



Professional Development for Higher Education Teaching Staff

Dr. Monika Rummler | TU Berlin, ZEWK | University of Twente | April 17th, 2018



About the Lecture

How is TU Berlin improving teaching and learning via continuing professional development of teaching. Activating large classes, organising project based education and diversity issues are among the topics on the agenda.

The workshop will be interactive with discussions on what should come next after basic teacher training modules.



Questions to the Audience (hands up, please...!)

- Who is teaching students?
- Who has changed his/her teaching from ex-cathedra to active learning?
- Who is working in teacher trainings?
- Who is working with a focus on changing the teaching and learning culture?



Our Centre and Continuing Education Programme

4 Areas:

Koop, BANA, Kubus, WWB

4 Programme Foci:

Teaching and Learning
Research Management
Science Communication
Working and Management Techniques



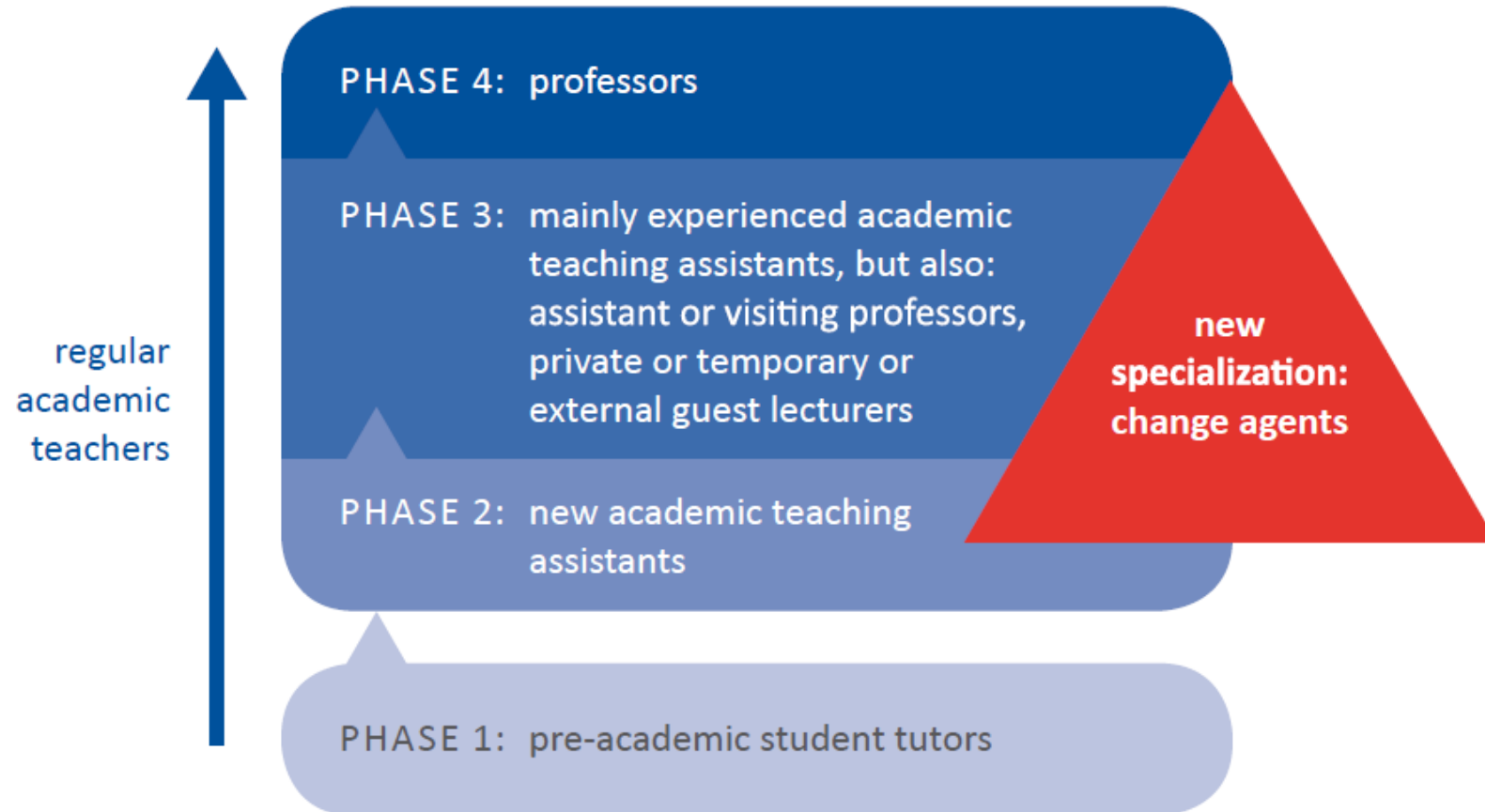
The Teaching and Learning Environment at TU Berlin

One of the biggest technical universities in Germany with about 33 000 students. Among the goals are sustainability, internationalization and high-level third party funding research projects, effective and satisfying teaching and learning, higher success rates in exams

