SLiCE
Scenario-based Learning in Cooperative Environments

Prof. Dr. Stefan Ludwigs
Key Findings

Learning and Working converge … as we are aware of 70/20/10

Digitally supported, scenario-based learning needs more teacher than less!

Learning culture and self regulation only poorly evolve in existing school grids!
We might have to change something?
Turning the learning goal taxonomy ...

What means 70/20/10 for us?
What means 70/20/10 for us?

- Remember
- Understand
- Apply
- Analyse
- Create

... upside down, means ...

at home

lecture
... solving problems in class!

Traditional Model

- basics in class
- self-regulated elaboration

Inverted Classroom

- self-regulated basics
- elaboration and problem-solving in class
SLiCE is Scenario-based: Global Remote Monitoring
Worldwide partnering: Here in Jakarta!
• Students at UMN in Jakarta do remote programming of the automation plant at RFH
• They are coached by lecturers at home and at RFH
• They monitor their work via broadcast or via Hololens.
Prototypical test between Jakarta and Cologne
Generic set-up for scenario based lectures

Phase 1: Initialization

Basics

Classroom-Training (workshop)
(a) theoretical basics (eg. physics)
(b) methodology
(c) science, research & future

Phase 2: Remote Learning

Programming

Shared Classroom programming, testing, problem-solving

Phase 3: Follow-Up

Application

Classroom / VC
application outlook experts excursion

Lecturer from home-university or guest lecturer (first three times)
may partially be substituted by taped lectures

Self-learning

UMN (Jakarta)

RFH (Cologne)

Lecturer from home-university or guest lecturer (first three times)
Starting with a set of problems to solve. In the course of development, the following things are tested:

- **didactical alignment** of input and hands-on
- presence and activities of **lecturers**
- amount of **problems**
- **mixture** of self-regulated learning phases and group centered activities

➢ **The idea follows the design thinking approach**
Determination of the necessary competencies

industry workshops

Competency - the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations & in professional and personal development & is described in terms of responsibility & autonomy.
The competence profile as a learning navigator

- Technical knowledge
- Application knowledge
- Practical knowhow
- Problem solving
- Cooperation & communication
- Presentation
How do we develop the competencies of lecturers?

The training of trainers (lecturers) will mainly focus on:
(a) technical/professional aspects efficiently applying the use of digital media (e-learning) in context of HE didactics
(b) being able to convey the ideas of ownership, innovation and personality development

The module is being designed as a blended-learning course, using physical sessions and digital media for self-learning and distance-group-learning.
Worldwide partnering: Here in Rwanda!
Scenarios for common lecturing (Rwanda)

distributed research with transnational quiz

shared instructions via VR

expert interview in virtual classroom

planning of experiments with digital tools

demonstrating results in shared lecture

presenting results with video presentations

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
How do we build community?

**project:** joint curricula of Rheinische Fachhochschule and INES-Ruhengeri (in the field of bio-molecular studies), planned for 2020-2022

**goal:** the students build not only learning buddy networks, but real communities of intercultural and personal interest

first idea: exchange of personal profiles on a paper basis (s. right side) as students and lecturers liked that so much during our stay in oct 2019, we are planning an app-version:

- Communication like WhatsApp
- Foto Gallery, like Instagram
- Most liked Movies, Music, Literature, Wisdom of Life Spells, Football Clubs etc.
- Dreams for the Future, Project Ideas, Business Ideas

- Matching of even more Inshutis
Key Findings

Learning and Working converge … as we are aware of 70/20/10

Digitally supported, scenario-based learning needs **more teacher** than less!

Learning culture **and** self regulation only poorly evolve in existing school environments!
SLiCE
Scenario-based Learning in Cooperative Environments

Prof. Dr. Stefan Ludwigs
Mit Augmented Reality hinter die Kulissen schauen
Mit Virtual Reality Dinge besser begreifen