



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!

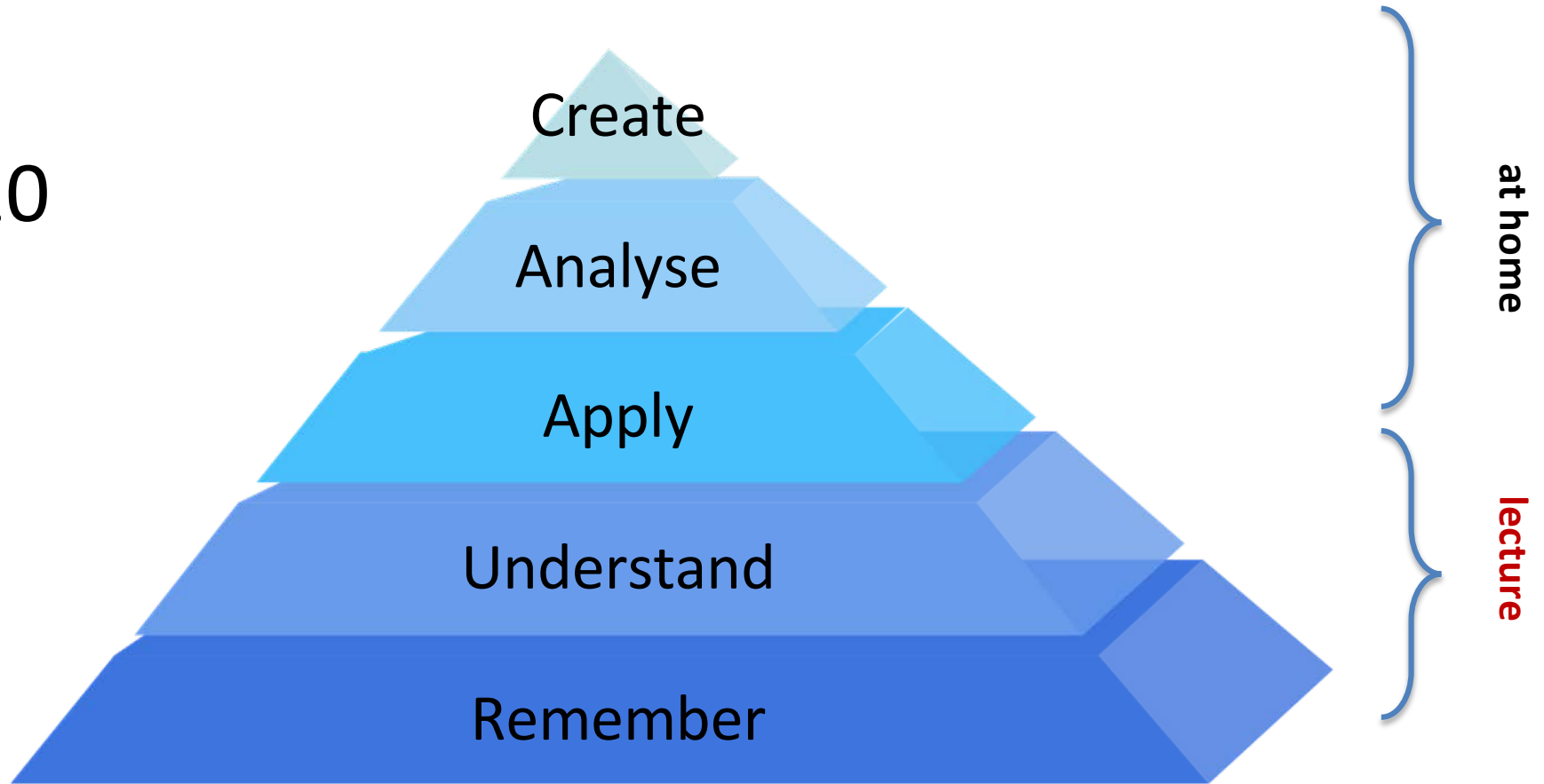
We might have to change something?



Turning the learning goal taxonomy ...



