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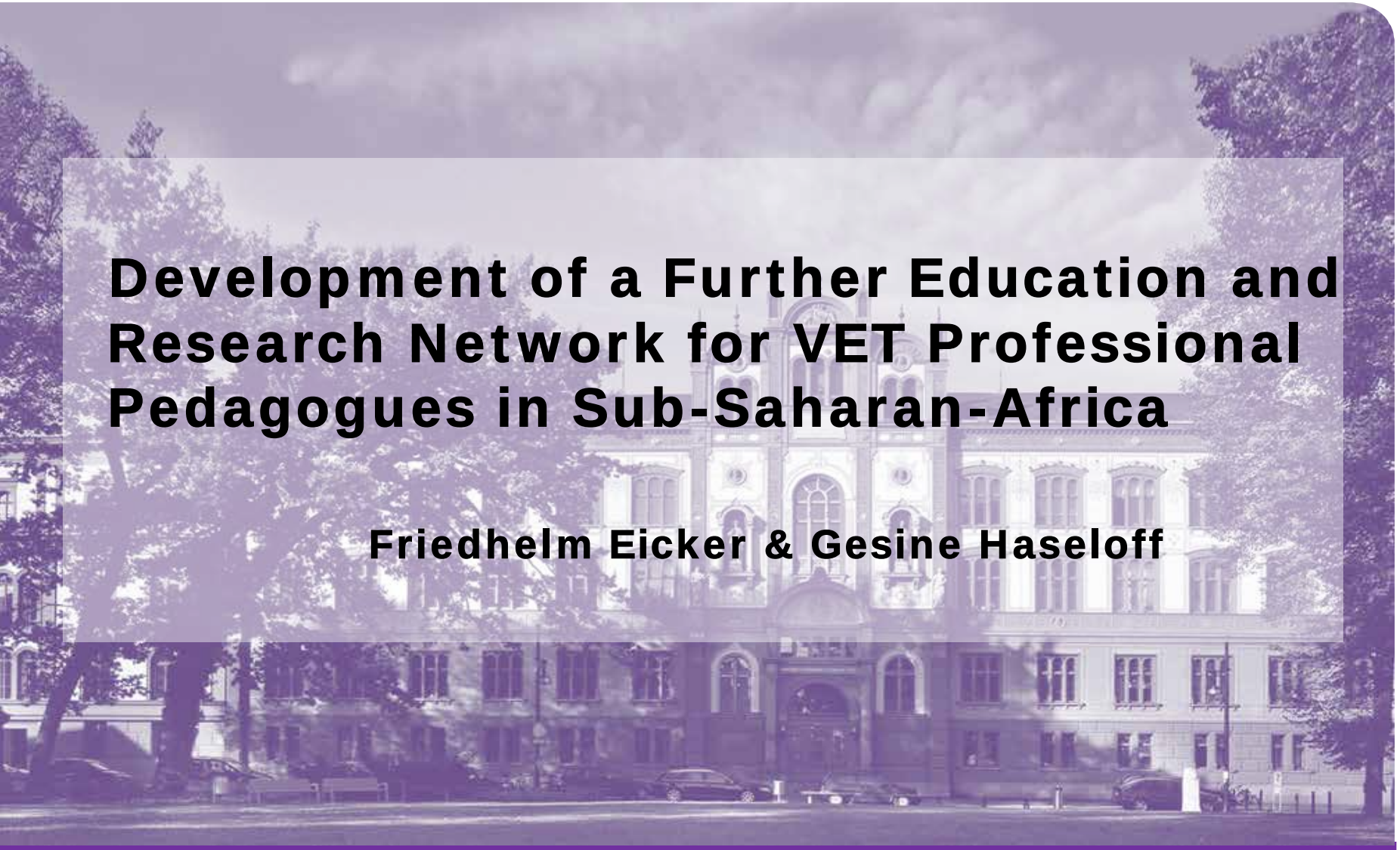

Development of a Further Education and Research Network for VET Professional Pedagogues in Sub-Saharan-Africa

Friedhelm Eicker & Gesine Haseloff

The VET-Net Project* (01.05.2012-30.04.2015):

Development of a Further Education and Research Network for VET Professional Pedagogues** in Sub-Saharan-Africa

- The VET-Net core team includes currently: Friedhelm Eicker (project manager) and Gesine Haseloff (project coordinator) from University of Rostock / Germany, Brigida Singo and Dinis da Costa from Pedagogical University of Maputo / Mozambique, Ewnetu Hailu Tamene and Esayas Alemayehu from University of Jimma / Ethopia, Peliwe Lolwana and Mary Madileng from Witwatersrand University in Johannesburg / South Africa.

** Professional Pedagogues means scientists and teaching staff who teach and research at universities, schools and other vocational education and training institutions. The global term is Vocational Education and Training (VET). TVET means technical vocational education and training. The previous project activities were more or less limited to TVET, in the future general VET activities are being offered.

About the Project Idea and its History

… on the way to a „modern“ teaching and learning
in (technical) vocational education and training

History – from the (unilateral) consulting to a networking collaboration

The Sub Saharan-VET-Net-Project*** – from 05/2012

Preparation of the South African-Extension – 2011/12

Preparation of the Ethiopia-Extension – from 11/2011®

The LEKOM-Project** – 2010-2012

The LeFoMo-Project* – 2008-2010

Dissertation of the first Alumni-vocational pedagogue – 2010©

Consultation at the Pedagogic University Maputo Regarding the TVET-Education – since 2004

- Teachers' education- and Further education in Mozambique

** Teaching and developing competence for TVET-Teachers in Mozambique

*** Extension of a further education and development network for vocational teachers in Sub-Saharan-Africa (Ethiopia, Mozambique, South Africa)

© Mucauque, Francisco: Technical teachers' education in Mozambique. Vocational education in Mozambique under consideration Of the technical teachers' education at the Pedagogic University Maputo, Saarbrücken 2010.

® Ewnetu Hailu Tamene has started the project of a conferral of a doctorate, under the working title „Establishing of a further education and research network in Jimma / Ethiopia".

Project Idea – Networking collaboration of Universities, and also with non-university regional and supra-regional Partners, should …

… enable resp. promote further education in the vocational education

… educate the competence of VET Professional teachers for the justification and shaping of „modern“ vocational teaching and learning

… prove activity- / shaping- / learning field oriented tuition as a central strategy of acquiring*

… start first – regional and possibly nation-wide effecting – R&D-activities regarding the realisation of a „modern“ further education

… create and promote some university pre-conditions for realisation of a sustainable „modern“ vocational further education and a related R&D*

* In the context of the special national, cultural, social, political, historical and economical basic conditions as well as the social values / virtues

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Extension of the further education and research net for VET-professional educators in Sub-Sahara-Africa (VET-Net) – state: April 2013

