

Developing, testing, concluding

Vello Kukk

Tallinn University of Technology

10 years

- Development of environment
- All databases preserved
- Most of decisions proved to be right
- We never say: this is ready
- Follow changing people
(10 years ago there were no students who had started using computers at age 2)

Goals

- Developing learning environment
- Measurement & control
- Motivation
- Feedback loops
- Always open
- Continuous operation & improvement
(average: some new facility in every 2 weeks)

Emphasis on learning

- Everything we do must be evaluated as 'what a student gets from that'
- Not average student but every individual must be targeted
- Motivators: 70% positive emotions
- No negative messages, only encouraging
- No limits on number of attempts

No deadlines

- Cancelled in 2005 and never even considered to return

Learning fields

- Basic structure for learning – graph of topics
- Topic: set of tests in feedback loop accompanied by proper reading-viewing objects
- Practical work (labs) included
- Feedback loop: selecting tasks, processing results, changing states
- CUs are collected, course and grade are secondary concept

Forgetting models

- System assumes forgetting
- Student's state is degrading in time
- Parameters are determined by results of actions
- Students' opinion: helps to decide which topic to activate
- Decreasing rushing

Many items!

- Number of tasks must be large – hundreds, better thousands
- A student should not be given the same task again
- Everything is logged
- ‘Many’ is very important for analysis

We observed

- Several figures that seem to be constant over all 10 years
- No-show percentage (3%)
- 15-70-15% distribution in activity
- Activities match logistic curve
- Main concern: simple problems
- Student has learned more from life, less from school

Cooperation

- Cooperate or vanish!
 - Because of volume
 - Comparison
 - Analysis
- Learning fields should be common for a number of educational institutions, and not only for universities

Home Lab Kit

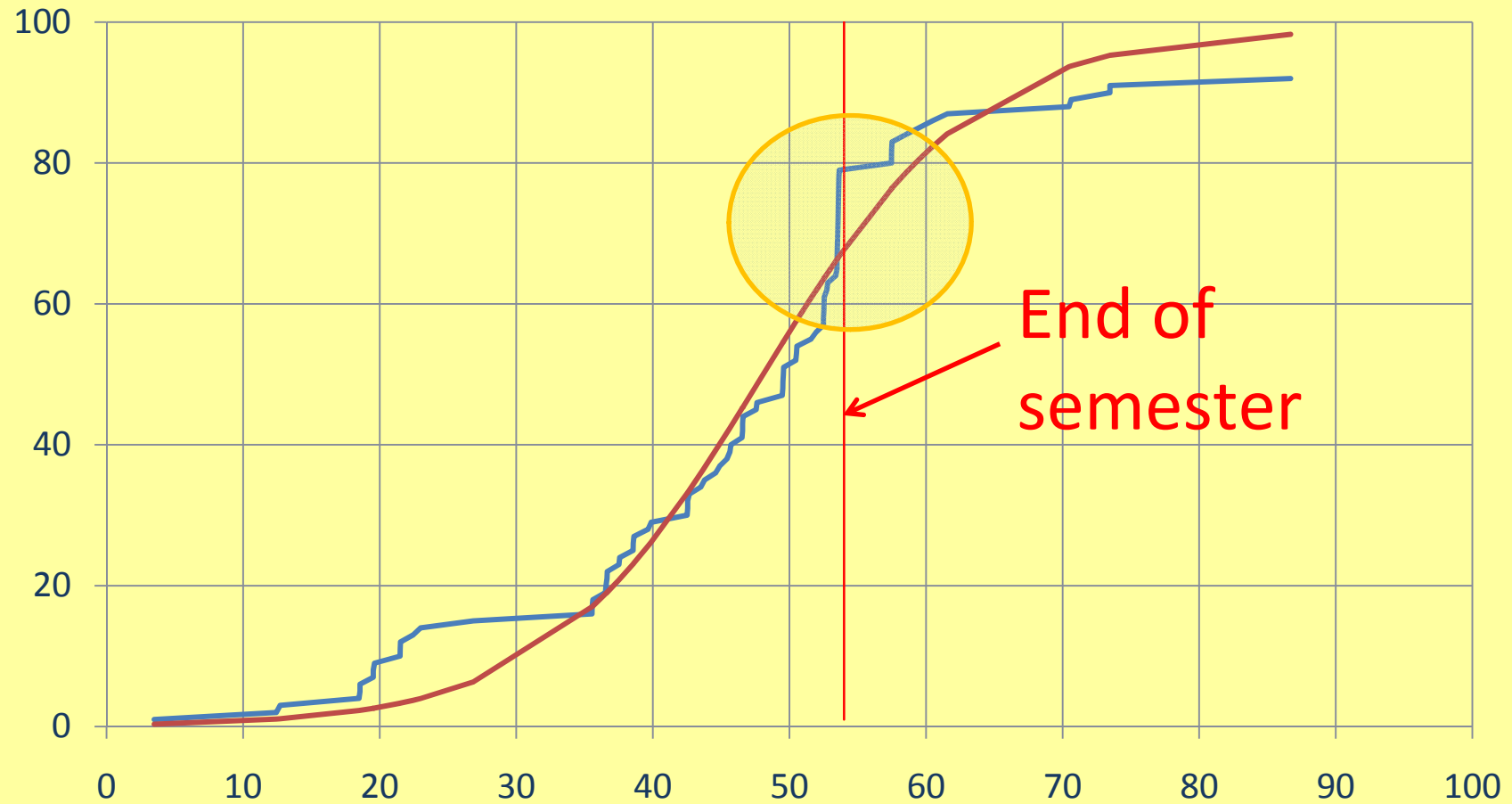


March 26, 2009

Baltech Annual Conference, Lund

11

2008 Fall



Forgetting