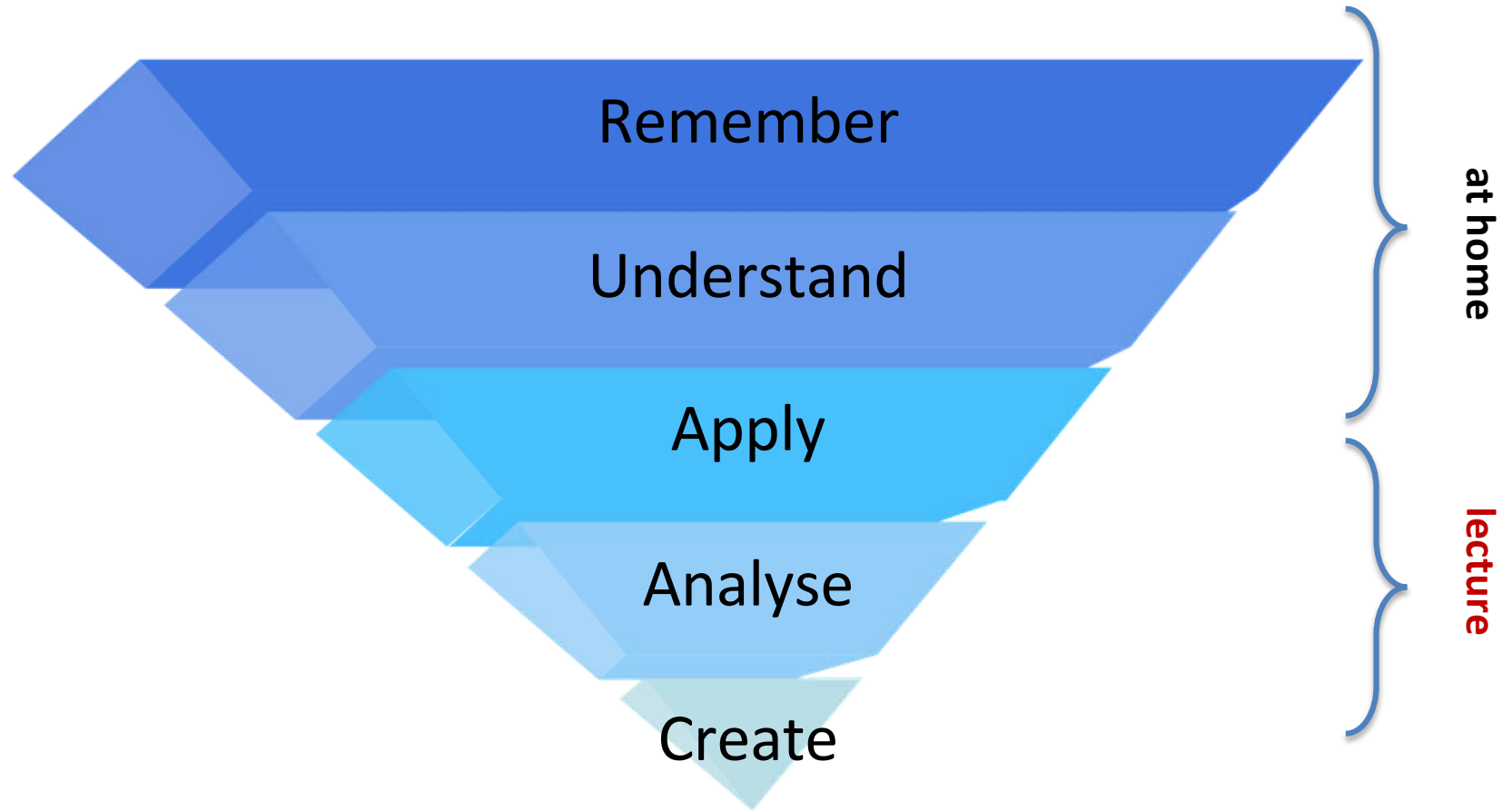
What means
70/20/10
for us?



... upside down, means ...



