TBL pilot in calculus course within the project **LIFELONG LEARNING IN APPLIED FIELDS (LLAF)**

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The 4 pillars of LLAF education

- **Learning to Know**: teach learners how to obtain information and media literacy
- **Learning to Do**: acquire new practices and become “adaptive learners”
- **Learning to Live Together**: Create new communities of teachers and learners
- **Learning to Be**: A tool for focusing on personal growth of professionals

Outputs: workshops, pilots, publications.
Pilot in the teaching of calculus

Meeting the method

- Workshop on Team Based Learning, July 2015 (with Dr. Naomi Dickman from the Faculty of Medicine in the Galilee)
- Material on the LLAF portal

Planning the pilot

- Choice of course for the pilot: calculus course for computer science students.
- For each aspect of the method: can it be applied as it is?
- Design changes because of cultural differences, specifics of the subject.

Running the pilot

- Preparing materials.
- Two sessions: a conceptual one and a technical one.
- Conclusions.
Team Based Learning

• How does it work?
  – First stage: independent reading of the material provided by the teacher at home.
  – Second stage: Reading assessment test: first individually, then in teams.
  – Third stage: teams work on a common task.

• Why?
  – Active and independent learning.
  – Collaborative work.
  – Encourage communication.
Positive aspects

- Very active participation and excellent interaction in the conceptual part. The students felt much more engaged than usual.
- Interesting aspects of the subject brought to discussion.
- Opportunity for the teacher to observe the reactions of the students to the material at the beginning of the learning process.
Problems encountered and conclusion

• Obstacles to completion of task:
  – Inadequate preparation (reading of material)
  – Difficulties in getting the answer written out
  – Cooperation did not extend to technical skills

• Students were stressed by having to function on their own.

• Conclusion: the pilot shows that some very important learning skills are lacking. Students need time to get adjusted and feel confident.

• Plans: use in a basic first year course on a longer period.

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