

**Towards standardisation and better  
comprehensibility of course content: use  
of a web-based text annotation tool to  
enhance the collaborative formative  
review of teaching and learning material**



Michael Schmidts

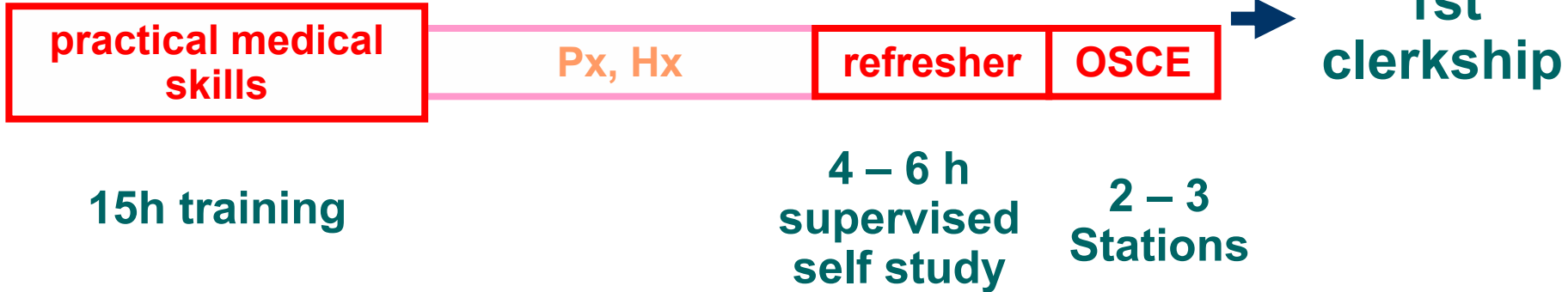
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# practical medical skills in the curriculum

-----2nd year-----



|       | Students | Small groups | Peer tutors | Expert supervisors |
|-------|----------|--------------|-------------|--------------------|
| 02/03 | 113      | 13           | 6           | 5                  |
| 03/04 | 487      | 49           | 17          | 6                  |
| 04/05 | 600      | <b>60</b>    | 20          | 5                  |



# course structure and organisation

objectives

- Mastery in „basic practical skills“
  - Venipuncture
  - IV-line
  - Catheterisation
  - Suturing

