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# 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.