td>Portfolio, journal, records of observed behaviors, self assessment</td>
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Review Your Design

How close is the assessment to what the students will actually do when they complete the program?

Is the assessment clearly related to the outcomes and competencies?

Does the assessment fit the level of the student?

Does the assessment elicit the most advanced performance of which each student is capable?

Does it include directions distinguished from criteria?

Definition of Criteria

- Criteria are qualitative indicators of an integration of competence and knowledge as seen in performance.
- Criteria result from breaking open an outcome into specific components.
- Criteria need to be specific enough for a student at a given level to understand and use, without being so specific that the performance is limited to following directions.
- Criteria must include qualitative dimensions of performance.
Let’s go back to our community health teaching plan example from earlier!

Teaching Assessment

Introduction:

As a professional nurse, educating your clients is an integral part of your role. According to The Essentials of Baccalaureate Education for Professional Nursing Practice, a major component of a nurse’s role is that of a care provider. A large part of providing care is educating patients so that they can be active participants in making their own health care decisions. As a nurse, you will be creating teaching plans in varied formats based on the needs, policies, and procedures of the given institutions and populations you work with. All semester you have been practicing your teaching skills, and this assessment is the culmination of that work. The focus of the assessment is on the independent preparation and implementation of a health related teaching project for an audience to be selected by the student and the instructor. This will require effective integration of speaking, reading, listening, and writing. You will use professional social interaction strategies to interact and negotiate with the agency representative. Faculty and at least one peer will provide feedback, and you will be completing a self assessment of the teaching project.
Assessment Outcomes

1. Identify the learning need of the client (individual, family, or group) using the dimensions of wellness. (Domain: 3 Population Health, Competence: 3.1 Manage population health, Sub-competence: 3.1c Assess the priorities of the community and/or the affected clinical population)

2. Collaborate as a member of the health care team. (Domain: 6 Interprofessional Partnerships, Competence 6.1: Communicates in a manner that facilitates a partnership approach to quality care delivery, Sub-competence: 6.1b Use various communication tools and techniques effectively)

3. Use the principles of teaching/learning within an analytic framework to develop a teaching plan to address the learning need of the client. (Domain: 3 Population Health, Competence: 3.1 Manage population health, Sub-competence: 3.1f Develop an action plan to meet an identified need(s), including evaluation methods)

4. Effectively implement and evaluate the teaching plan with the selected client. (Same as #3 plus - Domain: 2 Person-Centered Care, Competences: 2.5 Demonstrate accountability for care delivery & 2.7 Evaluate outcomes of care, Sub-competences: 2.6a Implement individualized plan of care using established protocols & 2.7a Reassess the individual to evaluate health outcomes/goals)

5. Integrate the abilities of communication, analysis, problem solving, valuing, social interaction, and use of technology into the teaching/learning experience. WOW!!

Directions

PART I
Select and obtain instructor approval for a teaching opportunity in the community. Content of the project must be developed by the student; you cannot implement pre-developed teaching plans. The content must pertain to health promotion, risk reduction, and/or disease prevention with links to the dimensions of wellness and Healthy People 2020.

The first portion of the project focuses on the assessment of learning needs of the client and the development of the teaching plan. This must be submitted to your instructor at least two weeks prior to the actual presentation, and it must include computer-generated media and a copy of the handouts for the learners. You will receive forms and criteria sheets, which will assist you in completing your plan.

PART II
The second part of the project is the actual presentation. At least one peer and your instructor will evaluate your presentation based on Alverno’s speaking/media criteria and the teaching presentation criteria for this project.

PART III
The last part of the project is your self evaluation of your teaching plan and presentation. Analyze the effectiveness of your teaching plan based on your teacher and learner outcomes and in terms of teaching/learning theory. Provide behavioral data to support your analysis. You must also submit a completed peer evaluation using the provided criteria.
<table>
<thead>
<tr>
<th>Presentation Criteria</th>
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<tbody>
<tr>
<td>1. Purpose and format of learning activity is identified. <strong>Evidence:</strong></td>
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<td>2. Methods used are appropriate to the learning situation. <strong>Evidence:</strong></td>
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<tr>
<td>3. Methods used are appropriate to the developmental age of the participants. <strong>Evidence:</strong></td>
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<tr>
<td>4. Materials used have relationship to the objectives and audience. <strong>Evidence:</strong></td>
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<tr>
<td>5. Provisions are made for variance in abilities of the audience. <strong>Evidence:</strong></td>
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<tr>
<td>6. Learners are aware of expected outcomes. <strong>Evidence:</strong></td>
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<tr>
<td>7. Learners are actively involved in learning experience. <strong>Evidence:</strong></td>
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<tr>
<td>8. Evaluation process is clearly identified. <strong>Evidence:</strong></td>
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<tr>
<td>9. Learners are involved in evaluative process. <strong>Evidence:</strong></td>
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<tr>
<th>Plan for Self Assessment</th>
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<tr>
<td>Self Assessment: The ability of a student to deepen his/her learning by observing, analyzing, and judging their performance on the basis of criteria and determining how to improve it.</td>
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A student’s thoughts…..

“You’re expected to develop your own criteria and assess for yourself whatever your own criteria are, within the framework of the class. I think that when you’re out in the workplace and nobody hands you a list and says, “Here’s what you’re supposed to be doing,” you know what your own criteria are within whatever the workplace is and you can say, “Yes, I do this well.” You make your own list. You make your own criteria. You assess from there.”

Self Assessment Prompts for Teaching Project

What did you do particularly well in this teaching performance based on your objectives, and how might you improve your performance?

Provide one example for how you effectively applied theory in this project.

What was particularly effective for engaging your audience and what would you change?

Provide one example of how you used your integrated communication ability well.

What are your next steps for developing your professional teaching role as a nurse?
Giving Competency-Based Feedback

Feedback tells students how well they are doing from a perspective outside themselves. It raises questions that enable them to critique and further develop their ideas. Therefore, we consider feedback essential for students’ improvement of their thinking and learning. By reinforcing students’ understanding of what they know and can do, it can motivate them to change and replace vague hope with realistic goal setting.

Purposes of Feedback

- Describe and judge performance in relation to criteria to help the students better understand and analyze their performance based on criteria
- Document distinctive performances
- Diagnose and prescribe
- Motivate students
- Plan for future performance
- Warn students
In your teaching presentation, you described the learning outcomes for the audience and explained why medication safety is important. You went through the four steps in your safety checklist (taking as prescribed, storage, side effects and interactions, and keeping a med list) and gave examples to illustrate each. The information was appropriate for the topic and the audience. Your teaching aids were eye-catching, colorful, but the writing was a bit small to be seen by the audience. Your individual handouts for the participants incorporated health literacy principles. For future presentations, I encourage you to read less and speak to your audience using more facial expressions and gestures. Your hangman game quiz at the end to assess learning was fun and effective!

“..."
Finally....gather data for evaluation and quality improvement purposes.

Questions? Comments?
References