process

- peer teaching under expert supervision



- mannequins
- role play

outcome

- 2 OSCE stations

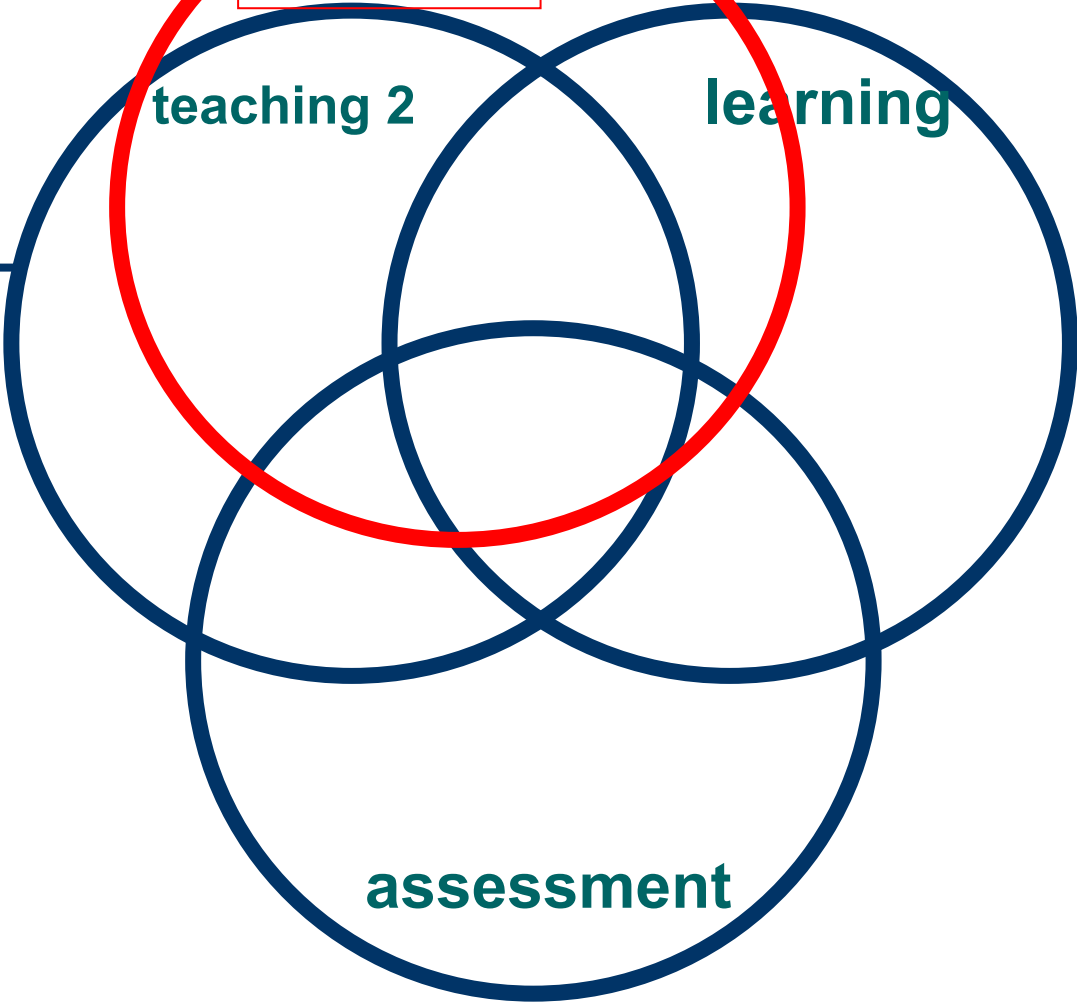




# 60 hidden curricula

**expert supervisors**

**teaching 1**



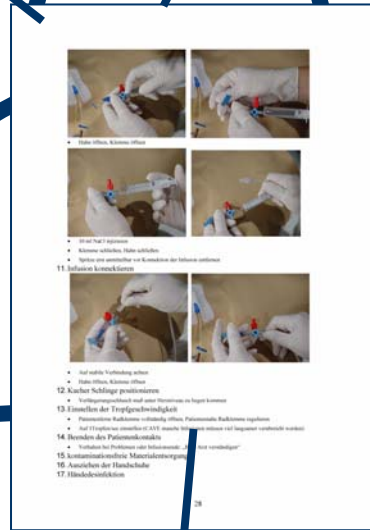
**peer trainers**



# standardised procedurally highly detailed learning material

formative review

teaching and learning material



OSCE-checklists



# standardised procedurally highly detailed learning material



• Filter #05cm Klammern #05cm

1. Händedesinfektion
2. Materialvorbereitung
3. Kontaktaufnahme mit Patienten
4. Patientenlagerung
5. Handschuhe anziehen
6. Stauen
7. Aufsuchen der Venen
8. Wischdesinfektion
9. Punktion
10. Blutabnahme

## 8. Wischdesinfektion

- Tupfer erst unmittelbar vor Desinfektion satt mit alkoholhaltigem Desinfektionsmittel tränken
- Mit 2 Tupfern je einmal von proximal nach distal wischen
- warten bis Alkohol eingetrocknet ist, mindestens jedoch 30"



• Filter #05cm Klammern #05cm

12. Kuchel-Schlinge positionieren

- Verlängerungsschlauch muß unter Herzniveau zu liegen kommen

13. Einstellen der Tropfgeschwindigkeit

• Patient auf Rückenlage legen, Kopf des Patienten nach unten lagern



# www.quicktopic.com

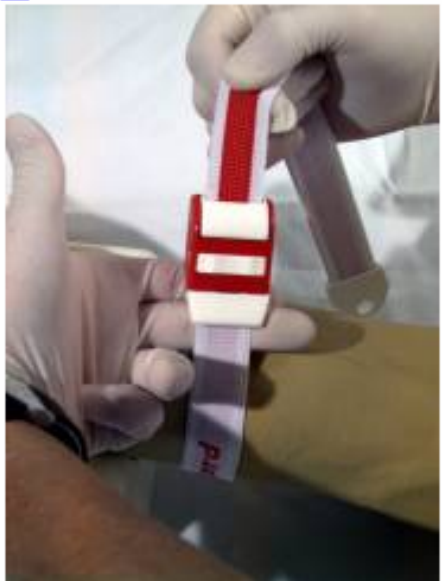
## collaborative hypertext as a review tool

**Comments for item**

**mpm** 01-28-2004 06:19 PM ET (US)  
 Wäre nicht eventuell das Stauen vor dem Anziehen der Handschuhe sinnvoll?  
 Auch wenn dann etwas länger gestaut werden würde, so besteht dennoch bei dem gezeigten Verfahren des Stauens (Finger als Klemmschutz) ein gewisses Risiko, den Handschuh zu beschädigen.

