


## How to stimulate teaching for understanding and assessing understanding in practice?




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## **From top down approach to the partnership**

- Teachers willingly implement changes if they experience them as their own
  - We develop models together with them
  - They seek for best strategies for them
  - Empowerment and learning communities
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# How to put the Afl model into practice?

## A) Organisational and strategic level:

- Different developmental teams on schools, 1 for AfL
  - School change agent (*have a training, develop and test solutions in their own practice, organise workshops and discussions on school, collect and evaluate products ... stimulate and put on strategic level*)
  - Implementation through training of inner multipliers
  - Supportive net for exchange of cases and experiences
  - Our consultant role
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B) Content level (programme of training and implement.):

1) Discussing **concepts of knowledge** and competences and the nature of complex learning outcomes, especially **understanding**

Defining **learning outcomes**

2) Designing **tasks** for assessment (content validity, taxonomic structure, authenticity)

3) Connecting expected learning outcomes with **criteria**

Defining **descriptors**

*Inbetween: testing, workshops, reflection, critical friendship*

# Starting point: The establishment of developmental teams for assessment

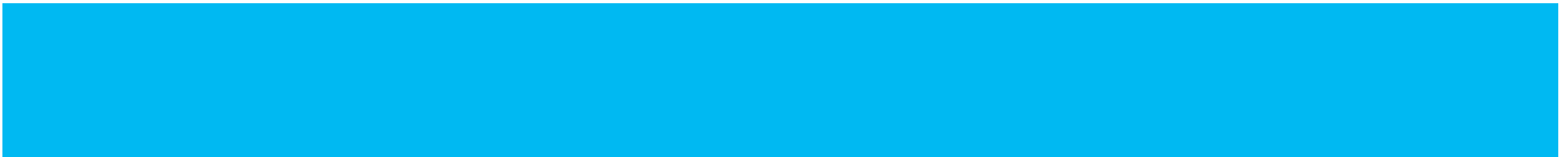
- Teachers with special interest for assessment and especially in interdisciplinary and team teaching
- They should act as curriculum developers or change agents on their own schools



**1 st step:**

**The discussion about core concepts  
(especially on the nature o  
understanding and indicators of it)**

**and defining learning outcomes**



# What is learning with understanding? What is understanding?

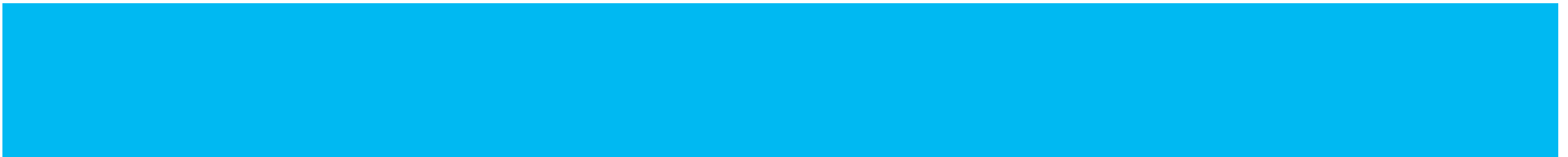
Learning with understanding is a sense-making/meaning-making/knowledge-making activity, when a person determines new relations and connections among facts and ideas. (Cerbin 2000)

Understanding is an ability to think and act flexibly with what one knows.(ibid.)

„It is being able to take knowledge and use it in new ways ...“  
(Perkins in Cerbin 2000)



The indicator of deep, conceptual understanding is ability to recognise which facts, procedures, principles, concepts ... are adequate for new problem situations and how to use them for solving this situations. (Bransford et al 2000)





# What does „to understand“ mean and how is it shown?

„... being able to do a variety of thought-provoking things with a topic:

- explaining
- finding evidence and examples
- generalising
- applying
- analogizing
- representing the topic in new ways“ (Perkins)
- reshaping
- expanding
- extrapolating
- interpreting new concepts
- solving new problems ...(Cerbin)

## **Some indicators of understanding (taxon.) as a starting point for defining learning outcomes:**

Abstract

Compare

Classify

Create a classification

Make a summary

Distinguish important of less im.

Make a conclusion from ex.

Put an argument

Give a proof

Illustrate

Translate from 1 form into 2.



# How can we teach for understanding?

Learning experiences that lead to deep underst. (Barnett, Ceci)

Deep versus surface approach (Entwistle)

Stimulating deep structural processes, for ex. transcontextual thinking processes (Halpern)

Scaffolding, cognitive strategies, zone of aprox. develop.

Organising learning by discovery

Problem oriented training

Providing authentic learning situations ...



# How to assess understanding?

1) Knowing what understanding is and how is it shown as a ground for defining L outcomes.