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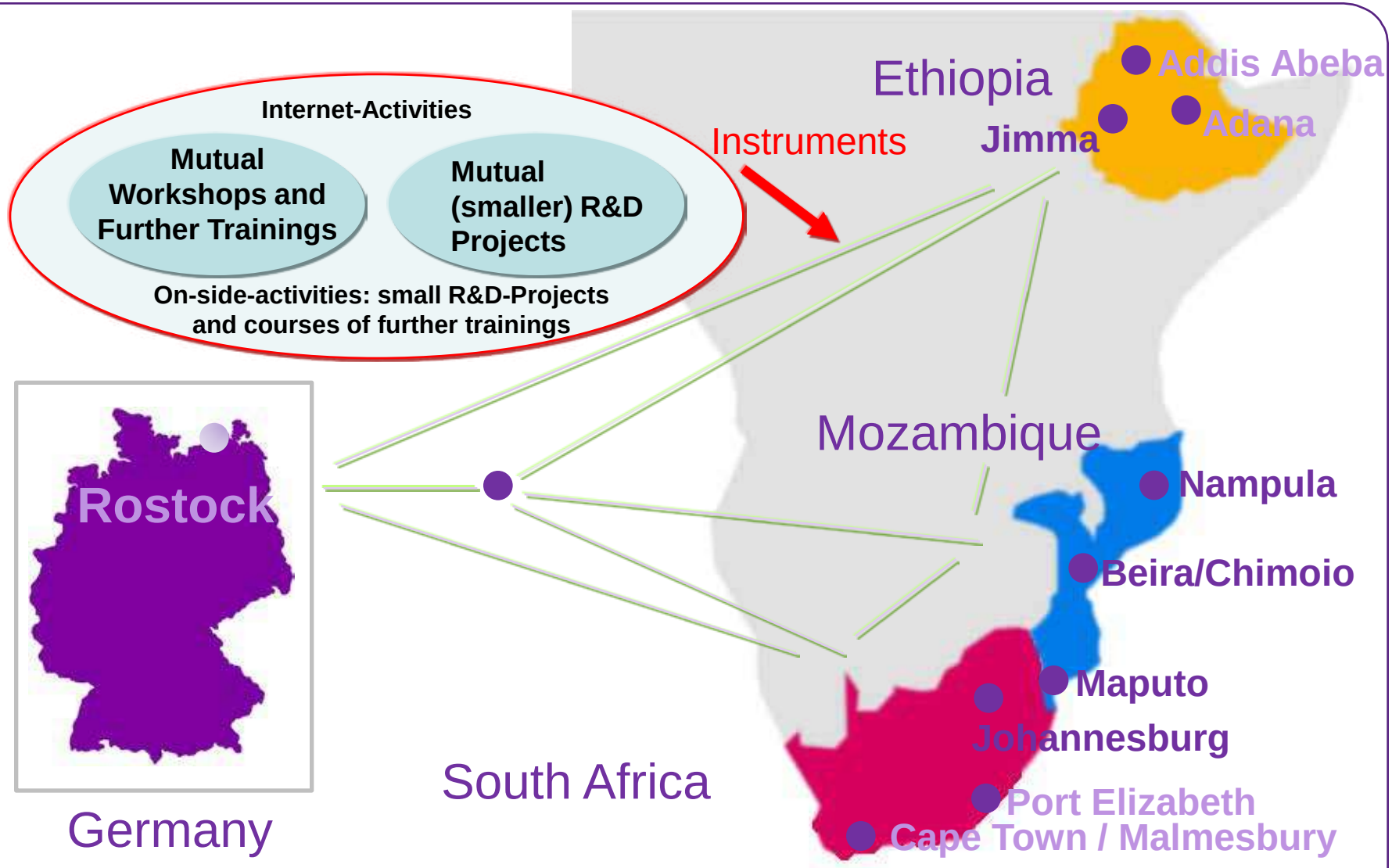
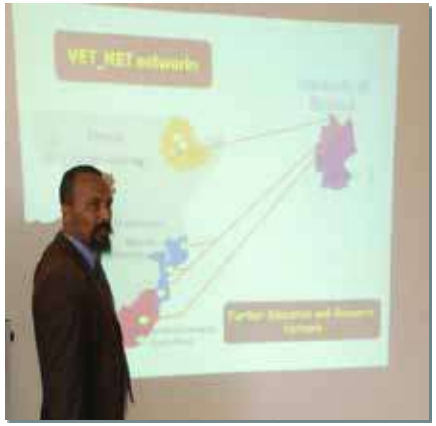
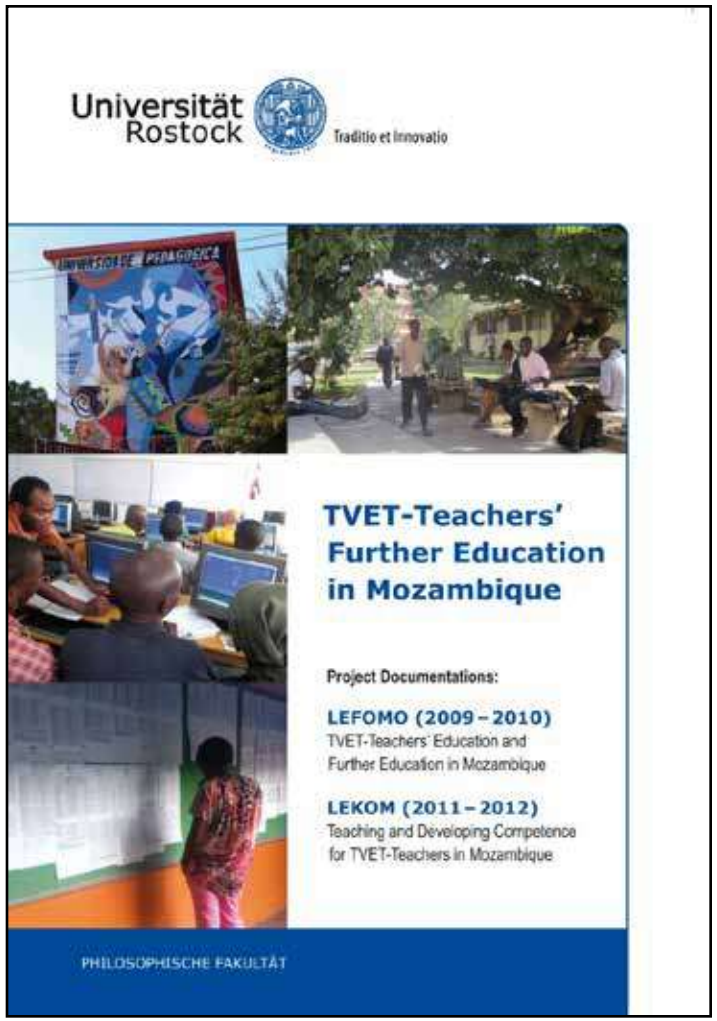




First Cooperation Center and activities in Jimma



Initial Situation in the VET-Net-Project:

Further education for professional educators in Mozambique as basis for a linked vocational education in Africa (Mozambique, South Africa and Ethiopia)

Topics of the current discussions in the VET-Net project – in workshops and further education courses

- Developing and reforming the vocational education in Mozambique and in Southern and Eastern Africa
- Possibilities of shaping a “modern” vocational education system
- Student oriented and shaping competence and learning field- oriented- teaching and learning – learning arrangements: key to “modern” tuition
- Possibilities for the Evaluation of an vocational education system, this tasks and projects
- Requirements to “modern” tuition
- Networks for vocational education and training - possibility for research of vocational educators
- Construction of regional networks for vocational education and training
- Working oriented teaching and learning
- Cooperation and Competence Centres – chance for the development of vocational education and training
- Possibilities and limitations of trans-national further training and research networks for VET-vocational teachers (in Sub-Sahara-Africa)

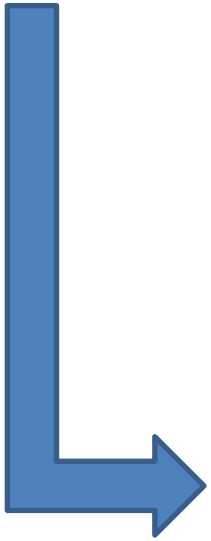
State of agreements
(Presented by the Rostock University‘s point of view)