- First year students: high numbers in introductory lectures, up to 1000 or more per lecture
- Teaching staff: 335 full-time professors in 7 faculties; 2700 scientific assistants (normally contracted for 3 to 5 years), env. 2700 student tutors (contracted for 4 semesters)
- Scientific Continuing Education Programme „Improving Teaching in Higher Education“: accredited introductory course and 20 teaching modules, lunch lecture series, books, coaching, teaching portfolio, certificate
- Project „tu wimi^{plus}“: one among eight „QPL“-projects to provide better study conditions and to improve the quality of teaching and learning
Phase 1 2012-2016: 7 teaching assistants, 8 teaching projects, 5 years
Phase 2 2017-2020: 12 teaching assistants, 10 teaching projects, 4 years



Who is Teaching?





Steps to Internationalisation of Teaching

Ziethener Manifest (2012):

In general: change of teaching culture, re-thinking teaching and learning, offer a great variety of different learning methods and formats to heterogenous and diverse students

Internationalisation of Teaching:

5 Dimensions of the International Curriculum: Language, Culture, Structure, Specialist Topics, Methodology

„Teaching Constitution“ (Leitbild):

A draft is developed with the goal that teaching at TU Berlin integrates systematically the principles of openness toward to world, internationality, gender equality and sustainability



Starting Point

„Global Engineer for the 21st Century“ – what is crucial in STEM-subjects?

- Preparation of students to an international context and a globalised practice
- Preparation and qualifying of teaching staff as task for academic teachers' development

by

- ✓ Corresponding professional contents
- ✓ Suitable teaching-learning settings
- ✓ Sensitivity for interculturality and diversity



Global Engineer for the 21st Century – which challenges?

- Technological change
- Globalization
- Demographic change
- Environmental sustainability
- Urbanization
- Increasing inequality
- Political uncertainty

Source: The Future of Skills – Employment in 2030 (Nesta-Studie)



Global Engineer for the 21st Century – which competences?

The **CDIO** revised syllabus consists of four parts:

1. Disciplinary knowledge and reasoning
2. Personal and professional skills and attributes
3. Interpersonal skills: teamwork and communication, entrepreneurship and leadership
4. **C**onceiving, **D**esigning, **I**mplementing, and **O**perating systems
in the enterprise, societal, and environmental context



Some Outlines of Innovative Studies

- A combination of different forms of electronic learning with traditional learning and continuing education methods and direct practical application
- International studies with high foreign language parts
- A link of practical and theoretical education
- Sensitivity for problems, articulation of problems, own problem solving capacities at the basis of teaching and learning processes
- Workshops, seminars, projects and phases of self study to transfer the contents of lectures at a high level
- Distance learning, individual study schedules



Innovative Learning Strategies and Principles

- Learning
problem based, project based/organised, contextual learning, activity based
- Social
student directed, team based learning
- Content
theory-practice relation, interdisciplinary learning, exemplary learning



Academic Teachers' Concerns

- High number of students, anonymity
- Evaluation results, teaching portfolios
- Demand for individual feedback
- Openness of project studies results
- Insecurity with activating methods in classes
- (virtual) communication with students or project teams
- cooperation in intercultural student groups or project teams
- dissemination of teaching or project results
- Knowledge transfer between students, coworkers and colleagues

Different subjects and needs according to career phase

all studies, faculties resp. chairs,

during application procedures, newly-appointed and experienced teaching staff



Curriculum Characteristics

- supply-side - demand-driven
- voluntary individually - project context with a constant group
- consulting - coaching
- self-supporter - disseminator
- ready made - tailormade
- general - specific
- one-way - double direction

Our courses are mostly performed by 2 experienced trainers in a tandem teaching team.

Our teaching methods follow an approach that is oriented at modern principles of Teaching Methodology in Higher Education and Adult Education.



9 Competence Areas

- Planning and Performance
- Learning
- Classic and New Media
- Quality
- Communication
- Diversity Culture
- Methods
- Subject-related Didactics
- Background



Dealing with Diversity in Engineering Education

Diversity and gender relevant innovation and best practice need to be dealt with by teaching staff in higher education as they have relevance for students around the globe.

Our response for teachers in engineering education is the concept of a diversity sensitive pedagogical education for teaching staff.

Change development to establish a new Teaching and Learning culture happens on two levels:

1. by implementing more active learning processes to promote study success,
2. by qualifying teaching staff for innovative methods and diversity in active learning environments.

Active student-centered, project- or problem-oriented methods support learning processes and enhance quality and success rates by acquisition of generic competences.

However, this concept compared with traditional formats may not benefit all learners.

Source: Rummler, Monika (2016): Dealing with diversity in engineering education: Qualifying teaching staff for working with diverse student groups. In: Good Practice – Angewandte innovative Lehrpraxis tu wimi plus 2012-2016. ZEWK – TU Berlin.



