

The use of TELMME in a teaching environment

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- Introduction to TELMME
- Four different ways: one example
- Observations and results
- Conclusion and discussion

What is TELMME?

Student:

- website: telmme.nl
- exercises: (user dependent) feedback

Teacher ('writer'):

- graph written in latex
- didactical problems, not technical

Teacher ('coach')

- picking exercises
- monitoring students
- testing students

Option 1: at home

- with bonus (not used by us)
- without bonus: e.g. Linear Algebra 1, Calculus

Option 2: in class

- “one computer” (Calculus)
- “many computers” (Linear Algebra 2)

Linear Algebra 2 (one quarter)

- determinants
- coordinate systems/transformations
- (applications of) eigenvalues
- projections and least squares

(15 students)

Planning (1)

Not on their own laptop because

- forgot
- no wireless
- msn, mail, pingen, . . .

⇒ course in computerroom, twice a quarter

Planning (2)

standard week program: two times “colstructie”

now:

- one theoretical class and theoretical exercises
- one TELMME class and TELMME exercises

Conclusion: plan ahead.

Observations

- Students are using TELMME only (even before the class officially starts!)
- They make hardly any notes.
- They get stuck \Rightarrow get help \Rightarrow finish the exercise

Multiple choice (1-5)

Score 4-5:

- Are you satisfied with the electronic learning materials?
- Do you have the feeling that the offered materials improve your examination results?

Score 1-2:

Is electronic learning a good replacement of the physically present instructor?

General remarks

+

nice

feedback and hints

enough exercises (randomisation)

General remarks

+

nice

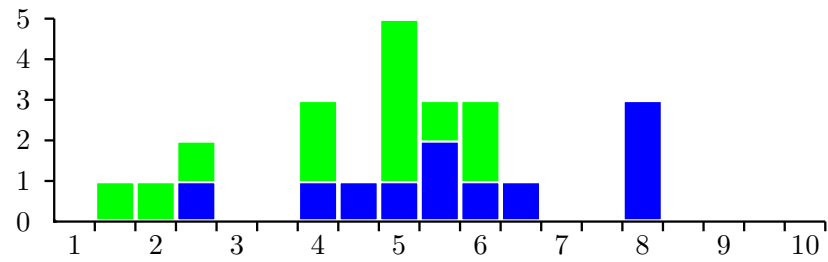
feedback and hints

enough exercises (randomisation)

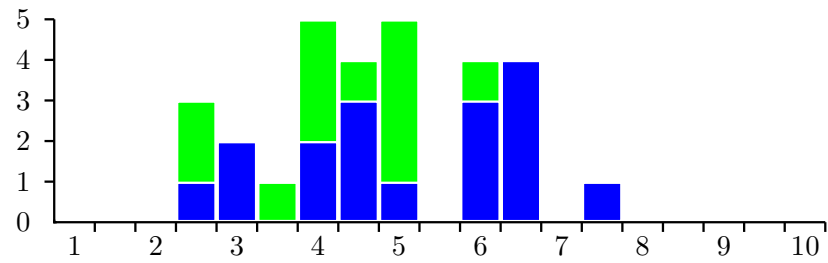
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feedback and hints

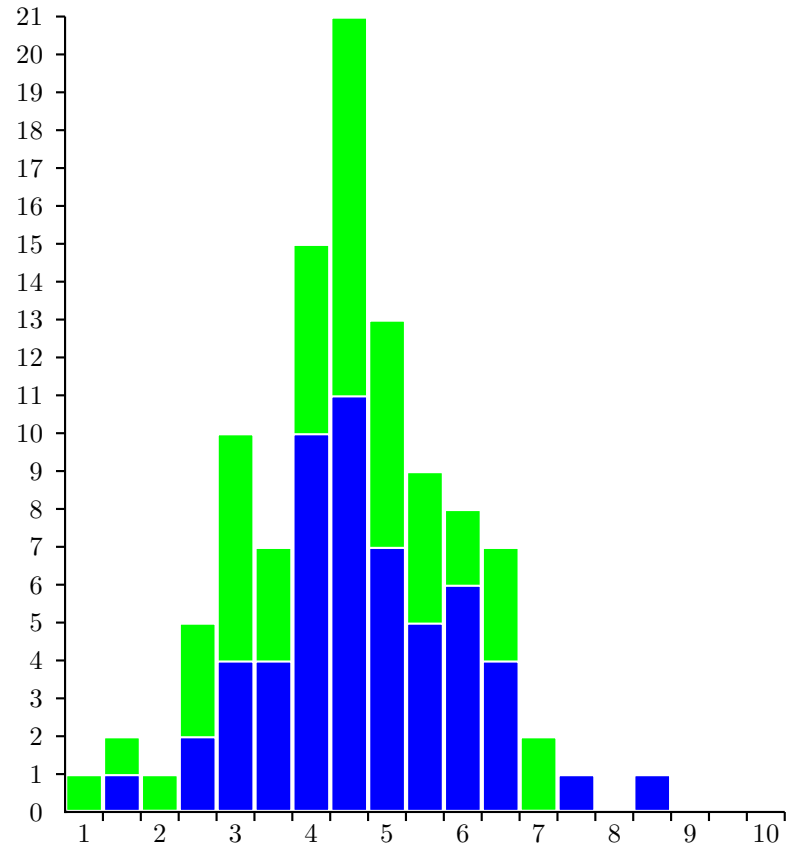
Linear Algebra 2, 2 juli 2010 (resit)



Linear Algebra 2 20 januari 2011



Linear Algebra 1 12 januari 2011 (resit), home



TELMME	number of students	passed	percentage	average grade
Yes	56	12	21.4 %	4.7
No	47	7	14.8 %	4.3
Total:	103	19	18.4 %	4.5

Conclusion

- Implementation possible in different ways (group size, etc.)
- Feedback necessary in the system

Discussion

- E-learning can help and motivate students to reach the learning objectives
- It can never replace a physically present instructor and will not lead to more 'efficient' education