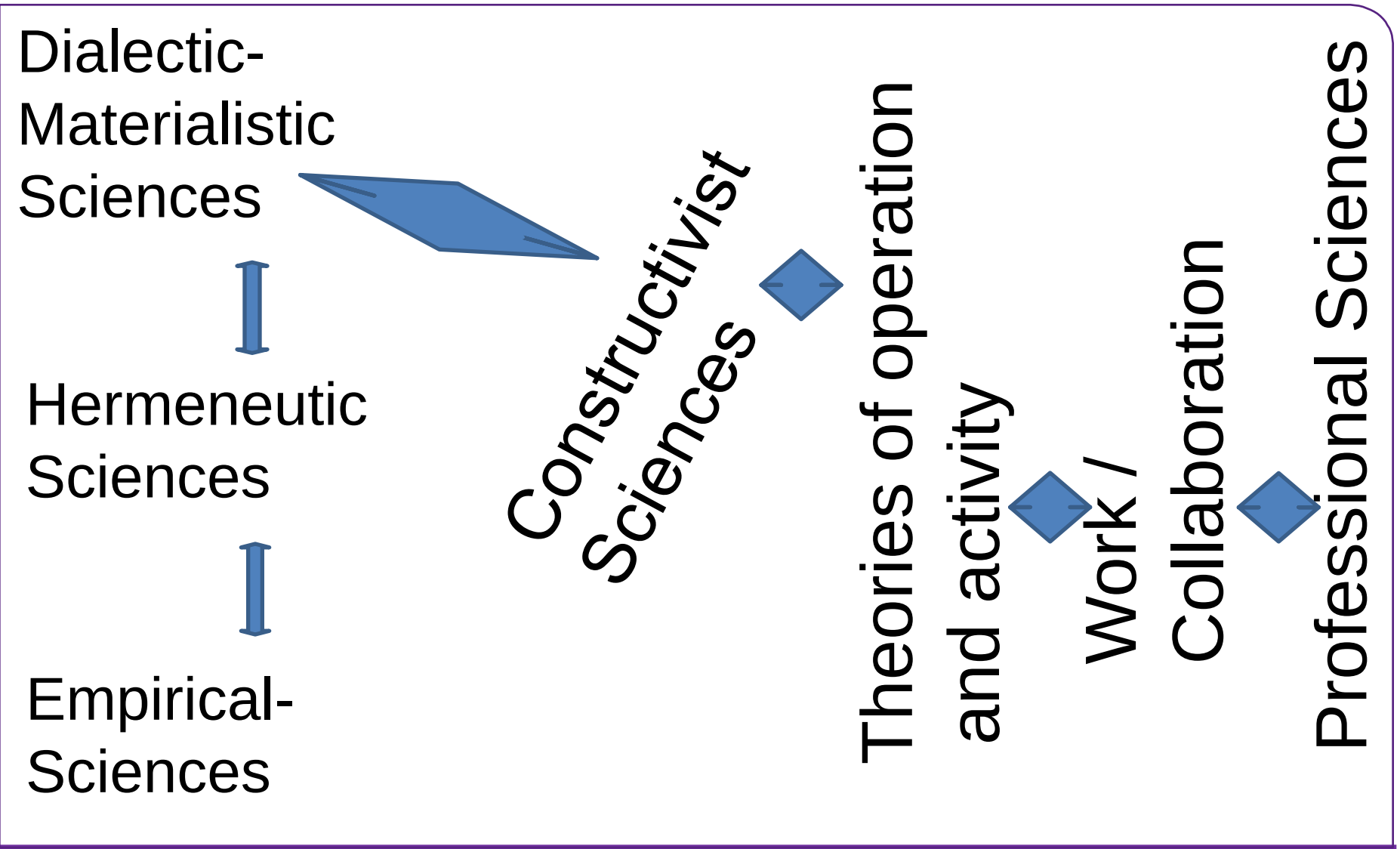
… on the way to a „modern“ teaching and learning
in (technical) vocational education and training

New working concepts are – more or less – enforced in all companies, which seems to bring out **new concepts of vocational education**

- Complex activities and continuous, systematical, versatile development of work instead of the old division of labour;
- Product -, process- or business processes-orientation instead of functional organization of work;
- Systematic development and using of human resources in this new form of working organization;
- Acquiring and usage of competence instead of „only“ knowledge;
- Development of alternative thinking and acting with respect to different (technical, economic, social and others) conditions;
- And much more.

Scientific theoretical basic position

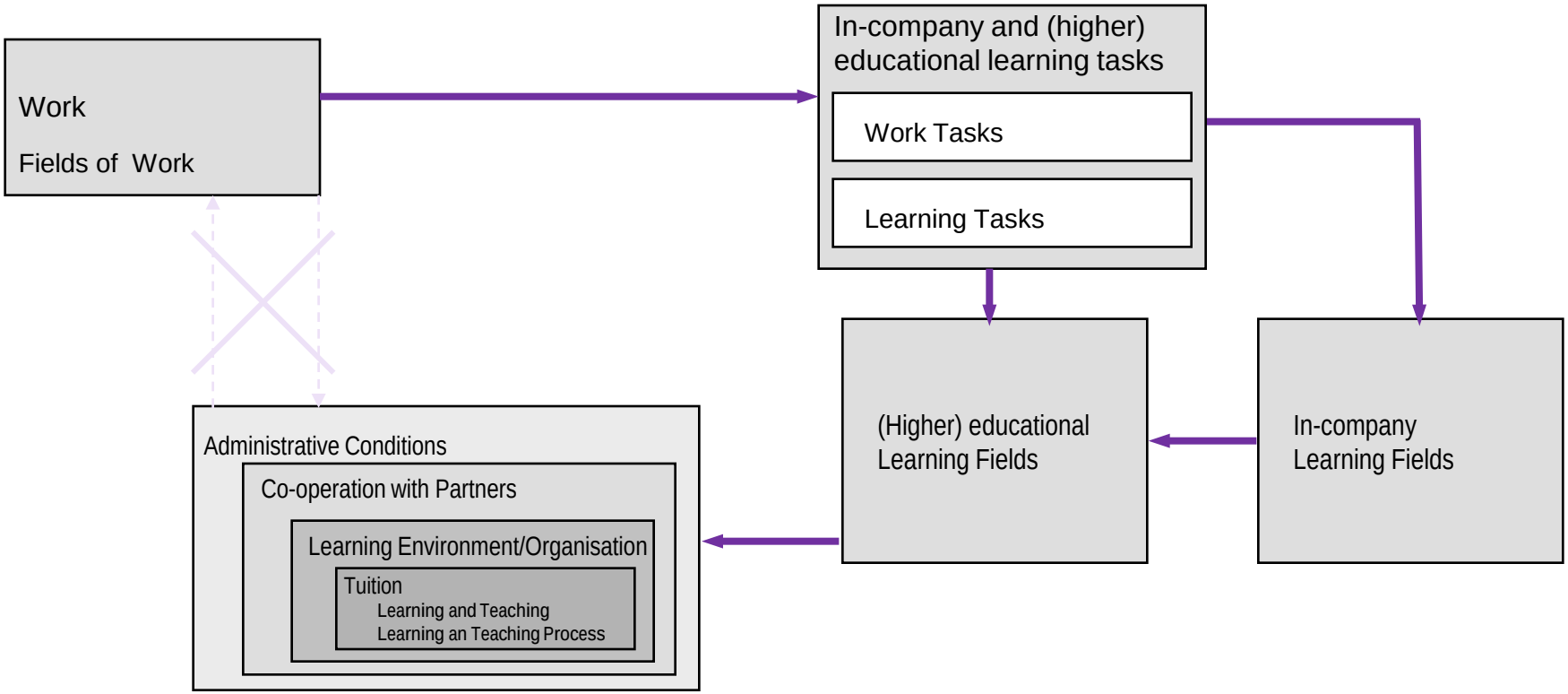



Dialectic-Materialistic Sciences
Hermeneutic Sciences
Empirical-Sciences
Constructivist Sciences
Theories of operation and activity
Work / Collaboration
Professional Sciences

