Classroom Communication: Creating Synergy Between Instructor, Students, and Learning Process

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Classroom Communication

My “Laundry List”

Instructor
- Lecture
- PowerPoint Slides
- Worked examples
- Professional Software
- Websites
- Blackboard CMS
- [Black/White] Board

Students
- Notes/Handouts
- In-class group activities

Calculator
- Computer
- Personal Response Tool

Homework
- Projects
- Quiz/Test
- [e]Portfolio
Classroom Communication

Instructional Context

- TEACHING (moderator)
- LEARNING (mediator)
- GAP
- [Expected] Existing Knowledge & Skills
- Target Knowledge & Skills
Classroom Communication
A Systemic View

Delivery Tools & Activities
Technology-driven
Non-Technology

Sending
Encoding
Decoding

Instructor
Students
Feedback

Assessment Tools/ Activities
Formative/ Summative
Synchronous/ Asynchronous

Human factor

NOISE
Classroom Communication

“Noise” due to Human Factors

Internal factors

Instructor (One) \(\rightarrow\) Many \(\rightarrow\) Students

Expertise

Prior Knowledge

Instructional Experience

Academic Performance

Instructional Motivation

Academic Motivation

Personality Traits

Personality Traits

Interaction
Classroom Communication

Expertise can be your Friend or Foe

Foe if...
- Try to convey everything you know;
- Assume silence as a sign of learning;

Friend if...
- Use stories based on your expertise;
- Integrate your research and teaching;
Classroom Communication
Prior Knowledge – the hidden enemy?

At the class level, expect to have a GAP between Needed and Actual Prior Knowledge/Skills

Will be helpful to:
- Have an entry test that covers critical skills;
- Build, in time, prior-knowledge tutorials;
- Create early tasks that use these tutorials;
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“Noise” due to Human Factors

External factors

Instructor  One  Many  Students

Research Engagement  Extra-curricular Activities
Academic Service  Academic Service
Non-academic Life  Non-academic Life
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Plan for Unexpected

For you as Instructor...
• Have at least one “throw-out” lecture;
• Learn how to use “distance teaching” technology available;

For your students...
• Clearly state what a reasonable requests is;
• Offer “opt-out” homework and quizzes;
• Offer extra-points problems in your exams;
Classroom Communication

“Noise” due to Encoding & Sending

- Delivery Tools & Activities
  - Technology-driven
  - Non-Technology

- Sending
  - Human factor
  - Encoding
  - Decoding

- Instructor

- Students

Feedback

Assessment Tools/Activities
  - Formative/Summative
  - Synchronous/Asynchronous
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“Noise” due to Encoding Traits: Linearity

...you do this

Topic 1

Issue 1.1

Issue 1.2

Topic 2

...you expect that

... you do this
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Strategies to compensate for Linearity

Continuity of Concepts & Ideas

• Revisit concepts taught previously;
• Use different contextual application (e.g. lecture, homework, project) of same/similar concept(s);

Summarize and Integrate

• Provide/ask for summary of major groups of concepts (e.g. outlines, diagrams);
• Provide explicit representations of related groups of concepts (e.g. concept maps)
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Concept Mapping Strategies

Use concept maps to show, build and assess structural knowledge (Why?)

Be creative…use engaging contexts (e.g. games, puzzle) to make these tools more appealing.
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Use of one Presentation Tools

Excessive use of PowerPoint Slides or [White/ Black/Digital] Board is:

• Boring;

• Disengaging;

• Waste of classroom time;
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Presentation Strategies

Balance the information on the slide and board

- Use outline slides to support not replace you;
  - use the board to add details

- Use slides that have complementary graphics;
  - when technical possible draw on the slide;

- Use slides that summarize and synthesize;
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Address the Diversity of Classroom

Various Cognitive Styles

- Visualizer
  - image oriented;
  - manipulate and transform images

- Verbalizer
  - word oriented;
  - manipulate and transforms symbols
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Address the Diversity of Classroom

Various Cognitive Controls

- Field Dependent (FD)
  - global;
  - externally directed
  - factually oriented
- Field Independent (FI)
  - analytic;
  - internally directed;
  - conceptually oriented;

FD Students taught by FI Teachers

* achieved more

than when taught by FD teachers
Classroom Communication

Don’t Forget the Affective Learning

Teacher Nonverbal Immediacy → Student Affective Learning (mediator) → Student Cognitive Learning

Affective Learning:
state of motivation
value preferences
commitment
epistemic beliefs

Cognitive Learning:
various levels of learning outcomes
(e.g. Bloom)
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Examples of nonverbal immediacy:

- Eye contact;

- Vocal expressiveness;
  (Tone of voice – variation/ Raising and lowering voice

- Gestures, dynamics of delivery;
  (Body Language/ Energy level - passion for subject/job)

- Movement in the classroom;
  (Walks around the room to show interest/
   Proximity - where instructor located)
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How to Increase Instructor Immediacy

Select a combination of two to three immediacy strategies you feel comfortable implementing

Start to implement them and be persistent (typically the impact on your students is slow);

Develop a set of questions regarding the immediacy strategies and administer them at midterm
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