

# How to teach Math without frontal teaching

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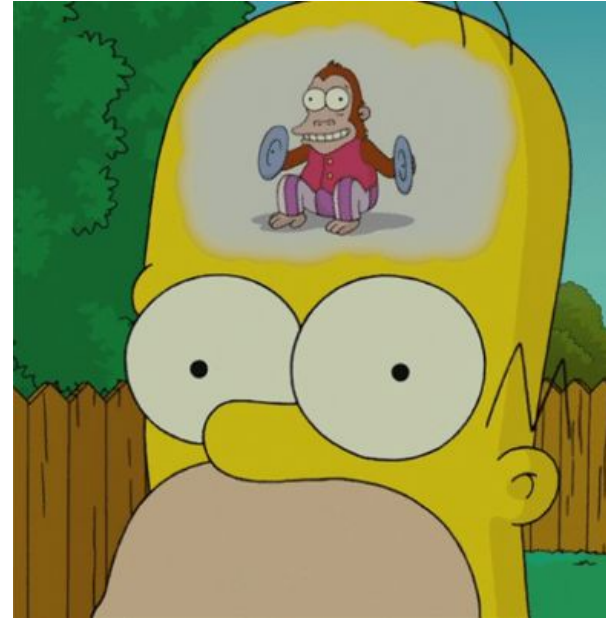
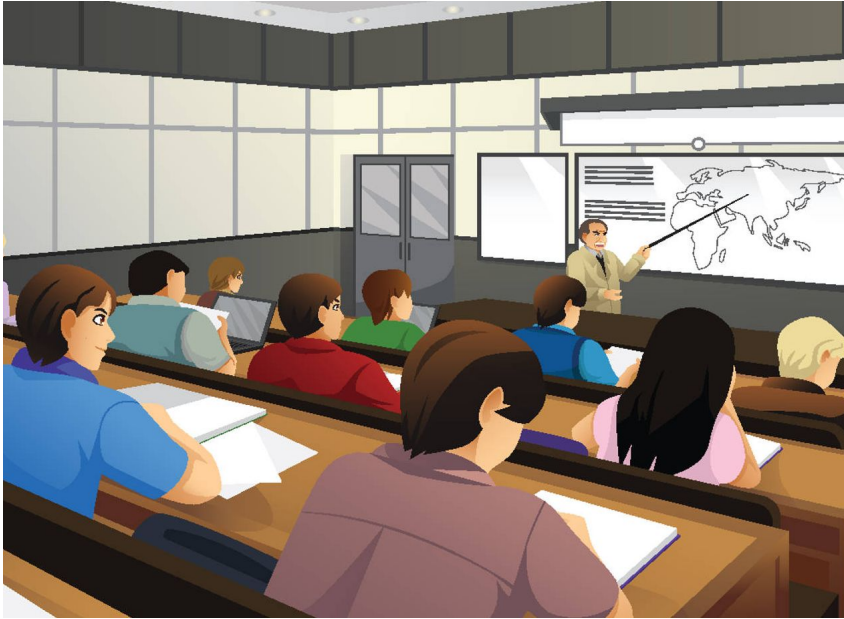
Erasmus+

# 3 ways of learning

1) **behaviourism** - avoiding uncomfortable feeling



## 2) cognitive approach - me and my brain



### 3) (social) constructivism - humans are social



# School must prepare children for life - not to become factory worker



# The 8 key competences of EU are important:

1. Communicating in a mother tongue
2. Communicating in a foreign language
3. Mathematical, scientific and technological competence
4. Digital competence
5. Learning to learn
6. Social and civic competences
7. Sense of initiative and entrepreneurship
8. Cultural awareness and expression



# Solution

- \* Math is dead language
- \* Math teacher = language teacher
- \* Start teaching Math as language
- \* Find yourself a friend who is language teacher and visit her/his lessons to get ideas. Say that you want to learn from the master :)



# Methods

- \* **Cooperative learning method** - Split pupils into teams (3-4) (Noise controller, time keeper, team leader *etc*)
- \* **Dialogue method** (One line one student, neighbor will answer *etc*)
- \* Let students **change exercise books** after 1-2 calculation
- \* **Hide answers to the classroom** (it involves moving)
- \* **Dictate method** - teacher will give to students (4-5) task and they will read it to others.
- \* **Team teaching** (2 or more teachers at time)
- \* **4-5 different “study tables”** (students can move)





# Deci & Ryan - Self-determination theory

People's basic needs:

- **Autonomy** - i will use my own way (mentor does not have to be teacher)
- **Competence** - i take charge and choose exercise (zone of proximal development)
- **Relatedness** - i want to fit in (Cooperative work, teamwork, communication)



## Alternative



Subscribe for ukulele lessons “Lauri Ukulele” :)