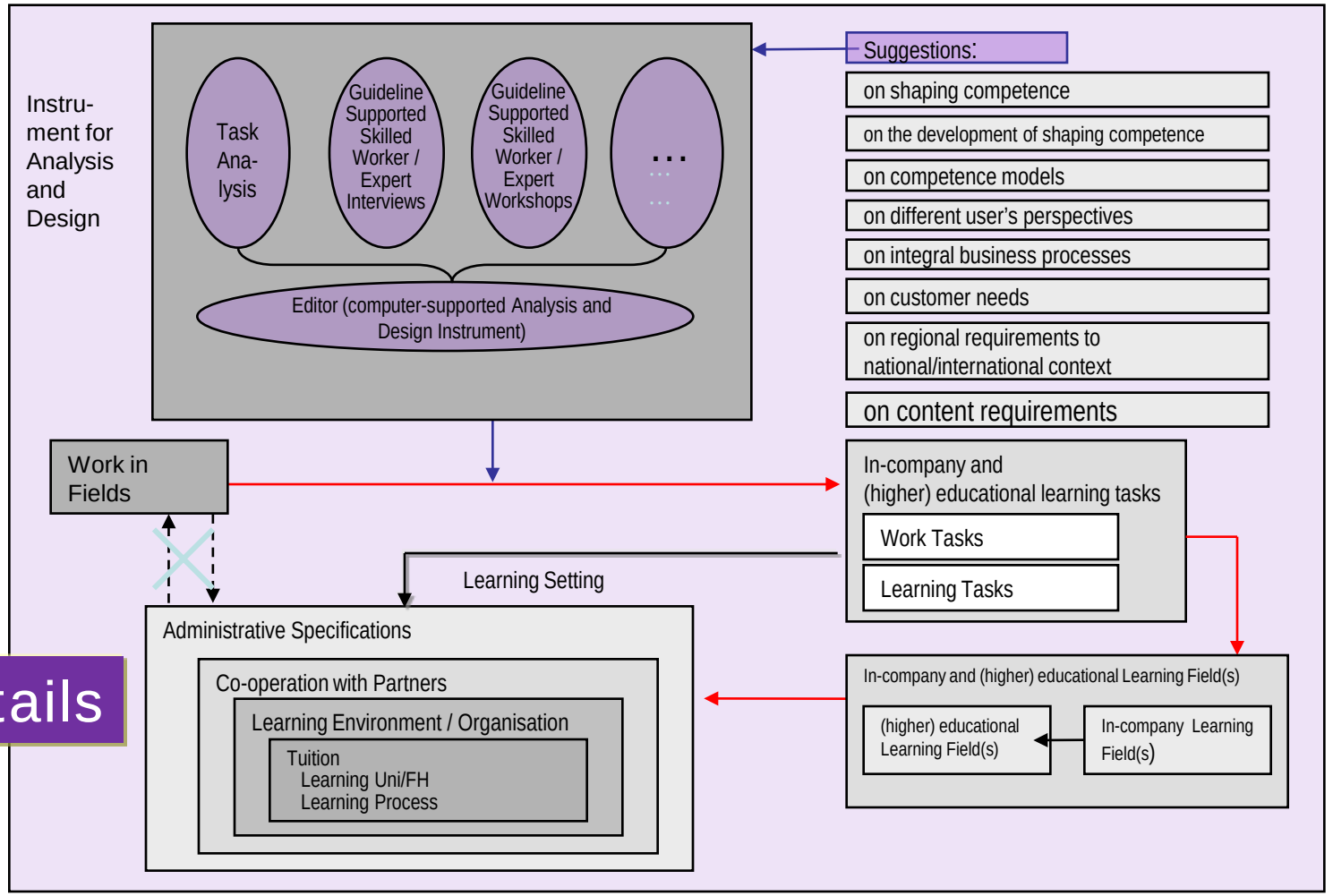
About the VET-Net-Justification- and Discussion frame:

Competence and shaping and network oriented teaching / learning and research / development

expects to look at the "complete way" from the work / working processes to the teaching and learning:



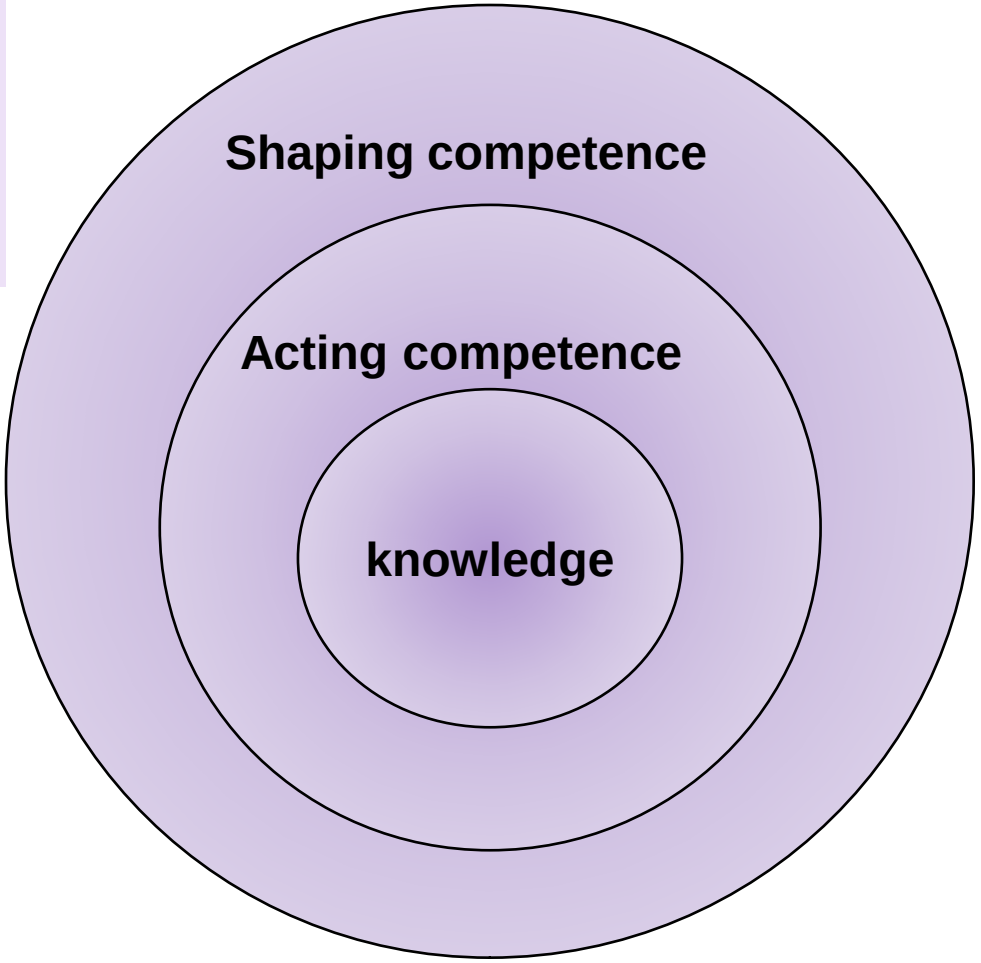
The „complete circle of reflexions and creatings“ is under consideration!



Reflective levels or other theories

In Details

Gaining of
acting competence
or better shaping
competence instead of
imparting knowledge



What does it mean - Shaping competence?

The Vocational education
needs orientation at an appropriate
Competence - Model

In VET-Net

the partners

are trying to

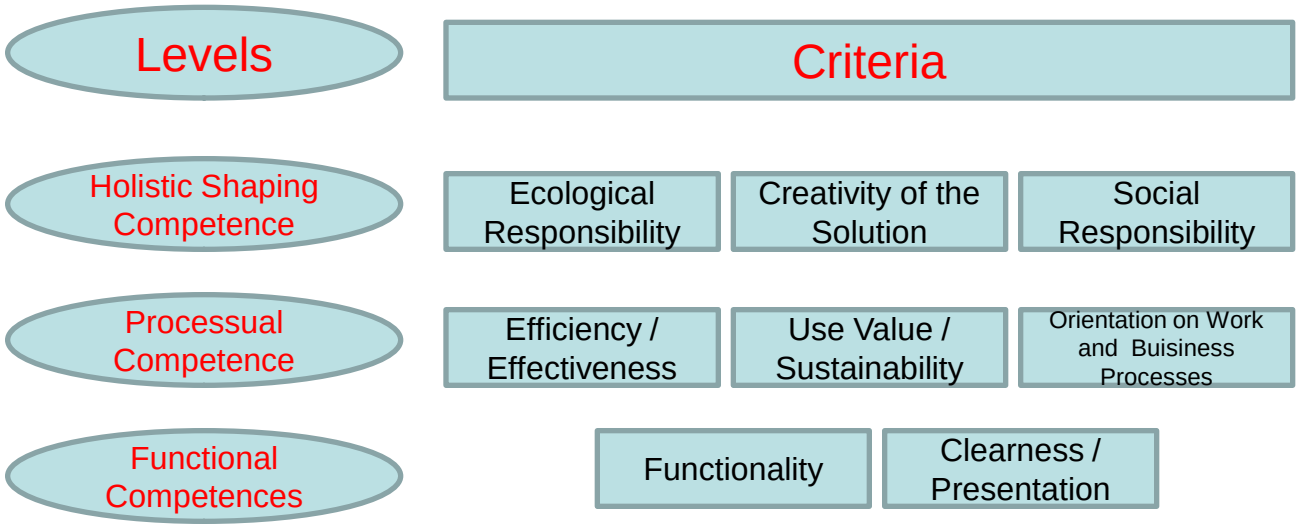
go forward

from the simple

– well known –

competence–model …

… to a more acceptable competence-model:



Heinemann / Rauner, in: Zhao / Rauner / Hauschild, Beijing 2010, p. 221

Shaping competence
means the abilitiy ...

