



Introducing the WebMicroscope into undergraduate pathology

3.7.2010 | L. Helle

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Context: Basic course in pathology

- Mandatory for 2nd year medical students
- Upon completion entry into clinical studies
- Microscopic pathology (only a part of Basics in Pathology!!) :
 - 6 weeks
 - approximately 100 slides covering an equal amount of diseases
 - > hectic, stressful
- Instructional cycle:
 - 1) theoretical lectures
 - 2) teacher-led inspection of slides
 - 3) independent preparation for microscopic exam
 - 4) microscopic exam

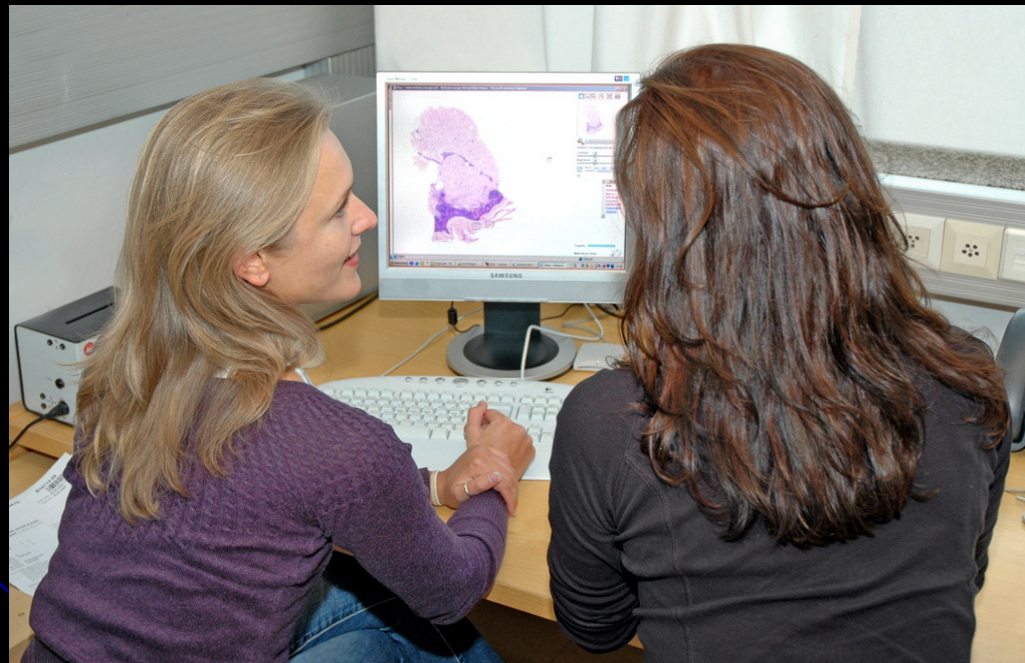
Teacher-led demos



Introducing the WebMicroscope

- WebMicroscope -> possibility to view slides from one's computer screen
- [See here](#)

A new vision of studying



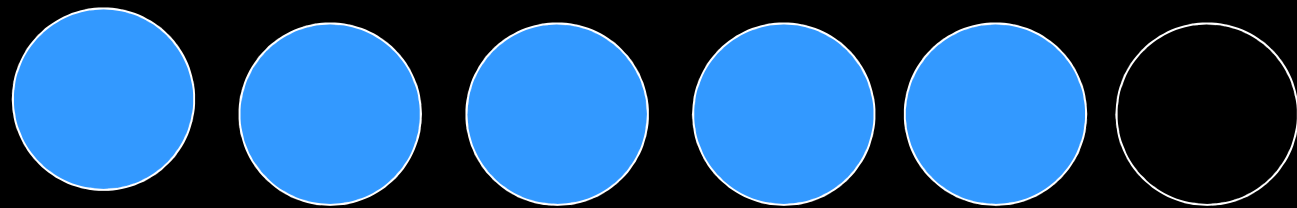
Why a shift to new way?

- Exactly the same slides for everyone
- Flexibility (possibility to view slides whenever, wherever with whomever)
- New pedagogical possibilities: both teacher action and student actions can be made visible (and saved) -> annotated examples, excercises, teacher-student interaction

Challenges

1. How to make efficient use of the new possibilities in the existing teaching culture?
2. How to support/scaffold students in more independent work?

Conceptualizing the initial (instructional design) problem space



Ideal solution according to van Merrienboer et al



Practical solution (and testing of it)

- Enriched instruction (1 week): the students completed a series of home work assignments in pairs
 - identification & description of single features
 - whole task: diagnoses
- Control condition: no homework
- Process worksheet to support the diagnostic process
- (The example slides from the demos have been annotated by the teachers)

Evaluation results

- Some indication that enriched instruction may promote microscopic performance of a subgroup of students compared to controls
- Student response to virtual microscopy very positive

Future

More work with process worksheet (a "map"
and a systematic way of teaching it:

-> basic ideas:

1. Inform students: What to look for?
2. Generalization: surpassing the focus on the specific features of a disease

Thank you for your attention!