GeoGebra Course

– Structure (slides 2 – 5)
- Use of Dynamat material (slides 6 – 10)

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The course

- Teacher students/teachers learn the basics of GeoGebra
- Focus on their area of interest e.g. material they are teaching or want to teach – hand in a plan
- Create/find at least 5 different worksheets/problems and hand in a paper (+ 20 pages)
- Evaluate 2 of their fellow students work
- Give a talk on their work and demonstrate worksheets

Final paper

- For each worksheet they need to explain:
  - What is the mathematical/technical prerequisite for their students to use the material?
  - What is the purpose of the material?
  - How is the material better than using pencil and paper?
  - What was the reaction of their students when/if they tried it out?

Outline

- Intensive weekend course at the beginning of the term – learn technicalities
- Students hand in their plan 10 days later
- Weekly meetings on Fridays for next 6 weeks
- Break for 4 weeks
- 4 meetings for students to introduce their material and discuss

Weekly meetings

Each meeting was partly spent on answering/discussing the material they were making. Also:

- How to do specific/complicated things in GeoGebra (according to students wishes)
- The GeoGebra community – websites, conferences etc
- Guest lecturers from upper secondary school
- **Introduction on Dynamat material**
- Discussion on articles from the book "Model-Centered Learning, Pathways to Mathematical Understanding Using GeoGebra“ + some other articles e g from NORMA11 conference
- Examples from different websites and blogs

DynaMat material

- Students were supposed to choose one article, read it and write an evaluation (3 – 4 pages) + fill in the evaluation form
- Only 5 (4 filled out the form) of the 8 students did this. Why?
  - They run out of time
  - They are not used to evaluating other material in writing
  - Dynamat material was perhaps too advanced for them since they are just starting to use ICT material

Result from the questionnaire form

- 2 students evaluated “Geometry on wheels”
- 1 evaluted the Tall tree
- 1 evaluated How to add infinitely long sums

Questionnaire - Geometry on wheels – filled in by 2 students

- **How you can evaluate the didactic materials and the activity proposed? Do you like them?**

Both crossed very much

- **Was the material prepared for the activity adequate? If not what did you miss?**

Stud1: it depends on how much GeoGebra you know – you need to know a bit about the program to do the tasks. I think that more

Questionnaire – The tall tree – filled in by one student

- **How you can evaluate the didactic materials and the activity proposed? Do you like them?** Crossed very much

- **Was the material prepared for the activity adequate? If not what did you miss?** The material is dependent on the location but can easily be adapted to other locations.
- **Do you think this activity can be useful for**

Questionnaire – How to add infinitely long sums – filled in by one student

- **How you can evaluate the didactic materials and the activity proposed? Do you like them?** Crossed very much

- **Was the material prepared for the activity adequate? If not what did you miss?** yes

- **Do you think this activity can be useful for other subjects as well? If yes, which ones?** Can be used when teaching sequences and