- to identify and to define tasks
- to search for possible solutions of the tasks and to evaluate them for their sense
- to realise solutions recognized as sensible and to interfere the exploitation of the “products”
- to realise different methods of solving the tasks and to use them flexibly
- to acquire special knowledge fast and independently most of the time
- to have wide-range, future oriented knowledge
- to have interdisciplinary knowledge
- to be part of changes and to realise these changes

Shaping competence
means the ability of ...

(to be continued)

§ critical reflection of tasks, also referring the social, caring and economic context

§ Turning away from classical „one best way"-behaviour (ability to find out the "right way," ability to communicate between various possible varieties and scenarios, ability to handle conflicts); together with that ...

- developing a personal style, which enables you to bring skills in a teamwork with out hurting colleagues
- having assertiveness and skills of reasoning
- concerning about requesters/ customers (to negotiate with customers about their expectations and about existing possibilities; at the same time deferring of own ideas without hurting technical needs so it is flexibility, empathy, sensitivity but also technical-specialist security at the same time)
- mastering techniques of presentation
- acquiring customers
- mastering foreign languages and accepting foreign cultures

(Modified partly after Neef 1997, Brödner 1996, Pelz 1997)

Shaping competence means:

Essentially, the training of shaping competence allows to expect that the learners explore possible acting alternatives themselves during all the learning steps and that they justify their meanings.

Not any longer traditional teaching / learning:

4-steps-method:

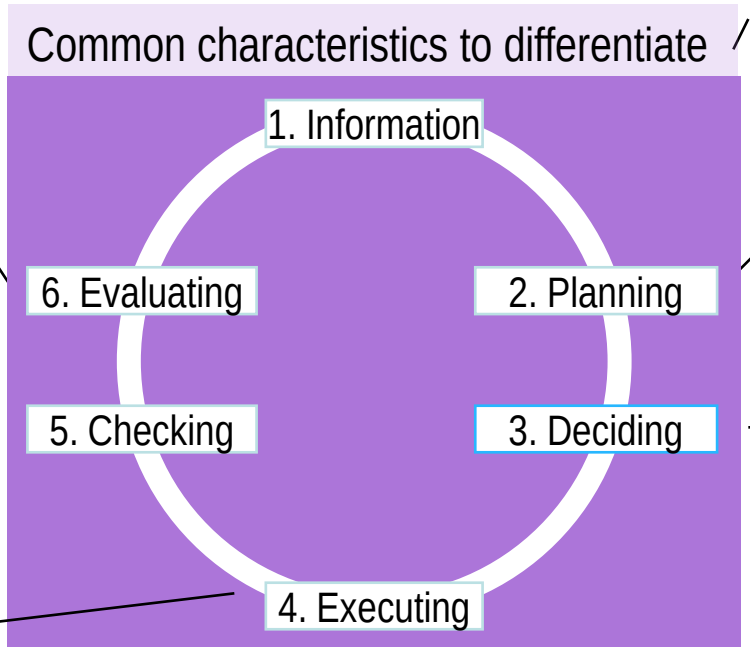
1. Teacher / educator names a – special scientific – topic, thinks about the related knowledge
2. Teacher / educator imparts the knowledge to the learners
3. Occasional explanations of the knowledge by demonstrations etc.
4. Testing of the knowledge, normally by test papers

... in the vocational education

New ways to competence acquisition

Commonalities of different new concepts:

6 steps, in which important vocational tasks are solved…and because of that shaping competence is acquired



Learners inform about possible vocational (fields of) tasks

Learners define and give reasons for – alternative – learning-tasks … and develop first plans for solutions

Learners decide about the learning tasks which are to be solved and future solving plan(s)

Learners actually solve the learning task(s) practically

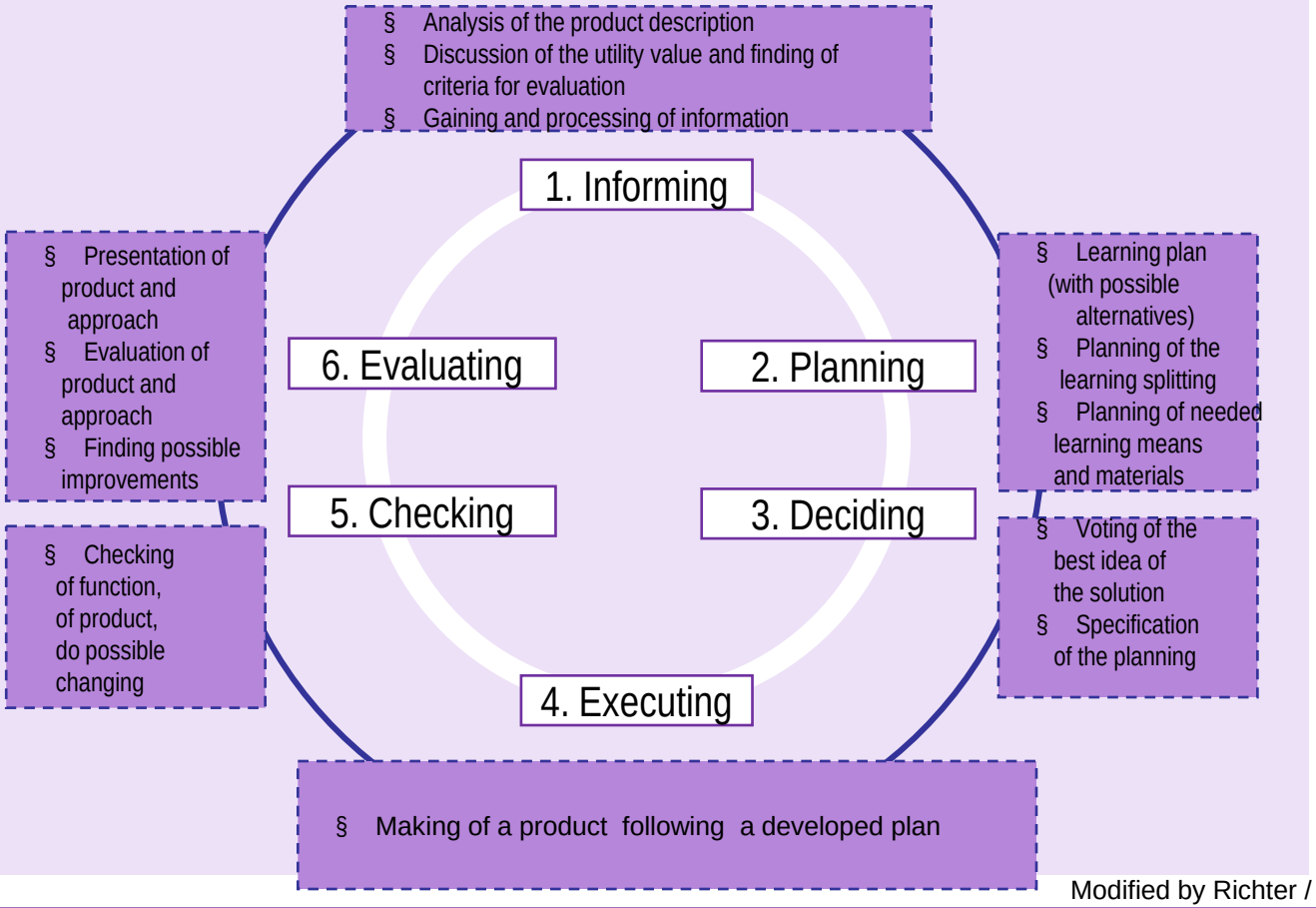
Learners check their learning progress continuously

