Presentation of feedback

PISA sept. 2012

- **Meeting for final editing of E-Book content and layout, and to give feedback about reports and plans or results of conference and journal contributions. Also to discuss and decide about suitable E-Learning environment and file format questions.**
- **Workpackage 6 month (June-September 2012) Feedback after courses, Book editing and production**
  - **This workpackage will use the feedback information collected from preliminary courses to modify and improve the part of E-book materials used in these courses. Moreover, the partners will edit all materials to be printed in a book, which will then be published. The book will be in EN, containing sample materials in each of the partner languages (DE, IT, IS, DA, BG, SK). Total number of pages is approximately 700. Book with materials:**
  - **a) Examples how the use of ICT can develop further the visualization process**
  - **b) Examples of simulations of real or hypothetical processes, so that appropriate math models will be constructed and will be further improved to aid the learner**
  - **c) Instructions and tips on how to use ICT to improve the simulations.**
- **Workpackage 7 month (October 2012-March 2013) E-learning Course development**
  - **The materials developed will be the basis of e-learning courses and workshops for pre- and in-service teachers at the partner institutions; the materials will be edited and compiled (in the partner languages) by the partner institutions to fit to their respective framework of courses.**

DK Team

- Rewriting last section of Arithmetic mean and Normal Distribution
  - To make a point about central limit theorem more clear (so I hope)
- Translation of Can Equations Be Exciting?
  - Excel a possible stepping stone for non-mapleists
- Evaluation from collegues
- My own thoughts

Geometry in the field using GPS

- From Kaj Østergaard
  - Finds article and worksheets exiting and relevant for teacher education and municipal school
  - Would like to use it in the future in different contexts
  - Tested the material at inservice teacher training course in Skive
    - Teachers got article before course – knows not how many read it
    - Kaj used very open ended approach to the work
    - Endomondo, Garmin, “What-ever-you-have”
    - Worksheets (John) or orientation (Starcke)
    - Large variation in what was gained

Geometry in the field using GPS

- Kaj Østergaard points out the following
  - To short time in that kind of course
  - One group used a lot of time in search of suitable Android apps (Kaj had recommended some iPhone and apple apps – he is not the owner of an Android Smart Phone)
  - Total task too open
    - Better start of with worksheet 1 (John) and our Garmin etrexH classroom set (as the material is written for – more or less)
    - Kaj recommended Endomondo because og trouble with data transfer from etrexH to computer

Geometry in the field using GPS

- Kaj Østergaard points out the following
  - Two groups worked with worksheet 1
    - None of them took up The Brain and The Robot game ☹
    - Rectangles very imprecise (Endomondo) while equilateral triangles looked “nice”
    - Some teachers had difficulties in seeing the mathematical points in the material
    - Some teachers could see possibilities and became inspired to try it out with their own pupils ☺
      - with adjustments

Geometry in the field using GPS

- Susanne Simoni writes
  - I used the article with my third year teacher students (appr. 25 persons)
  - Hard to find the time (third year is really a collage of different tasks with a lot of subjects and activities involved – not at all mathematics related)
  - 5 groups are supposed to study the part on parametric equations (flower in the field)
    - Hard for them to find time
  - The introductory part: Tracking different shapes such as trigon, square, pentagon seemed to work – BUT
    - Lot of technical problems: how do the Garmin GPS work?

Geometry in the field using GPS

- Susanne Simoni writes further on
  - The introductory part: Tracking different shapes such as trigon, square, pentagon seemed to work – BUT
    - Lot of technical problems: how do the Garmin GPS work?
    - How to transfer data from GPS to computer?
    - How to calculate coordinates by GeoGebra?
  - Susanne became very surprised over how insecure third year teacher students were in those matters and how much support they needed
  - These practical (and mathematical!) problems almost overshadowed the mathematical points – BUT:

Geometry in the field using GPS

- Susanne Simoni writes further further on
  - AHA-experiences
    - The questions of locating places on the Earth
    - UTM-zones compared to latitude – longitude
    - Distance calculation by GPS – how it does it
    - Setting time on GPS (why was it AHA/John)
- Conclusion (Susanne)
  - Some would like to study the subject further – even for project in connection with the examination to come
  - Some would like technical up-qualification

General comments from Henning Westphael

- Well written as inspiration for teachers and teacher students
- Everything is explained
  - may cause a problem if they are used in teaching the way I do
- Perhaps consider a reduced version with gaps (smaller or larger) to encourage students thinking and innovative engagement)

My own thougts

(matrix under inspiration from book by danish handball coach Ulrik Wilbek: Gør en forskel, 2010)

Those who	Can	Can maybe	Cannot
Will	No problem	Great possibilities	Sad situation
Will perhaps	Typical Danish Teacher Student	Also a large part of the teacher students	Hm!
Will not			

More emphasis on

- Mathematical points
  - Arne Mogensen
- Demands to the student
  - What mathematical competencies is not about is perhaps what is needed

The project does *not* purport to characterise or discuss *general education* or the actual or potential contribution of mathematics as a subject to such education. It is obviously important to have this relationship cleared up, but this cannot transpire in the present context.

Does not focus on general education

Recently the word "competence" has, with its different connotations, become the focus of much attention in educational, political and business circles. There is therefore a great interest in the education system in discussing the diverse forms of *general competencies of an intellectual, personality and social nature*. This refers to competencies like enthusiasm, working capacity, endurance, confidence, the ability to take responsibility - e.g. for your own learning, the ability to make decisions, tolerance, cooperation, empathy, etc. In spite of the importance of these competences, not least for the development of mathematical skills, they are not the focus of this project. The same goes for *labour market and business competencies* of a specific or general nature, like cooperation, adaptability, flexibility, ICT skills, the use of one or more foreign languages, etc. as they are demanded in business and business organisations. These too are important competencies, but they nevertheless fall outside the scope of the KOM project.

Not a focus on general competencies or labour market competencies