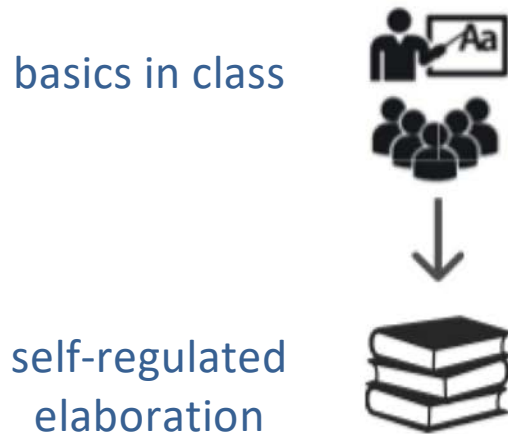
What means
70/20/10
for us?



... solving problems in class!



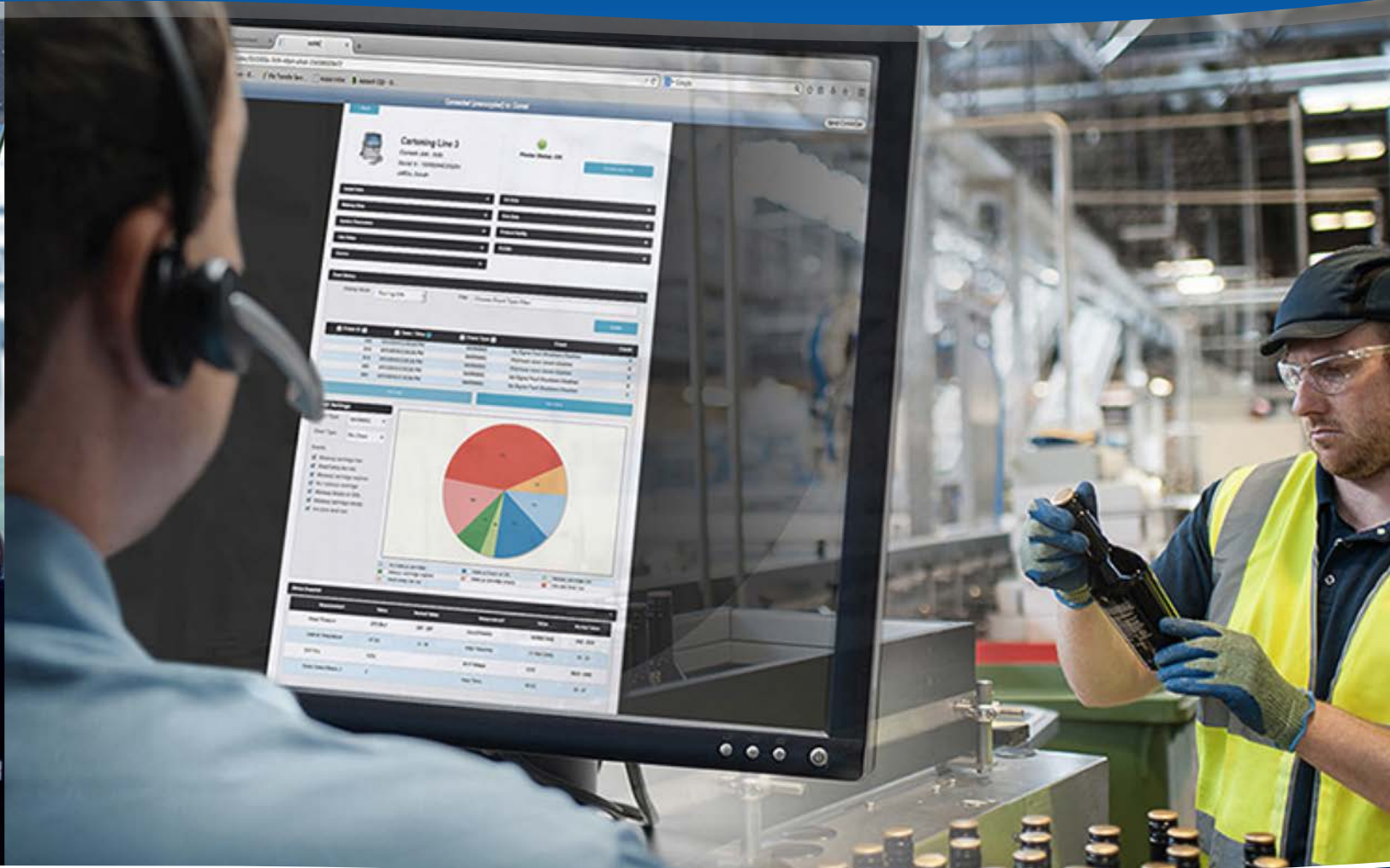
Traditional Model