Learners evaluate the process and the learning performance (with the help of the tutors)

Modified by Richter / Meyer, Troisdorf 2004, p. 31

Product orientation

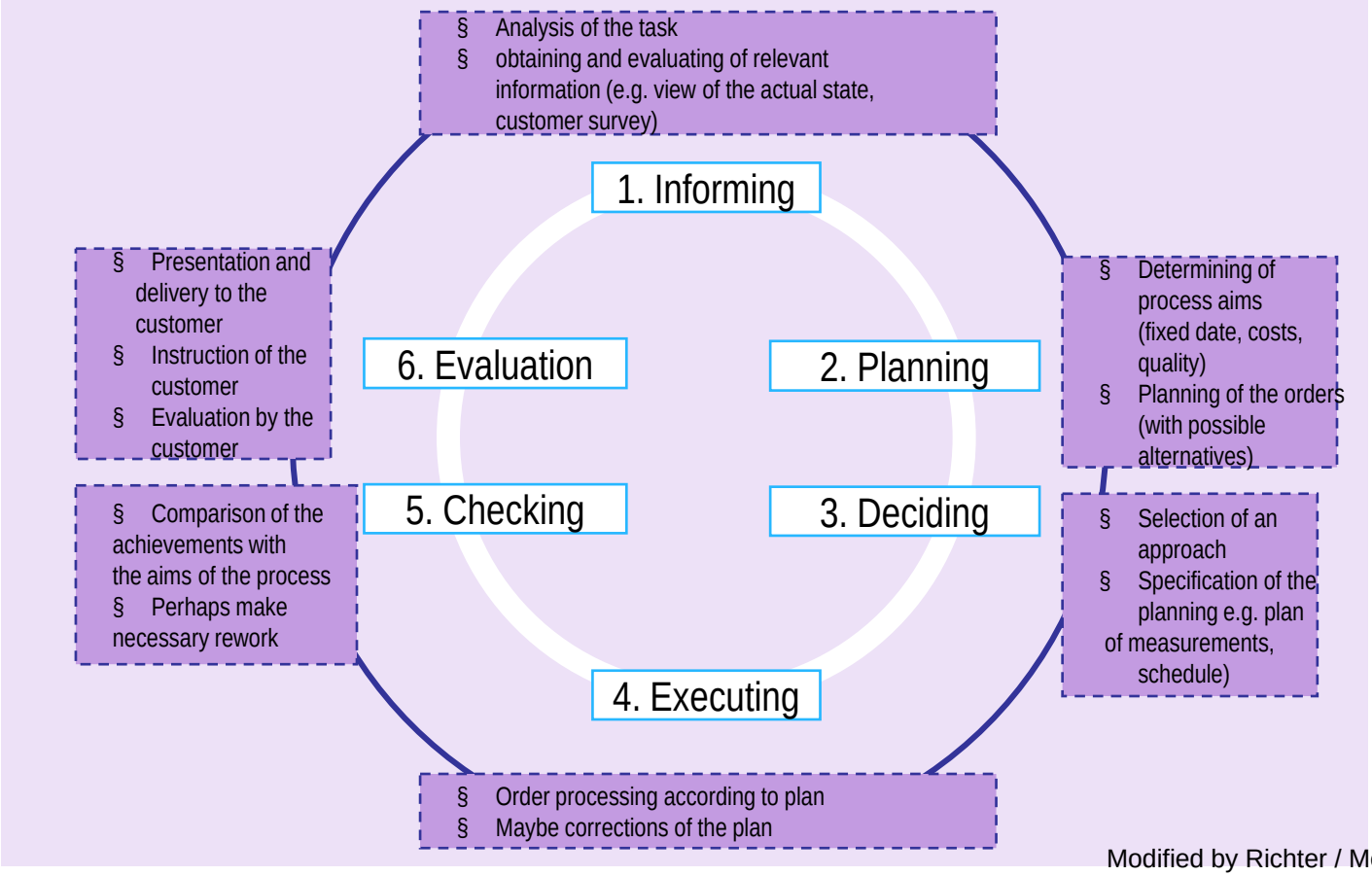
Definition: Product orientation is the focusing of the lessons to the manufacturing of a product.



Modified by Richter / Meyer, Troisdorf 2004, p. 32

Task orientation

Working tasks are precise orders to the employee or a team of employees.



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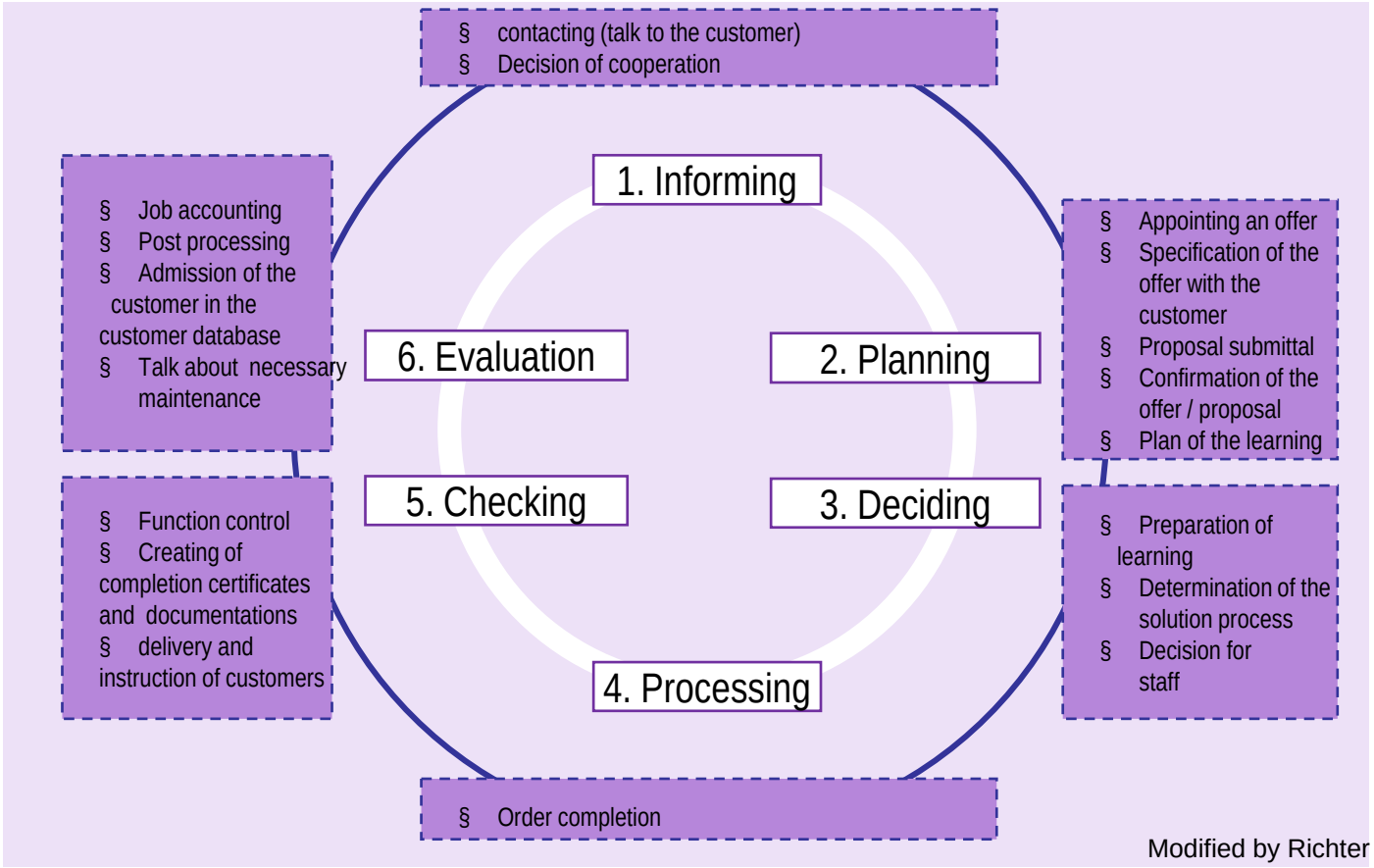
Orientation of the business process (I)