6. Stauen

**C22** • Proximal der Punktionsstelle



- C23** • Die Stauung darf den Puls nicht abschnüren (arterieller Druck > Staudruck > Venendruck)
- C24** • Haut nicht einklemmen (v.a. bei exsikkierten Patienten), d.h. Zeige und Mittelfinger der 2. Hand zwischen Schloss der Staubinde und Haut des Patienten
- C25** • ab jetzt zügig vorgehen
- C26** 6b. Stauen mit Stauschlauch
- C27** • nicht bei exsikkierten Patienten
- C28** • Schlauch unterhalb des Patientenunterarms frei spannen und ohne die Spannung zu

verringern um der Arm herumführen

**C29**

**Comments for item 29**

**Sascha** 11-12-2003 12:47 PM ET (US)  
 Bei dieser Grafik sollte man vielleicht ergänzen, das oben distal und unten proximal ist (sprich: "Oben geht's in Richtung Hand, unten in Richtung Ellenbogen").



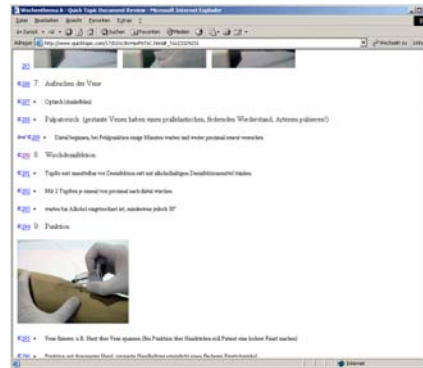


# Strategy

objectives



skills course



annotation tool

on the spot  
report of  
questions or  
standard  
deviations to  
course content

by

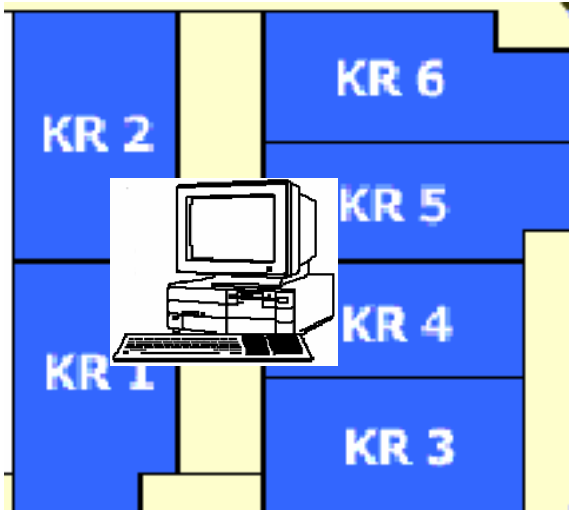
students  
peer tutors  
supervisors

yearly review by expert  
panel

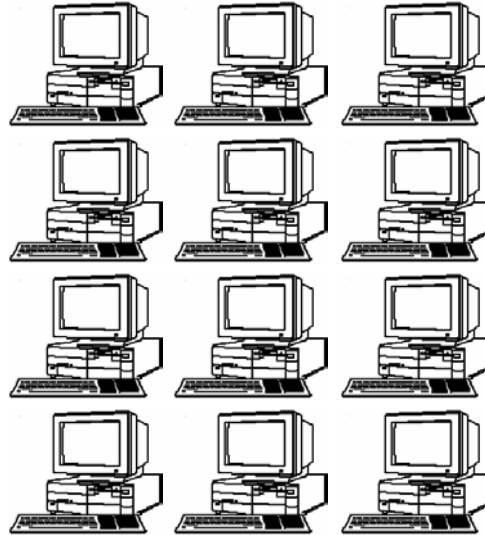




# year 02/03 on the spot availability



**skills lab**



**computer lab**

**WWW**

**study guides**

- Peer-tutors are asked to announce the availability of the tool
- Questionnaire about usage



# Results 02/03

- 45 comments

|             | n   | % usage | comments | changes due to comments* |
|-------------|-----|---------|----------|--------------------------|
| students    | 113 | 8%      | 16       | 3                        |
| Peer tutors | 6   | 83%     | 16       | 11                       |
| supervisors | 5   | 80%     | 13       | 12                       |

\* difficult to estimate, since major changes in the learning material



# Results student questionnaire I

- 96 responded (85 %)
- ~90% use eMail and the internet at least once a week
- ~80% regard the tool as useful to collect vagueness or document errors in the learning material
- ~60% regard the tool useful to document discussions about standards



# Results student questionnaire II

- 83% used it never (53%) or only one to two times (30%)
- 20% never heard of the existence of the tool
- students would have used it more often, if
  - they had been informed better (41%)
  - they would have more time (36%)
  - if the software would run quicker (12%)