Courses for all Phases of a Teaching Career

- Student tutors: “Train the Tutor“
- Scientific assistants: “Teaching for University’s Best”^{*}
Training Programme “Teaching and Learning in Higher Education”^{*}
including e-learning courses
- (Newly appointed) Professors Programme
Parallel Course Offerings, Coaching

^{*} accredited in 2006, 2012 and 2018 by the Accreditation Commission of the German Society for Academic Development (dghd) and according to European “Standards and Guidelines for Quality Assurance in the European Association for Quality Assurance in Higher Education (ESG)” and the “European Association for Quality Assurance in Higher Education (ENQA)”.



Teaching for University's Best

Introductory





The „Teaching and Learning“ Curriculum

Introductory Course

for Beginners „Teaching for University’s Best“ (German and English)

20 Basic and Advanced Teaching Modules

in 9 Competence Areas (partly in Englisch)

Documentation and Reflection

Coaching, Teaching portfolio or Teaching project

Networking

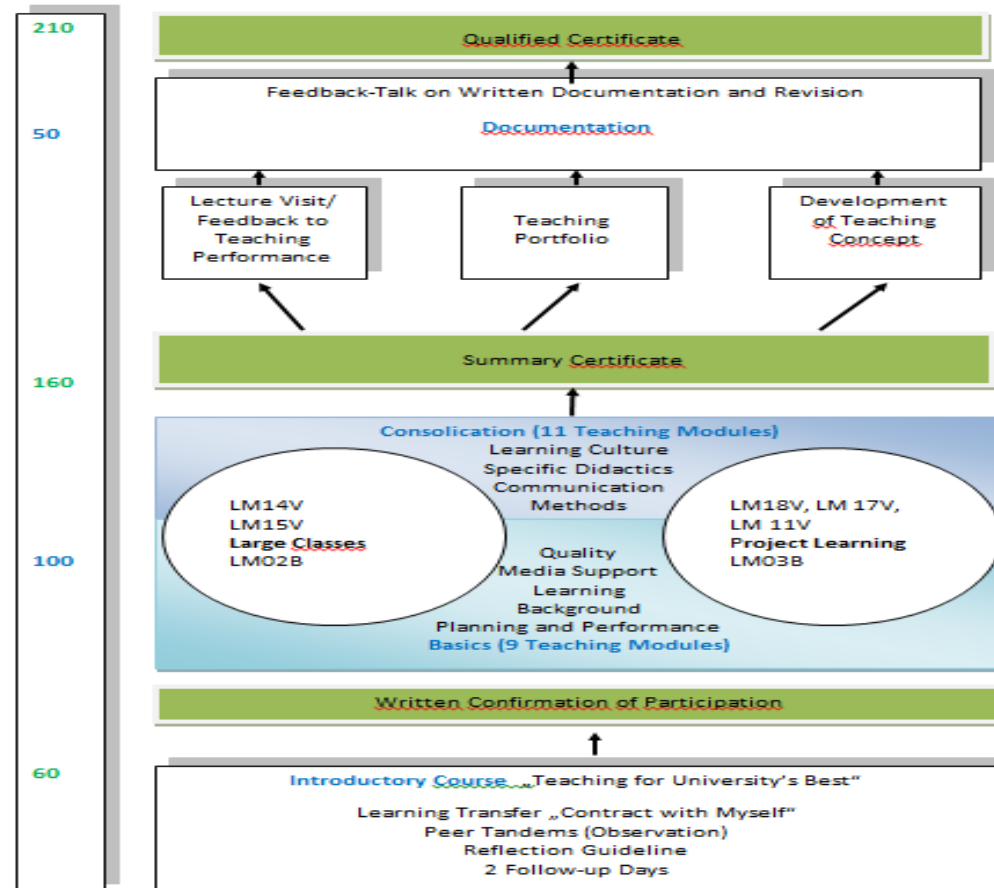
Lunch for good Teaching (with international workshops)

Frame

eg. Intercultural Challenge for Visiting Scholars



The TU Certificate





Our Teaching Concept

- oriented towards activation and motivation
- exemplary learning and reduction of learning materials
- oriented towards problems and holistic concepts
- interdisciplinary and intercultural
- change of perspectives and sandwich principle
- video-supported feedback



Teaching and Learning Support

- New goal: problem solving
- New role: facilitate learning
- New understanding: shift from teaching to learning
- New method: activating students
- New concept: self-organised learning
- New level: global acting
- New result: context oriented



„Good Teaching can be developed!“

- Sensitivity - Attitude
(personal competence)
- Awareness – Knowledge
(professional and subject-related competences)
- Activity – Capability and Transfer
(organisational, methodical and social competences)

« If you think education is expensive: try ignorance! »



Literature





„Think“shop

Discussion on
what should come next after basic teacher training modules?

Is one of these aspects relevant for your discussion:

- Structure?
- Process?
- Result/Effect?



Thank you!

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