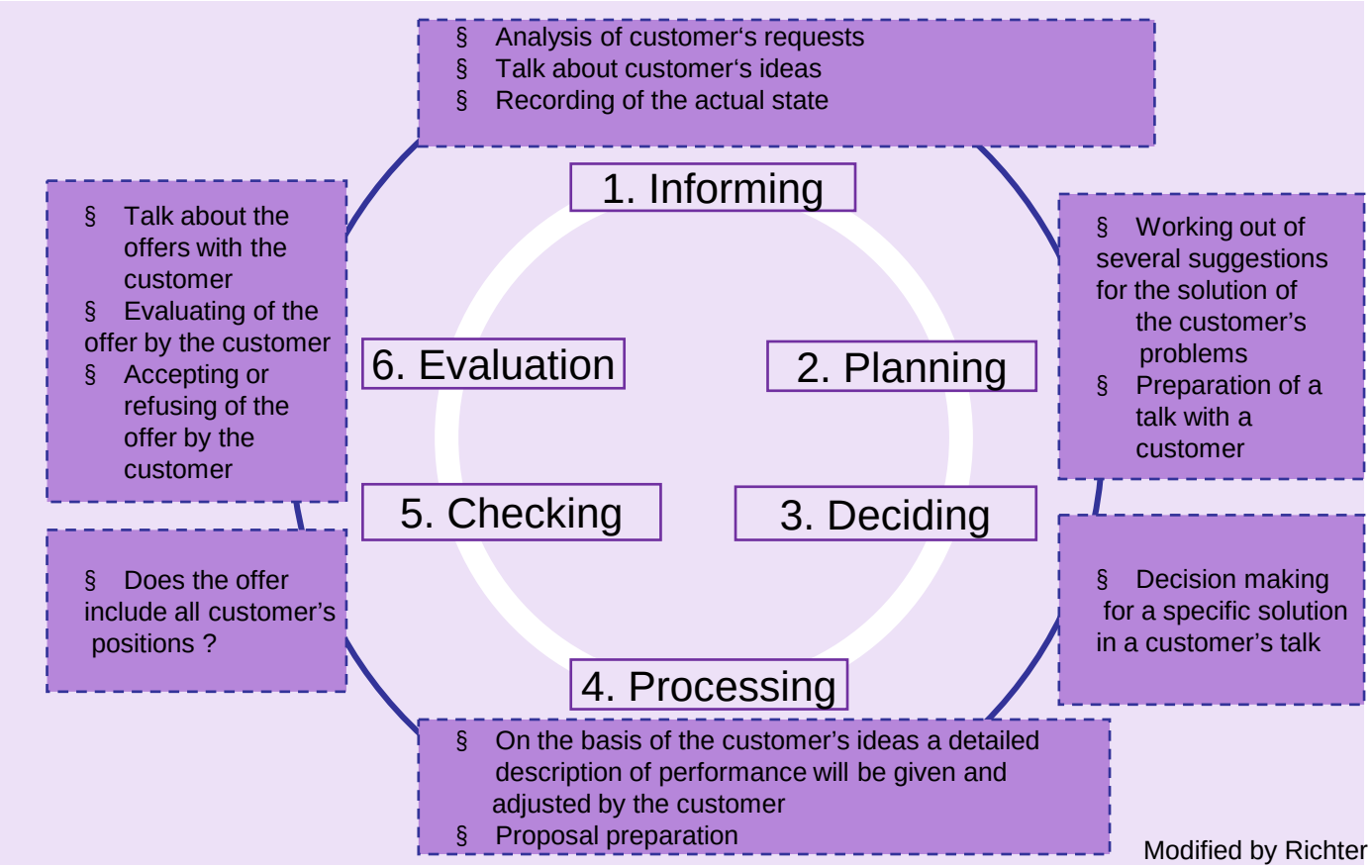
A business process is a connected and completed series of activities in order to solve a stated task.



Modified by Richter / Meyer, Troisdorf 2004, p. 34

Orientation of the business process (II)

Proposal preparation as sub-process



Modified by Richter / Meyer, Troisdorf 2004, p. 35

New learning – New teaching

The teachers ...

- continuous work during a longer time with the same learners on one task
- possibility for individual learning with single students or groups of students
- reality-related learning situations are planned and executed in a team
- the resources of vocational schools, universities, companies etc. have to be used together in networks
- necessity of orientation at regional demands in a supra-regional context

Modified after Richter / Meyer

New learning – New teaching

The teacher …

- has to know the work, the involved techniques and the processes in the special working field
- has to understand and to reflect new developments and has to make decisions for the teaching
- has to work out an (adapted) curriculum together with all the other involved educators

- has to improve the own competence continuously

- has to know about individual learning processes under different circumstances
- has to design and to organize learning arrangements which support a competence development
- has to evaluate individual learning and competence-developing processes

Modified after Richter / Meyer

„7 steps – method“:

„7 steps“ to a lesson‘s project for shaping- and competence-oriented teaching and learning in learning fields

At first there was the project of the lesson/class (one unit) suggested in

7 Steps

Prepared in written style and for discussion:

„7 steps“ to a lesson‘s project

1. The teachers analyse important substantial **basic conditions** for the lesson‘s project
   - Individual teaching-/learning-conditions
   - General + working/academic teaching-/learning-conditions

2. The teachers concretise the **general principle** for the lesson‘s project
   - The teachers express their own requirements about the evolving shaping competence in the lesson‘s project (the unit)
   - The teachers explain, by which essential features the lesson‘s project is characterized

„7 steps“ to a lesson‘s project

3 The teachers set up a **(total-) task** for the learners and name what the learners can do and can learn

4 The teachers **illustrate** a possible process of the lesson‘s project (the unit) as a cycle of sequences

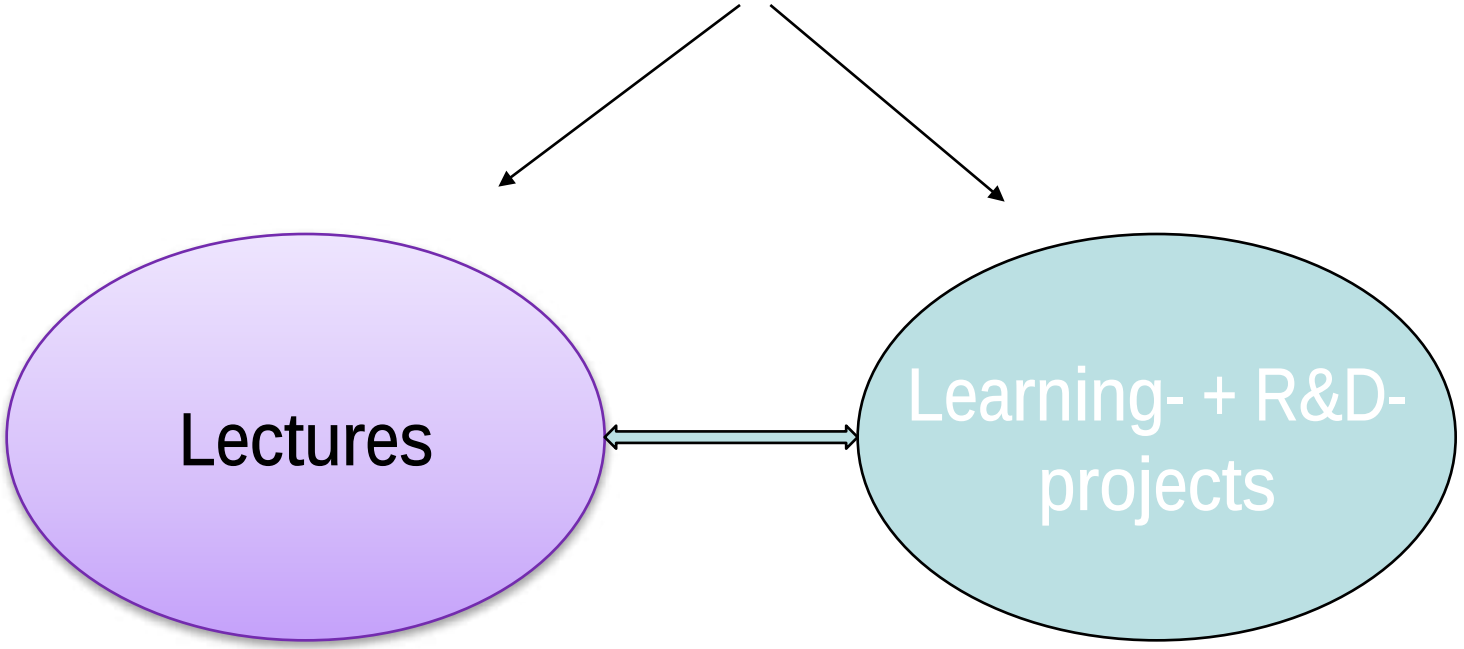
5 The teachers develop „**applications / guidance for experiments**“ (no „recipes“) and the **material** for the lessons for the single sequences / units.

