

# How can academic staff development enhance teaching competencies for a digital and international future?

## Impact Analysis Based on Action Research as part of the NIDIT Network

Action Research is a scientific, systematic and iterative approach based on:

Participatory Observation and Reflection

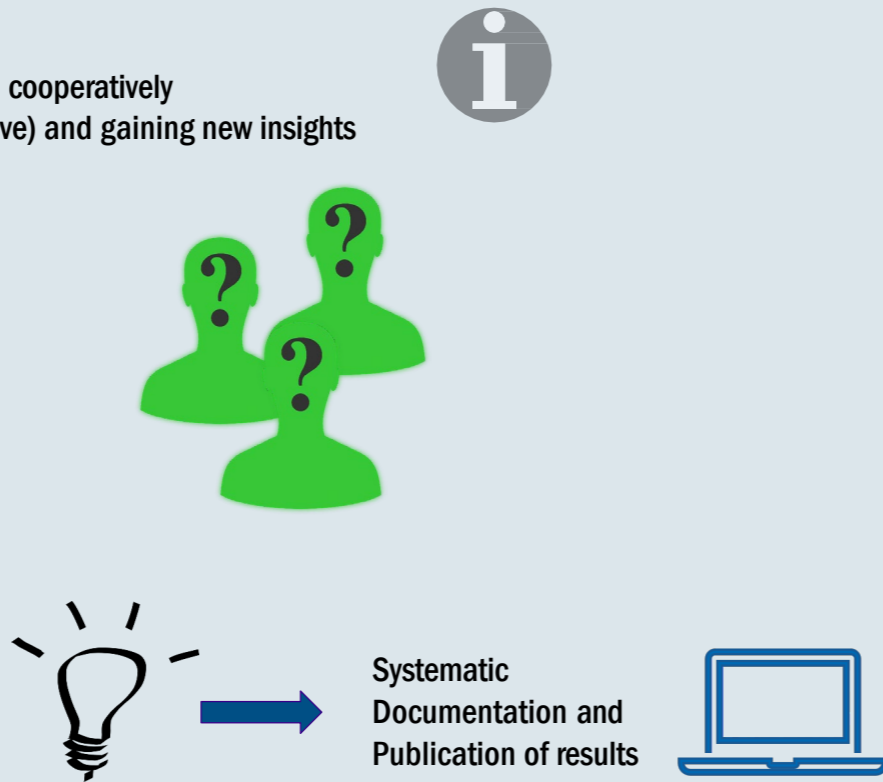
- exploring and reflecting teaching practice cooperatively
- collecting data (qualitative and quantitative) and gaining new insights

Developing a „Practical Theory“

- generated inductively from practice (as opposed to deductively from theory)

Generating Impulses for Development:

- of practice (teaching)
- of practitioner (teacher/lecturer)
- of organisation (university).



Action Reflection Circle (Posch & Altrichter 2007, references: see below)



## Current NIDIT Projects: Teaching-Innovation-Funds

Our Center for Cooperative Teaching and Learning, ZekoLL, is accompanying teaching staff at THM by providing didactic support and coaching with regard to challenges faced in teaching and/or inventing new concepts. Additional financial funding is based on NIDIT's "Teaching Innovation Funds" (LIF) provided for teaching staff at THM. Funded within the framework of NIDIT, there are currently three ongoing projects in their implementation stage, accompanied by didactic coaching together with Action Research:

 <p><b>Digital Teaching of Pharmaceutical Chemistry</b></p>	 <p><b>Just in Time Teaching (JITT) of Basics of Pharmaceutical / Drug Developments</b></p>	 <p><b>Group Heterogeneity in Language Teaching</b></p>
<ul style="list-style-type: none"> <li>• developing learning materials for pharmaceutical basics with H5P</li> <li>• providing materials online together with tasks for student self learning including specific feedback on their answers/solutions</li> <li>• initiating various approaches of student activation</li> </ul>	<ul style="list-style-type: none"> <li>• assembling learning materials for pharmaceutical / drug developments from various sources</li> <li>• providing learning materials online for student self learning including educational videos etc.</li> </ul>	<ul style="list-style-type: none"> <li>• generating an entry-level English test for online use</li> <li>• analysing test scores regarding differences in entry-levels of English</li> <li>• providing additional learning materials via Moodle platform for more challenged as well as advanced students</li> </ul>

## Prospects

There are two newly funded "Teaching Innovation Funds" (LIF) projects in the planning stage starting soon:

- Sustainability in steelconstruction: increasing the consciousness of construction students for the climate crisis and current demands for more sustainability in the field of construction by studying the life cycle of a building, the legal frameworks for climate protection and more. Innovative strategies for more sustainability will be developed.
- Development of various experimental lab set-ups for testing microprocessors, microprocessor-boards and programming code.

The Academic Staff Development Network, HDM, a well-established cooperation between JLU, UMR and THM, benefits from NIDIT:

- Newly developed NIDIT courses get integrated in the programme for further education and training offered by the academic staff development network, HDM
- Participants of these classes are invited by us at ZekoLL, THM, for guideline-based interviews on their education and training biographies, career developments, teaching and learning experiences as well as turning points or changes on their paths to their current levels and aspirations.

References:

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JITT according to: Novak, G.M., Patterson E.T., Gavrin, A.D. & Christian, W. (1999): *Just-in-time teaching: Blending active learning with web technology*. Upper Saddle River: Prentice Hall.

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