Good teaching in the lecture mode:
Lesson clarity
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Outline

1. What is the meaning of clear teaching?
2. How can teaching promote students' understanding?
3. What are intermediate/low-level dimensions of clear teaching?
Three-Level Hierarchical Model of Teaching Dimensions

Main Dimensions

Intermediate-Level Dimensions

Low-Level Dimensions
Classroom Behaviors/Teaching Techniques: “Do’s and don’ts”
A model of Main Teaching Dimensions

Categories

Affective: Classroom environment
- Positive Interactions
- Care, respect, support

Cognitive: Effective communication
- Organized
- Clear
- Interesting: Promoting concentration & attention
We concentrate here on clarity in teaching

**Categories**

- **Affective:** Classroom environment
  - Positive Interactions
  - Care, respect, support

- **Cognitive:** Effective communication
  - Organized
  - Clear
    - Interesting: Promoting concentration & attention
1. What is the meaning of clear teaching?

Clear teaching = Students’ understanding

Teaching in a way that students construct their new knowledge so as they achieve a sound level of understanding.
Information Processing Model
3. What are intermediate/low-level dimensions of clear teaching?
3. What are intermediate/low-level dimensions of clear teaching?

a. Facilitating input thru senses
b. Reducing cognitive load
c. Constructing new knowledge
d. Deepening the new knowledge—looking back, sharpening the meaning
Prime discriminators between clear and unclear university teachers (Hines, 1981)

1. Gives explanations we understand
2. Explains things simply
3. Teaches at an appropriate pace
4. Repeats things that we don’t understand
5. Repeats things that are important
6. Repeats things that are hard to understand
7. Prepares us for what we’ll be doing next
8. Asks questions to find out if we understand
9. Stays with the topic until we understand
10. Asks if we know what to do and how to do it
Prime discriminators between clear and unclear university teachers

11. Explains assignments and the materials we need to use
12. Explains something and then stops so we can ask questions
13. Answers our questions
14. Allows us time to ask questions when we don’t understand
15. Teaches step-by-step
16. Writes important things on the board or in class handouts
17. Shows us how to remember things
18. Uses examples when explaining
19. Shows similarities and differences between things
20. Compares new material to what has already learned
21. Goes over difficult problems in class
22. Explains something and then stops so we can think about it
3. What are intermediate/low-level dimensions of clear teaching?

a. Facilitating input thru senses
b. Reducing cognitive load
c. Constructing new knowledge
d. Deepening the new knowledge—looking back, sharpening the meaning
a. Facilitating input thru senses

Avoiding “noise”
Hearing noise
לעשות התנהגוויות המרצות ואוזן הטבות בסיועה
המסיבים את דעותם של
ה=wxhemידים מבוהמים
המודגשים בשיעור ומפורעים
לחשים לקושי ולהתרבס.
Visual noise
Logical noise
Internal/emotional noise
a. Facilitating input thru senses

Multiple-channel communication of the new information
Multiple-channel communication

Communication of same information thru speech, writing, face mimics, supporting gestures, demonstration, picture, diagram, painting, videotape
3. What are intermediate/low-level dimensions of clear teaching?

a. Facilitating input thru senses

b. Reducing cognitive load

c. Constructing new knowledge

d. Deepening the new knowledge—looking back, sharpening the meaning
Reducing cognitive load

- Breaking down the new information into small units
- Teaching the small units step by step
- Providing “wait time” and every so often other breaks/pauses in the material presentation
3. What are intermediate/low-level dimensions of clear teaching?
   
a. Facilitating input thru senses
b. Reducing cognitive load
c. **Constructing new knowledge**
d. Deepening the new knowledge—looking back, sharpening the meaning
Constructivist learning theory

Meaningful learning is possible only when the learner relates new material in a substantive fashion to an already existing cognitive structure. Understanding develops through an active process of thinking and building networks of bodies of knowledge.
Constructivist learning theory

Gaining new knowledge is not a simple /direct action of transfer or accumulation of knowledge, but it is the result of an **active engagement of the learner in the construction of knowledge** on the basis of his **prior knowledge and experience**
Constructivist learning theory

Students will learn and remember information better when they can make more cognitive associations with this information and more interconnections between the new and the already known.
Teacher explains and the listeners build their knowledge by themselves
Information Processing Model

Control Mechanism: Processing information in working memory--between STM and LTM

- Selection
- Problem recognition
- Rehearsal
- Searching
- Identifying related knowledge
- Connecting
- Identifying relationships
- Organizing in schemas and frames
- Response selection
- Coding
- Etc…
Building new knowledge, based on the Constructivist learning theory

- Connecting to existing knowledge
- Creating a common base of knowledge to all students in class
- Adapting to student diversity: Adjustment to the individual and his/her interpretation
Building new knowledge, based on the Constructivist learning theory

Connecting to existing knowledge

- Creating a common base of knowledge to all students in class
- Adapting to student diversity: Adjustment to the individual and his/her interpretation
Connecting to existing knowledge

- Identifying relevant knowledge and reminding it
- Reviewing relevant knowledge
- Identifying similarities and differences between new and old knowledge—comparing and contrasting
- Presenting interconnections between new and old knowledge, i.e., generalizations, special cases
Building new knowledge, based on the Constructivist learning theory

- Connecting to existing knowledge
- Creating a common base of knowledge to all students in class
- Adapting to student diversity: Adjustment to the individual and his/her interpretation
Creating a common base of knowledge to all students in class

Starting with examples, demonstrations, analogies, metaphors, cases, events, incidents, anecdotes, vignettes

Starting with visual representation: a drawing, picture, graph, two- or three-dimensional model, computerized animation, videotape, etc.

Starting with the main/central idea, advance organizer, end results, an algorithm for solution, a plan for action, a simulation of the process, a reduced/simplified version – more specific/concrete, less rigorous and less accurate.
Building new knowledge, based on the Constructivist learning theory

- Connecting to existing knowledge
- Creating a common base of knowledge to all students in class

- Adapting to student diversity: Adjustment to the individual and his/her interpretation
Adapting to student diversity: Adjustment to the individual and his/her interpretation

Identifying factors of diversity
Questioning, questionnaire, interview, exam/test

Adapting teaching to student diversity
- Reviews, repeating explanations
- Adapting the pace, pauses
- Adapting teaching methods: verbal/visual/written/built on intuition and imagery

Examining students’ understanding throughout the lesson
- Questioning (Socratic, questions to students, encouraging students’ questions
- Analyzing homework assignments (problem solving, learning journals, asking for explanations, reflection, etc)

Examining students’ understanding outside classtime
Homework projects and assignments, exams, meeting with students, help thru email, Internet, personal discussions etc.
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d. Deepening the new knowledge — looking back, sharpening the meaning

- Presenting additional examples, demos, analogies, metaphors, cases, events, vignettes, anecdotes, rule-example-rule
- Additional understanding performances in increasing level of difficulty
- Identifying potential problems and errors