CS301 2002-02-22 Talk

CHS
UCB

301 Discussion, Feb.22, 2002

> **Learning & Teaching,**
>
> **Learning to Teach,**
>
> **Teaching to Learn.**

Carlo H. Séquin
University of California, Berkeley

CHS
UCB

Learning (1)

What is the most important prerequisite for effective learning ?
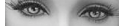
◆ MOTIVATION, -- wanting to know !

What does that imply for a good teacher ?

◆ **Explain the relevance and importance of what you are about to teach;**

◆ **Relate any (theoretical) material to some application in the students' lives, careers.**

◆ **Be ENTHUSIASTIC !!**

CHS
UCB

Learning (2)

How do you make the material stick ?

◆ **Ears only ➔ 10%**

◆ **Eyes only ➔ 10%**

◆ **Eyes + Ears ➔ 25%**

◆ **+ Lips: Repeat, Explain ➔ 50%**

◆ **+ Hands: Use, Apply ➔ 80%**

Implications ?

CHS
UCB

Learning and Teaching

How do you make the material stick ?

◆ **Use Props !**
(outrageous props will be remembered).

◆ **Engage Audience, Q & A !**
(engage lips; Socratic method),

◆ **Discovery Method (sow "confusion" first: enhances motivation, answers will stick).**

◆ **Give assignments to apply the material.**

CHS
UCB

Teaching (1)

◆ **Organize !**
  ● **Select relevant material**
  (consciously decide what to leave out !)
  ● **Sequence the material for a good progression**
  (5% Piaget steps: build foundations)
  (synchronize with assignments)

◆ **Be Organized !**
  ● **Let students know what to expect**
  (schedule, exam rules, grading …)
  ● **Provide, set-up, and test (!) the class resources**
  (readers, web-pages, programs, lab equipment …)

CHS
UCB

Teaching (2)

Teaching "imperfect" students i.e., human beings.

(many) Students have:

  ● **time limitations, other course pressures,**

  ● **insecurities, anxieties, lack of sleep,**

  ● **poor work habits, lack of discipline, …**

◆ **Be understanding, compassionate**
(this does not imply tolerance of bad habits)

◆ **Help students overcome deficiencies**

Carlo H. Séquin

CS301 2002-02-22 Talk

CHS UCB	**Learning to Teach**

Dealing with an imperfect teacher (yourself)

(most) Teachers have:

- time limitations, other job pressures,
- lack of sleep, lack of patience, …
- limited discipline, some procrastination, …

◆ **Work on one (or two) traits at a time**
(can't fix everything at once !)

◆ **Find and correct the "weakest link."**
(study the student surveys for feedback)

CHS UCB	**Teaching to Learn**

Convey some meta-skills:

- Advise students on how to follow a class.
- Explain to them how to read a paper.
- Teach them how to write good reports.
- Show them how to give effective presentations.
- Instruct them how to work in teams.
- Guide them in how to prepare for an exam.

CHS UCB	**(More) Discussion ?**

Carlo H. Séquin