Inverted Classroom



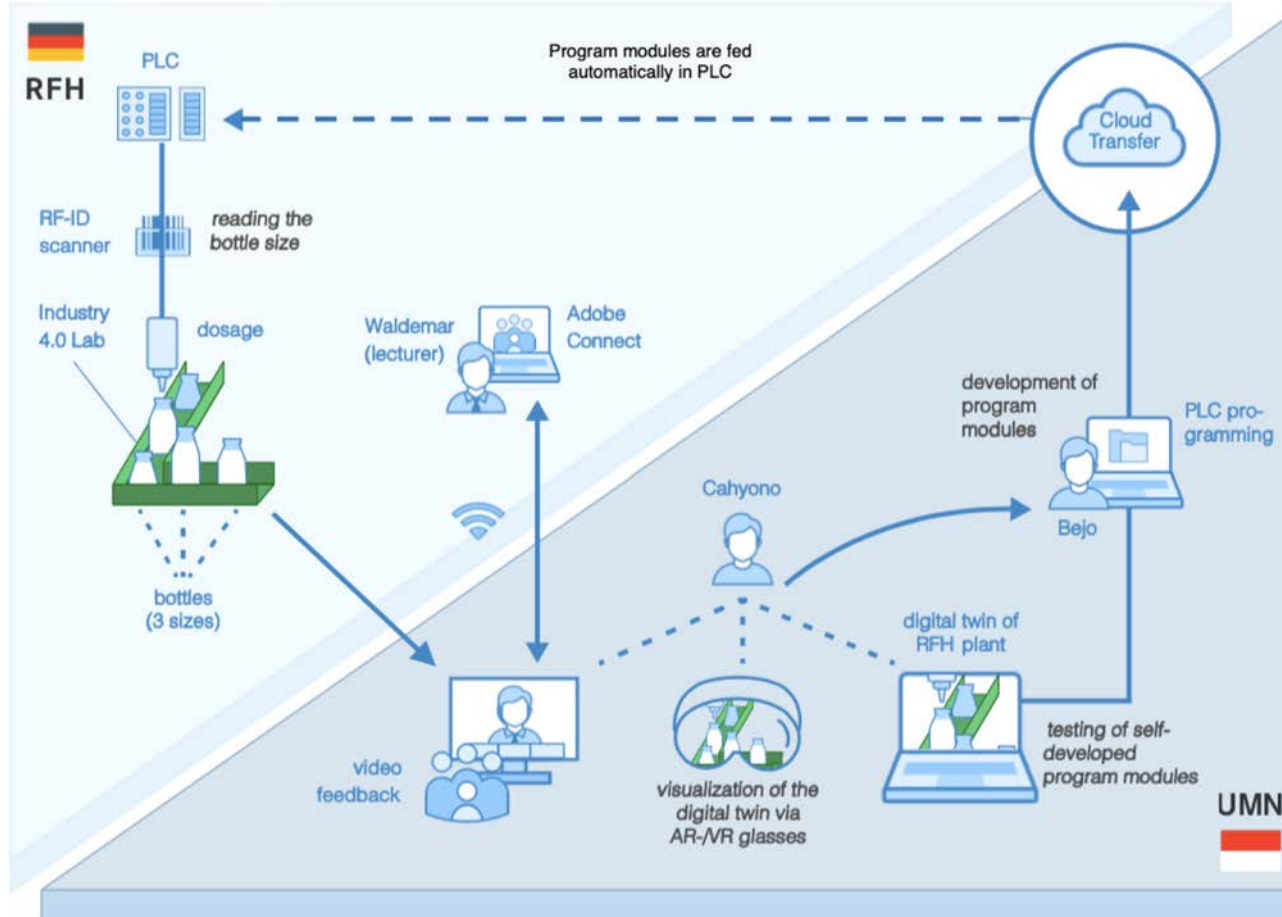
SLiCE is Scenario-based: Global Remote Monitoring



Worldwide partnering: Here in Jakarta!



