LEARNING OBJECTIVES AND ASSESSMENT CRITERIA
- HOW TO DEVELOP, IMPLEMENT AND EVALUATE

Ann-Sofie Henriksson, Royal Institute of Technology
Emma Lundkvist, Uppsala University
Criteria

Expresses the quality of the expected understanding, skills and abilities
Criteria as a mean to support learning

- Student’s learning process is promoted by awareness of assessment criteria and the assessment process
- Requires communication, not only information
- Students who are not involved tend to overestimate their performance
- Good support when giving feed-back

Comments by students

- Clearer than before
- A help when studying
- More interesting if more grade levels
- A little ”scary” due to unfamiliarity
- Increases quality
- Positive as well as hard that you must meet all learning objectives
The learning objectives in the course curriculum should specify what is required to pass the course.

*Requirements for higher grades should be formulated in terms of gradually higher quality regarding goal achievement.*
Different ways of looking at the relationship between learning objectives and assessment criteria

Learning objectives describes *what* the student should know, be able to do etc.
Assessment criteria describes *how well* the student should know it, be able to do it etc.

Learning objectives specifies the requirements for passing.
Assessment criteria specifies the demands for higher grades.

Learning objectives (or assessment criteria) specifies what is demanded in order to get the highest grade. Assessment criteria for lower grade levels is specified as deviations from the highest grade.
What should be examined?

Goals
What should the students be able to do after the course?

Learning activities
What do the students need to do in order to achieve the goals?

Examination
What should the students do to show that they have achieved the goals?
One example of how to use criteria

- Distribution of assessment criteria as well as examples
- Presentation at course introduction
- Reconnection during course (e.g. example of written examination)
- Written examination assessed only based on criteria
Identify, evaluate, solve and prevent basic drug related problems (DRP), such as side effects, interactions and poor compliance, based on medical history, laboratory values, symptoms, drug treatment and patient interview.

Pass
• Majority of relevant DRP´s identified
• Only a few irrelevant DRP´s identified
• Satisfactory evaluation and solution of identified DRP´s
• Satisfactory motivation of chosen solution

Pass with distinction
• All relevant DRP´s identified
• No irrelevant DRP´s identified
• Good evaluation and solution of identified DRP´s
• Good motivation of chosen solution
Clarifying example

**Pass**

The heart failure is inadequately treated. ACE-inhibitors is missing, which is the basis of heart failure treatment.

Should be prescribed at all NYHA-classifications.

Prescribing Enalapril, initially 2,5 mg x 1, scaling up to 20 mg x 1.

**Pass with distinction**

The heart failure is inadequately treated. ACE-inhibitors is missing, and no contraindications is present.

ACE-inhibitors is prescribed. T. Enalapril Actavis, initially 2,5 mg one tablet per day, thereafter scaling up to target dose 20 mg x 1 if possible considering blood pressure and creatinine.

ACE-inhibitors are the basic treatment for heart failure. With ACE-suppressors you get prolonged survival, relief of symptoms and less need for hospitalization.
Overall impression

Pass

• At most a few contraindicated drugs, unsuitable treatments or harmful doses selected. Most of the proposed treatments are relevant.

Pass with distinction

• None of the selected drug are contraindicated or unsuitable. No harmful doses recommended. At most a few of the proposed treatments are irrelevant.
Example from assignment with only one grade

- Apply methods and techniques for patient interviews and drug reviews
- Produce written reports with satisfactory language and a clear summary of relevant content

Criteria for pass

- Content of written report well balanced
- Description in logical order and with satisfactory structure
- Using the documentation template with minor deficiencies
- Satisfactory language
Weighing results into grades

Holistic assessment criteria or criteria per assessment area?

Assessment areas:

- Learning objectives
- Assessment forms
- Topic
- Other?
# Weighing results into grades—perform

<table>
<thead>
<tr>
<th>Assessment form</th>
<th>B</th>
<th>Ba</th>
<th>AB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written exam</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Home exam</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memo</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active at seminar discussions (may increase, in borderline cases)</td>
<td>=&gt;</td>
<td>=&gt;</td>
<td></td>
</tr>
</tbody>
</table>
Weighing results into grades – per learning objective

<table>
<thead>
<tr>
<th>Learning objective</th>
<th>B</th>
<th>Ba</th>
<th>AB</th>
</tr>
</thead>
<tbody>
<tr>
<td>No 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No 2</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>No 3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>No 4</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example of how to weigh results into grades

- Written examination consisting of two patient cases
- Passing all 7 learning objectives necessary for pass
- 4 key learning objectives where you must pass on both patient cases
- Pass on one of the patient cases is sufficient for the other 3 learning objectives
Writing criteria

- Consider rewriting your learning objectives
- Start with writing criteria for pass
- What more should the student perform to get pass with distinction?
- Do you need specific criteria for fail?
Choose appropriate non-pharmacological treatment to a given patient, taking existing recommendations into account.

<table>
<thead>
<tr>
<th>Pass</th>
<th>Pass with distinction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• At least two relevant non-pharmacological recommendations with some grade of individual adaptation</td>
<td>• At least two relevant non-pharmacological recommendations with high grade of individual adaptation</td>
</tr>
</tbody>
</table>
Clarifying example

Pass
Dietary advice, exercise, stop smoking, speech therapy, physiotherapy.

Pass with distinction
Meeting with dietitian (together with wife if she is the one cooking), physiotherapy, speech therapy since speech affected, exercise in the form of long walks with his dog.
A few advices

When writing

- Write criteria so they make you proud of all students who have passed
- Put words on your gut feelings
- Use real examples
- Use taxonomies
- Prioritize learning objectives
- Involve "all" teachers in the process
A few advices, cont.

When implementing

- Illustrate with examples
- Use criteria actively with students
- After the assessment — give feedback based on criteria
- Test your criteria before implementing to the full (e.g. through using parallel with old system)
- Evaluate your criteria and be prepared to rewrite them
Some advantages and challenges

Advantages

- Examination of all learning objectives
- Assesses degree of goal achievement
- Increased clarity for the students
- Higher quality assessment

Challenges

- Takes time to develop
- More difficult to compile assessment results