2) Creating situations that demand understanding and knowledge use

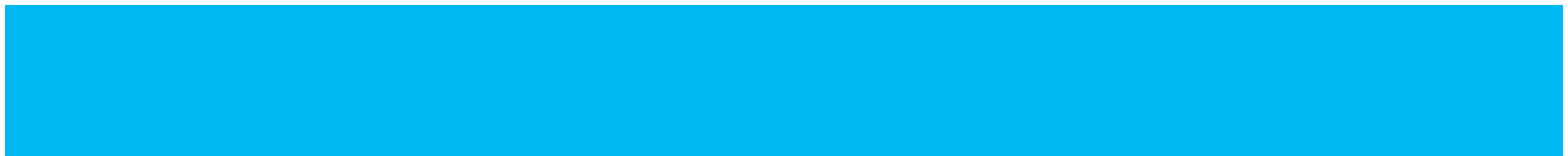
- designing such activities, tasks, questions and instructions

3) Creating such criteria that reflect different dimensions of understanding



**2 nd step:**

**Designing tasks and creating  
situations for assessing complex  
learning outcomes...**



## **Some indicators / activities of understanding (taxon.):**

Abstract

Compare

Classify

Create a classification

Make a summary

Distinguish important of less im.

Make a conclusion from ex.

**Put an argument**

Give a proof

**Illustrate**

Translate from 1 form into 2.



## **Some indicators / activities of using knowledge**

Evaluate which principle / law ... explain new problem sit.

### **Explain it**

Estimate effects (to put hypothesis)

Design the test / experiment / research

Conclude a generalisation, law, model, system, theory...

Analyse the relations

Recognise exceptions

Detect and define new problems

Put the suggestios, solutions ...



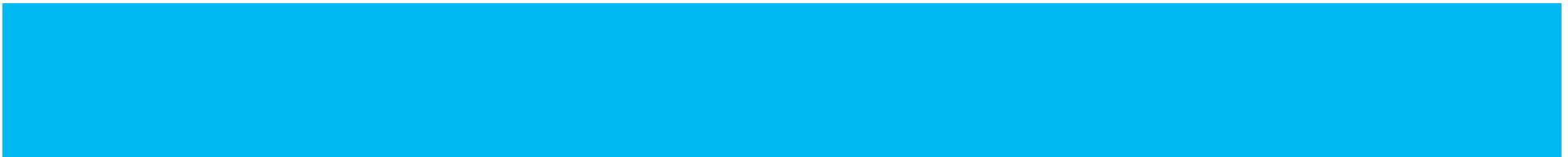
## Example

1. Question doesn't elicitate understanding:

*Explain the photosynthesis.*

Recommended:

*What happens when you put a pool over the grass?  
Explain.*





**3 rd step:**

**Designing criteria and descriptors  
(rubrics)**



<p><b>Learning outcomes</b></p>	<p>Capability for critical evaluation of the media impact:</p> <p><b>Explanation</b> of media impact with the use of different theories and <b>illustration</b> with examples.</p> <p><b>Argumentation</b> about the media policy case.</p>
<p>(Activities for the process of learning by discovery)</p>	<p>Theory research: comparision, searching for cases, explaining.</p> <p>Case research and making conclusions of mass media impact.</p>
<p>(Activities for preparation)</p>	<p>Essay / newspaper article: Explanation of a case with selected theory and argumentation.</p>
<p><b>Assessment activities / tasks</b></p> <p><i>(not grading!)</i></p>	<p>Round table: In the debate <b>explanation</b> of media impact, <b>illustrating</b> with examples, <b>argumentation</b>.</p>

Kriteriji	descriptor for 3 points	2	1
<p><b>EXPLANATION of media impact with theories</b></p>	<p><b>Explanation of media influence on the basis of different theories.</b></p>	<p>Description and explanation of two theories in the light of media influences.</p>	<p><b>Summary of main theories and findings.</b></p>
<p><b>ILUSTRATION with examples(s)</b></p>	<p><b>Illustrate and explain persuasive cases from own experience.</b></p>	<p>Analysing the known case of media discourse.</p>	<p><b>Mention one case.</b></p>
<p><b>ARGUMENTATION about media policy</b></p>	<p><b>Argumentation of overall media impact for the forming of attitude towards the self and the world by different theories. Making conclusions about longterm effects.</b></p>	<p>Summary of the main findings of media impact ...</p>	<p><b>Point out the most important media influences.</b></p>



## Some examples of weak practice

2. Weakly defined criteria:

*manage the topic, total understanding, persuasive sinthesis,*

Recommended:

*Explain, illustrate with cases, include comparisions, conclude, give some solutions and suggestions ...*



### 3. Negative descriptors

**0-1 point or grade 2:** *Material doesn't fit to content. Bad design. Not readable. No comment or worse one. Unadequate content. Deficient explanation. Difficulties at presenting. Product not completed. Not understandable presentation. Weak knowing of basic concepts.*

**Affirmative:**

*Material fits to content in basic features. Minimal standards for design are fulfilled. Elementary readability. Comments with some elements of use. Content is properly chosen but minimal. Presenting shows next elements: ... Product in x phase. Presentation is understandable in x, y ... element. Knowing basic concepts on the level of recognition, description ...*

## 2 lessons:

### For teachers:

The way assessment is designed determinates students' learning paths

### For us:

„You find some solutions as your own when **you** find this solutions by yourself!“



# Bibliography

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