SLiCE is a Cooperative Environment



- 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

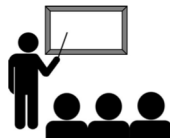


Phase 1: Initialization Basics



Classroom-Training (workshop)

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



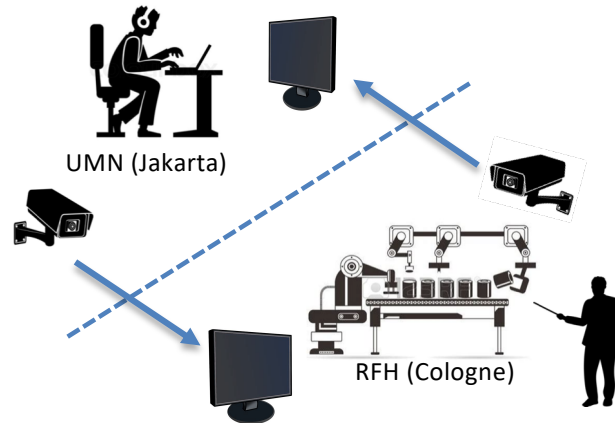
Lecturer from home-university or guest lecturer (first three times / may partially be substituted by taped lectures)



Phase 2: Remote Learning Programming



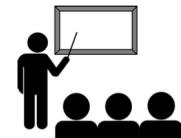
Shared Classroom programming, testing, problem-solving



Phase 3: Follow-Up Application



Classroom / VC application outlook experts excursion



Lecturer from home-university or guest lecturer (first three times)

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

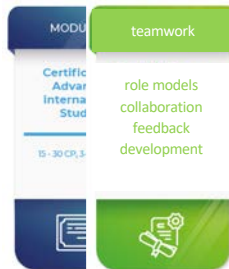
➤ **The idea follows the design thinking approach**



