The active 90 minutes

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What have I learned during the BKO?

What should every student remember at the end of the lecture?
The stack = all the lecturer knows
The needle = the essential message th

Active – the activist: Learns more wher   pating in group activities
Reflective – the dreamer; Learns more   nd reflect.
Theoretical – the thinker: Learns more   ections between ideas
Pragmatic – the pragmatis: Learns mor   a clear and practical application.

Concrete experience – reflective obser   xperimentation

Group activities for the active learner a   -on time for the pragmatist and Abstraction time for the thinker

Avoid the monologue. Engage with que   gs. Let work/discuss in group.
The 90 minutes are precious. There is a   , not to entertain.

My students perspective: Had to overc   face their lack of clear understanding My perspective. Must b   metaphors. Require time to carefully go through. As a student: very easy to realize you don't understand As a lecture: very easy to see they don't understand

My students perspective: Easy as well known method. Forces to summarize what has been learned.
My perspective: Need to make sure the important ideas are in the slides.
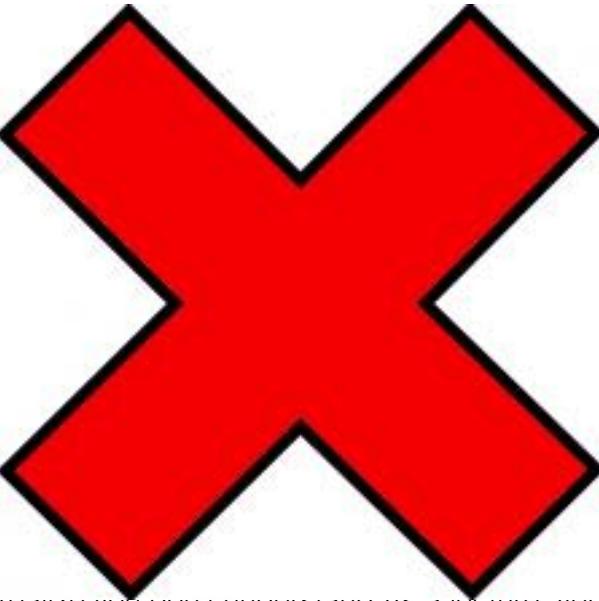
Less is more

What should every student remember at the end of the lecture?

The <u>stack</u> = all the lecturer knows
The <u>needle</u> = the essential message that can be really learned in 90 minutes

The way I learned

4 learning styles

Active – the activist

Learns more when given opportunity to brainstorm, when participating in group activities.

Reflective – the dreamer

Learns more by taking distance, having time to consider and reflect.

Theoretical – the thinker

Learns more when having time to identify relations and connections between ideas.

Pragmatic – the pragmatist

Learns more through practical experience, when there is a clear and practical application.

Learning cycle
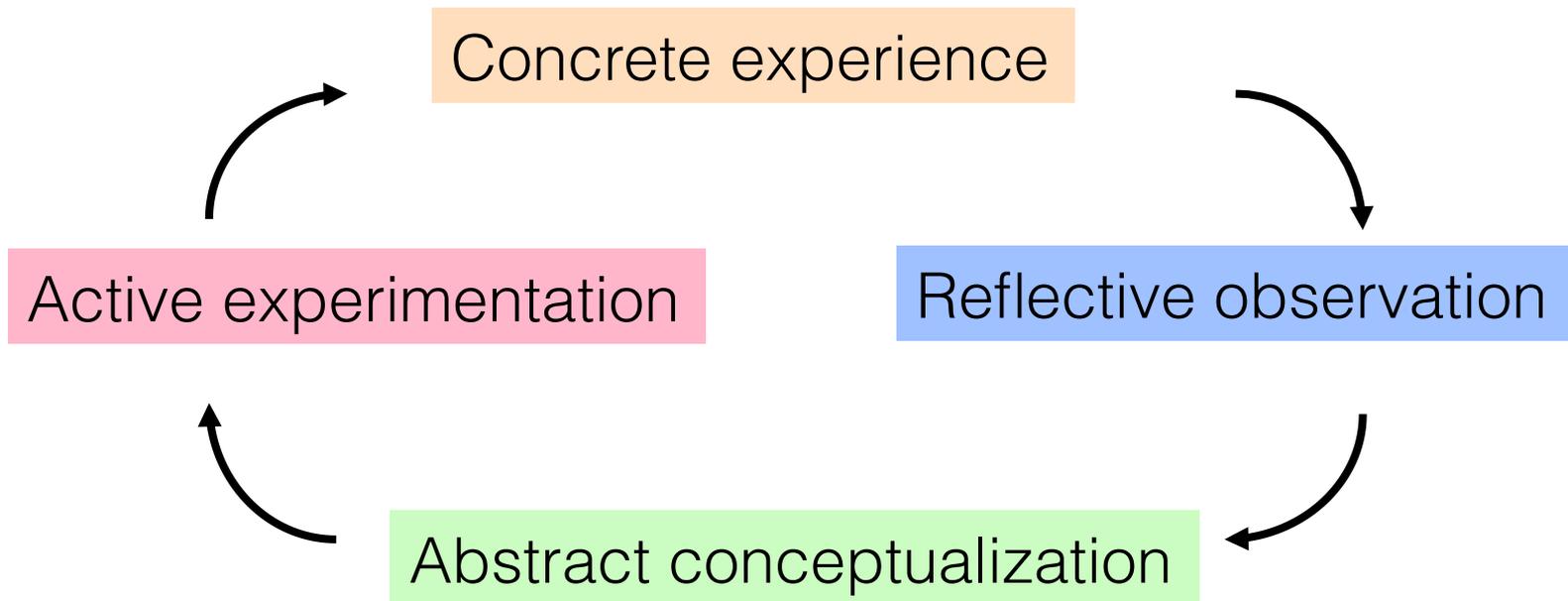
All of this in one lecture