6 The teachers discuss the intended (later) **analysis** of the lesson‘s project

- How does it work to analyse and evaluate the quality of the lessons related to the intended requirement??
- What are the expected individual and general (professional/academic) outcomes?

7 The teachers **summarize** their outcomes in a first draft of a lesson.

Projects should be planned – in universities ***combined***



In the VET-Net partners try to plan ***projects ?***

"Projects ..., because of that real, (social and individual) sought-after and meaningful (working-, teaching-/learning-, searching- and/or developing-) processes are initiated, in which self-determination, autonomy, auturgy and so on are promoted. It is about complex, planned, organised and product-, task- or business-process-oriented intentions, about (subjects and working fields) comprehensive, events motivated by serious situations"

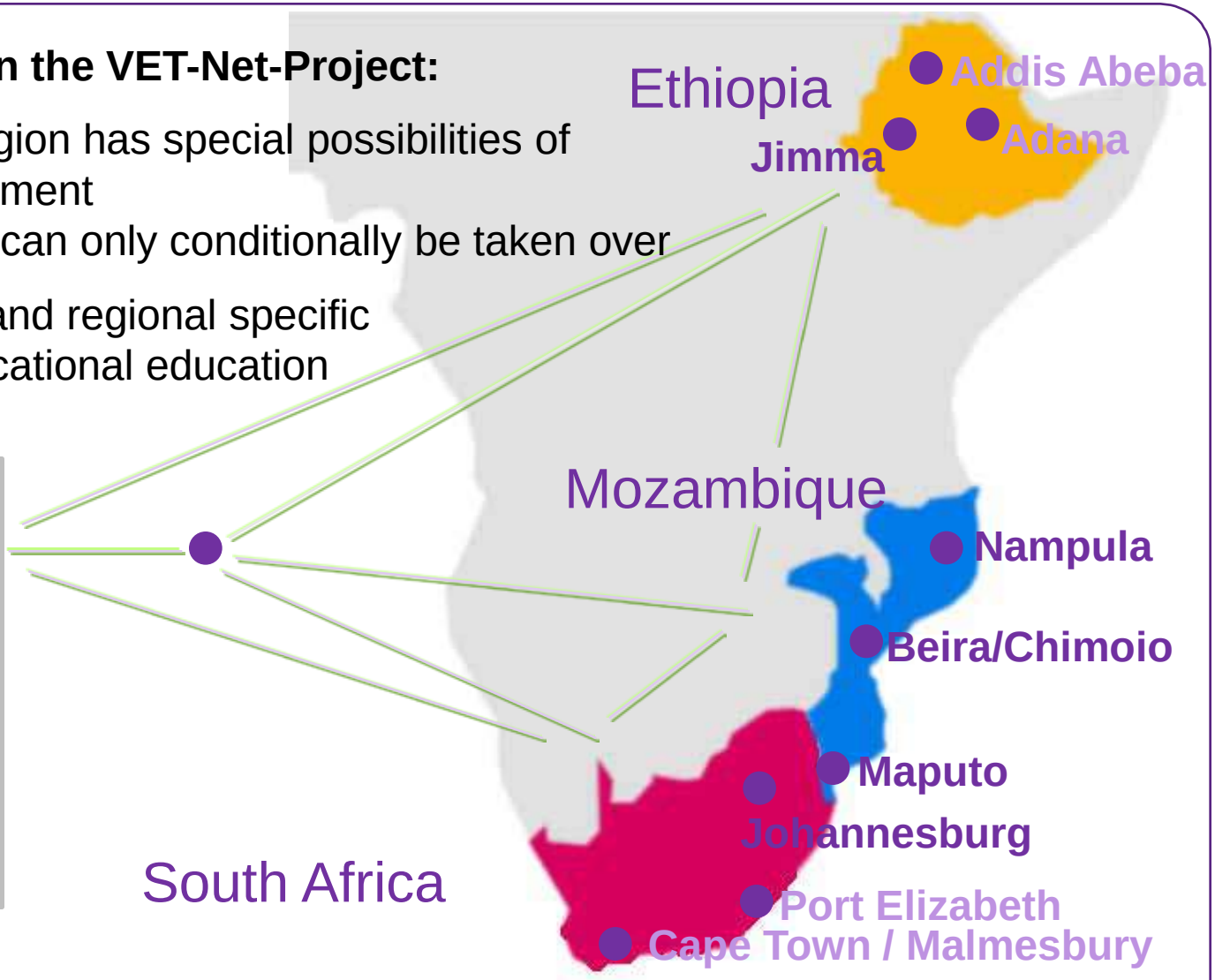
(Modified by Eicker, F.: Vernetztes Gestalten – eine Perspektive in der kompetenzbezogenen Berufsbildung, in: Universität Rostock / Technische Bildung (Hrsg.): Technical Education for a Co-shaping Working in Building Automation, Universität Rostock, Band I u. II, Draft, Rostock 2006, S. 96 ff., insbesondere S. 105)

In the VET-Net the partners identify open teaching / learning and researching / shaping questions and try to find acceptable answers ...

No new insights in the VET-Net-Project:

- Every country/ region has special possibilities of shaping / development
  – foreign insights can only conditionally be taken over
- It needs country and regional specific shaping in the vocational education

Germany



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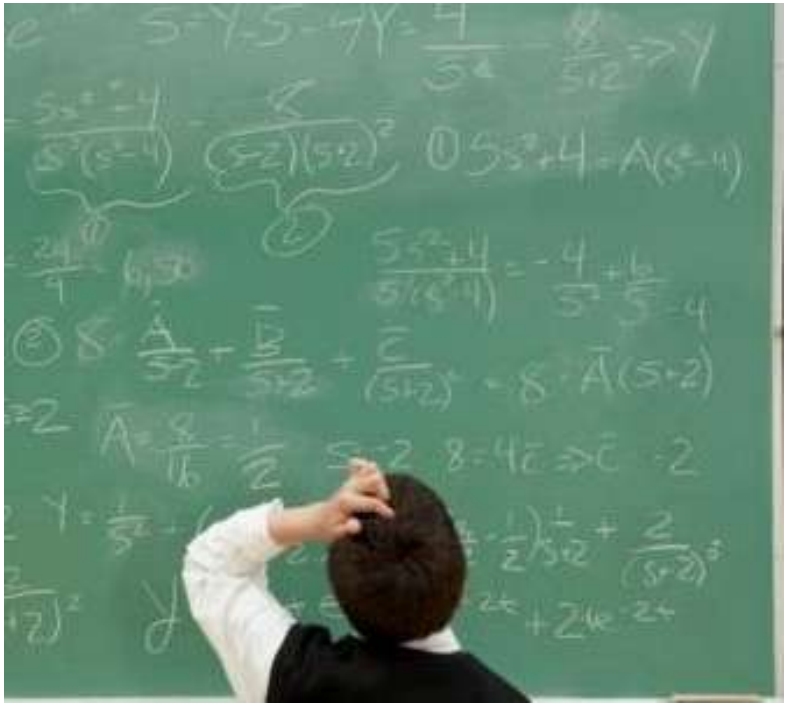

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