industry workshops

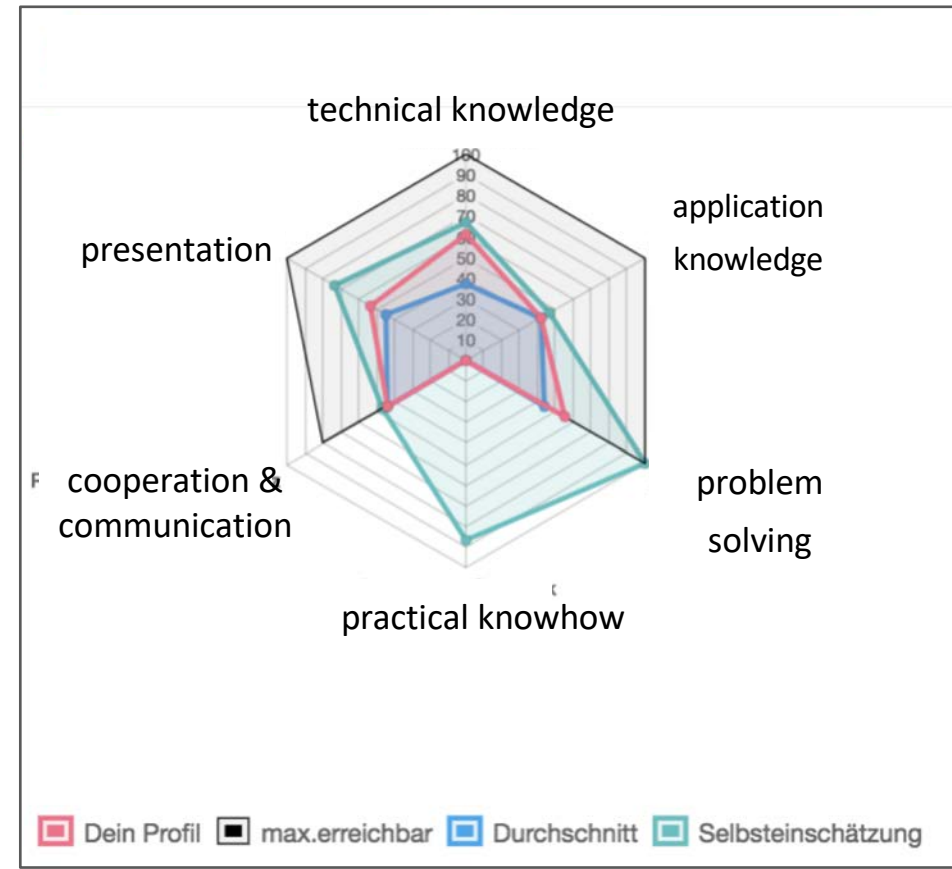
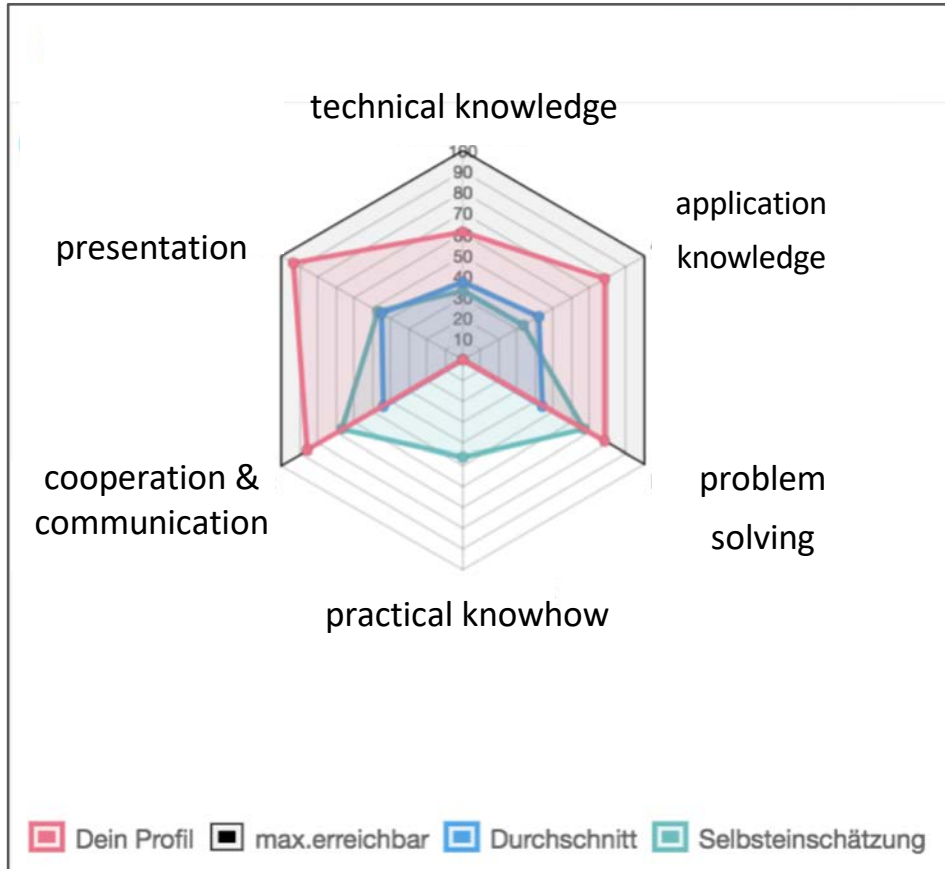
creative problem
solving