- Group activities for the active learner

And

- Reflection time for the dreamer

And

- Hands-on time for the pragmatist

And

- Abstraction time for the thinker

STRESSED OUT!!!
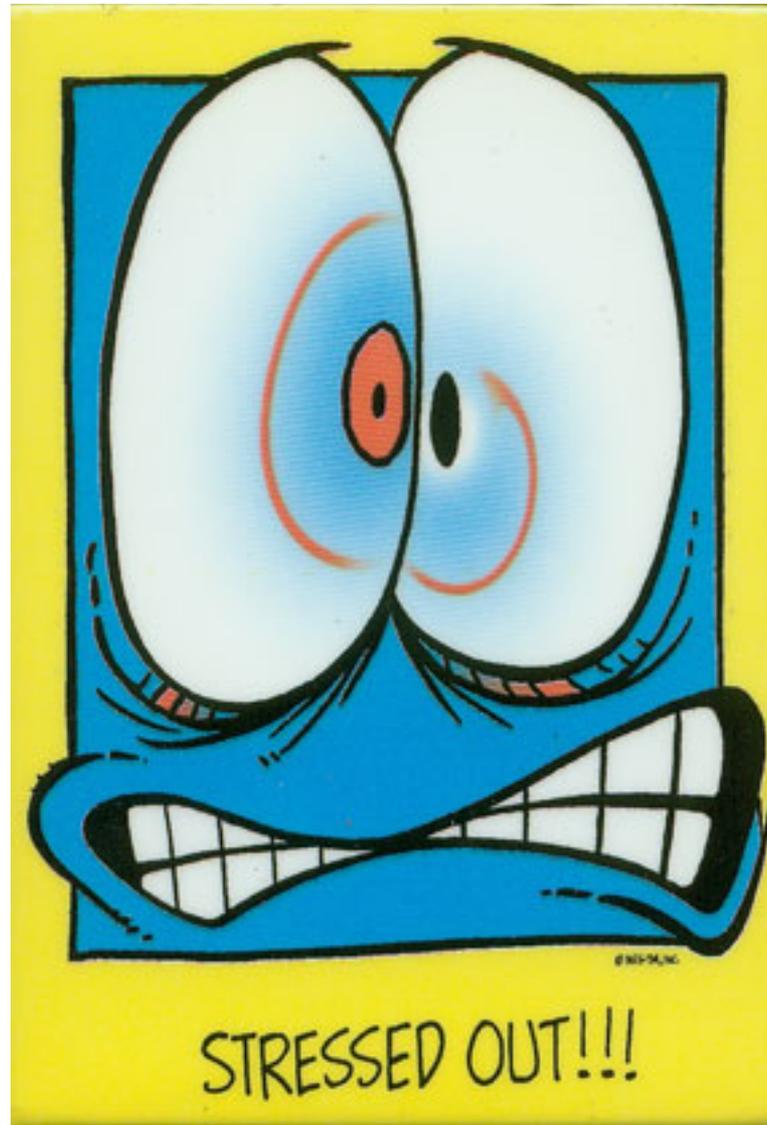
Finding the balance

Avoid the monologue.

Engage with questions.

(Online) quizzes.

Test on home readings.

