

# Improvement of sustainability in learning using a forum-based blended learning competition approach

EOS04: Contemporary Education in a Changing World

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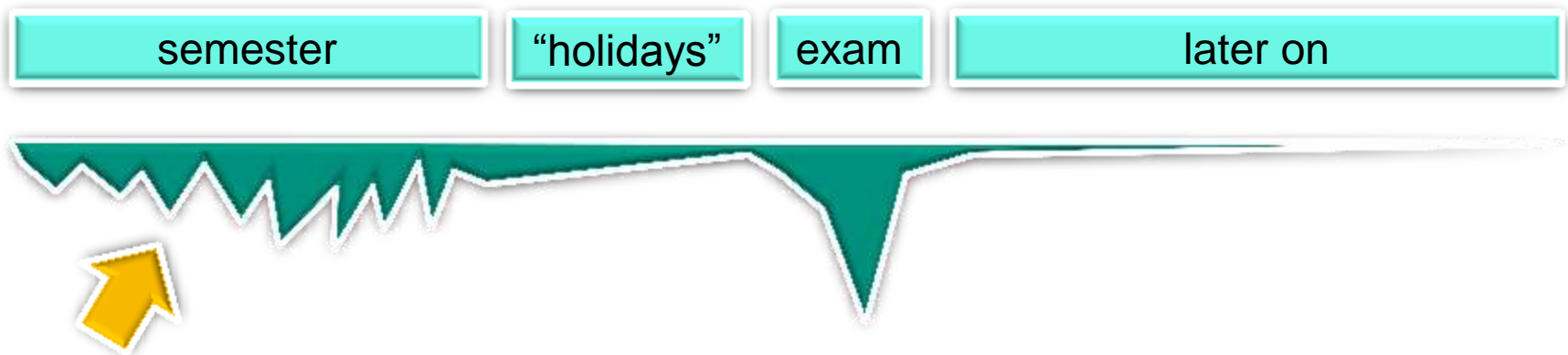
# Case Study – LPF-based Competition

- **Lecture course „Introduction into GNSS Positioning“**
- **Aims**
  - GNSS Overview
  - Basis for other lecture courses
- **Geodesy and GeoInformatics, Geophysics**
- **3<sup>rd</sup> Bachelor semester**
- **10 students**
  
- **Case study: ILIAS (Learning platform); <http://www.ilias.de/docu/>**
- **Forum-based approach**
  
- **Blended learning**
  - Combination of different learning environments (classroom, e-learning)
  - Teaching synchronously and asynchronously



# Motivation and Goals

- “Learners are acting (often) like hunter-gatherers”:  
learning sustainability deficits due to economically driven strategies
- Only small parts of knowledge are existing in the long-term memory of the learners (anchoring?)



- **Need for increased sustainability of knowledge**
  - Need for effort
  - Motivation, fun, creativity, self-realisation

# Rules of the Challenge

- Rule 1: Each participating student has to post 1 statement within 1 round
- Rule 2: This statement has to be correct or incorrect
- Rule 3: 6 rounds will be played
- Rule 4: Each student has to post at least 3 correct statements

## ■ Example: Round 1

- Thursday 8 am: GNSS Lecture (S / T)
- Friday...Monday noon: statement posting (S); posting is visible to all participants  
“GPS stands for Global Positioning Service” (in total 10 statement postings)
- Monday noon...midnight: Validation of statement postings (T)
- Tuesday...Wednesday: Rating of statement postings (S); hidden
- Thursday: Publication of all postings and scores (T)

A priori it's not known if the posting is correct or incorrect

## ■ Scoring:

- 1 point: Correct rating of 1 statement posting (non-creator)
- 2 points: if an incorrect statement posting is rated as correct (creator)

67% of points



# Preparation

- First contact to ILIAS, introduction
- E-learning, uncommon
- Information within e-mails and lecture
- Test round



# Time Budget

- 2-3 hours per round (T, future: tutors)
- Round 1:  $(20 \pm 5)$  min per statement posting (S)
- Round 1:  $(35 \pm 8)$  min rating 9 statement posting (S)
- Round 6:  $(15 \pm 6)$  min per statement posting (S)
- Round 6:  $(34 \pm 7)$  min rating 9 statement posting (S)

# Winners / Award Ceremony / Approval

- 1<sup>st</sup> winner: € 30 – book gift coupon, mug
- 2<sup>nd</sup> winner: € 20 – book gift coupon, mug
- 3<sup>rd</sup> winner: € 10 – book gift coupon, mug
  
- All others: mug

# Lessons Learnt / Future Modification

## *Evaluation after 1<sup>st</sup> and last (6<sup>th</sup>) round*

- Students (90%) realised the need for effort and became active and often very creative
- Challenge-related effort: appropriate (reduced motivation: 10%)
- Reduction of number of rounds (4)
- Rule modification: e.g., statement creator gives short explanatory statement
  
- **Additional benefit:**
  - Examination preparation (T / S)
  - Feedback





for you very  
Feedback attention  
Questions  
your much Remarks  
Thank