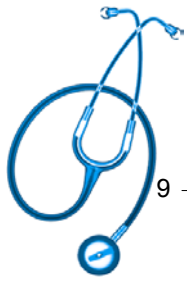


# Results 03/04

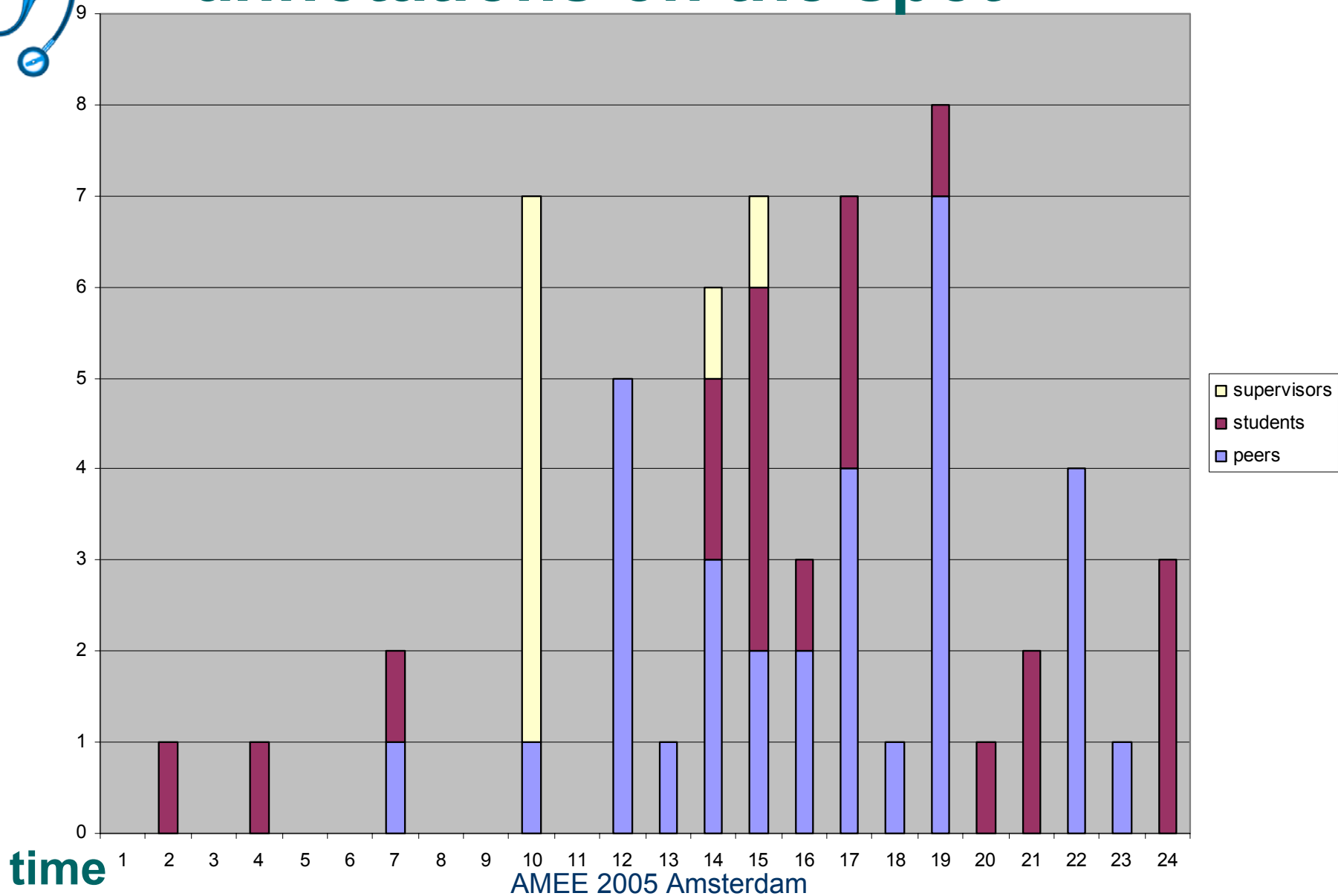
tool better available, better computer and better advertised, more time

- 62 comments
- 106 skript-changes (wording, additions, deletions, transitions)
- 65% of changes directly induced by hypertext comments

|             | n   | % usage | comments | changes due to comments* | % efficacy   |
|-------------|-----|---------|----------|--------------------------|--------------|
| students    | 487 | 4%      | 21       | 9                        | 43%          |
| Peer tutors | 17  | 41%     | 33 (*19) | 53 (\$37)                | 160% (&195%) |
| supervisors | 2   | 40%     | 8 (#6)   | 7 (#7)                   | 86% (#117%)  |



# annotations on the spot





# Conclusion

- in 03/04 the majority of changes in the skript was due to hypertext comments
- the tool is not heavily used, but very effective
- students are the wrong target group; most students do not use the tool and their comments have low impact for the formative review process
- teachers, especially peer tutors, use the tool to a higher extent, and their comments are very valuable
- on the spot usage is an option, but not necessarily preferred