Let work/discuss in group.
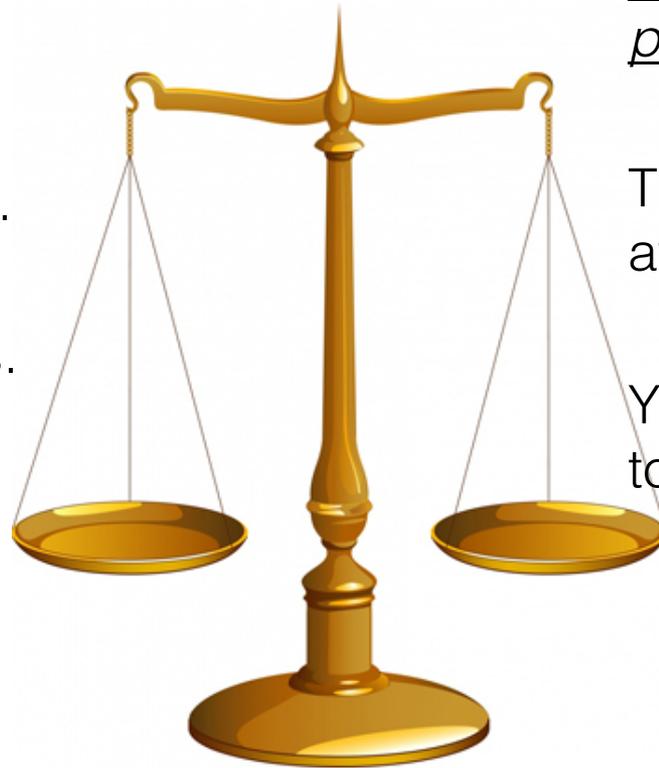
The 90 minutes are precious.

There is also lab time afterward.

You are there to teach, not to entertain.

What have you learned during the BKO?

Lecture me about it in one slide.

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"you lecture me" approch

Link layers protocols

- Two main classes of techniques used
  - Error correction (FEC, forward error correction)
  - Retransmission of lost packets in response to automatic repeat request messages (ARQ)
- Main advantage:
  - Fits naturally into layered structure of network protocols
  - Does not maintain per connection state
- Main concern:
  - Possible adverse effect on certain transport layer protocols such as TCP

Split connection protocols

- *Describe the characteristics of split connections protocols used to improve TCP performance in wireless nets. What are the pros and the cons?*

- General
  - One TCP connection between sender and base-station
  - One TCP connection between base-station and receiver (tuned to the wireless characteristics)
- Pros
  - Split source and wireless losses
- Cons
  - The performance is not great
  - Packet goes through TCP protocol processing twice
  - Handoff procedures (complicated / slow)

Students had read an article on the topic (TCP in wireless environments).

In group of three people they had to prepare slides on the topic.

Thumbs up?

My students perspective:

Easy as it is a well known method.

Forces to summarize what has been learned.

My perspective:

Need to prepare the slides skeleton (to divide the work among students)

Need to make sure the important ideas are in the slides.

Works well with masters. Maybe less with bachelors?

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What have you learned during the BKO?

Draw it!

'You draw it' approach

Unleash the artist in you!

You have 15 minutes.

1. Form groups of three people

2. The goal is to create a cartoon strip that explains:
   – What is bufferbloat?
   – What are the solutions to this problem?

You can be funny, but you have to be accurate!

Thumbs up? 👍

My students perspective:

- Had to overcome fear of ridicule

- Forced to 'simplify' brings essence to the surface

My perspective:

Must be able to comment on unexpected drawings (metaphors).

Require time to carefully go through.

As a student: very easy to realize you don't understand
As a lecture: very easy to see they don't understand

It's a process after all…
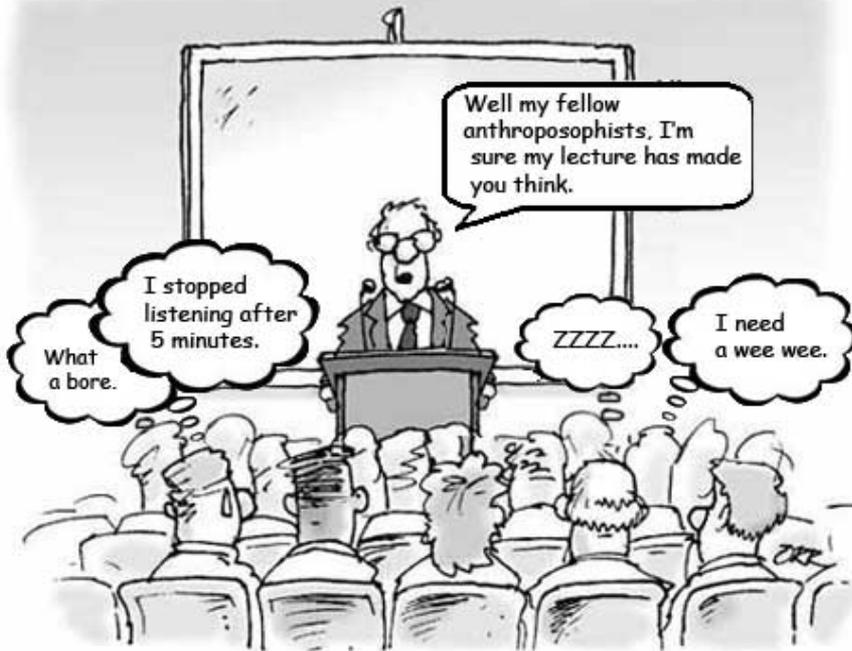
What other?
What better next time?

Can still happen!