Analytical abilities
Innovative Thinking
Flexibility
Ownership
Critical Thinking

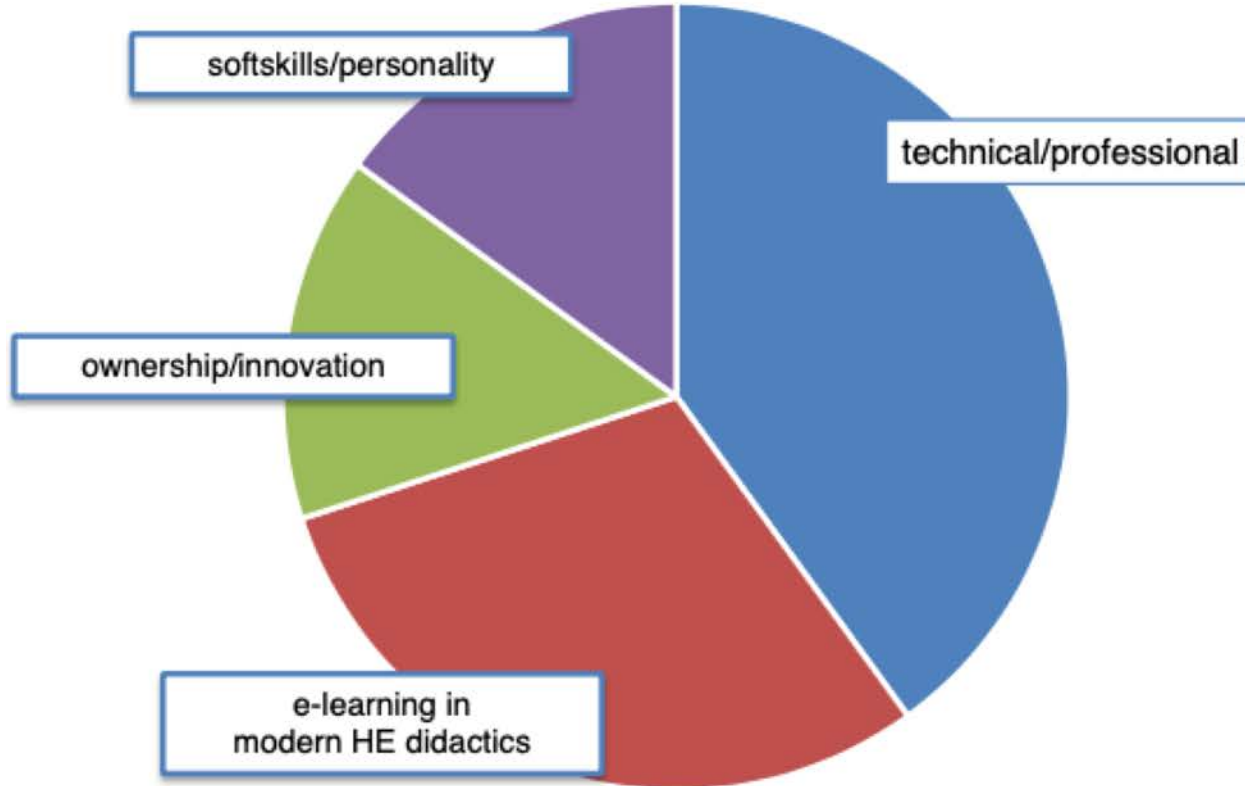


Competency - the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations & in professional and personal development & is described in terms of responsibility & autonomy.

The competence profile as a learning navigator



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!



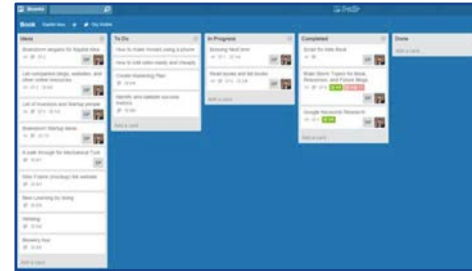
Scenarios for common lecturing (Rwanda)



distributed research
with transnational quiz



shared instructions
via VR



planning of experiments with
digital tools

presenting results with
video presentations



expert interview in
virtual classroom



demonstrating results
in shared lecture

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How do we build community?



INSHUTI – The App

project: joint curricula of Rheinische Fachhochschule and INES-Ru-hengeri (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 iked Movies, Music, Literature, Wisdom of Life Spells, Football Clubs etc.
 - Dreams for the Future, Project Ideas, Business Ideas
- **Matching of even more Inshutis**



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Mit Augmented Reality hinter die Kulissen schauen



Mit Virtual Reality Dinge besser begreifen

