

Transfer of Knowledge and Training from Germany to Egypt

Means and possibilities to improve the quality of
work and techniques in the Egyptian industries

Dr. Stefan Wolf, s.wolf@tu-berlin.de
Technische Universität Berlin,
Zentralinstitut El Gouna,
Institut für Berufliche Bildung und Arbeitslehre

Topics

- Short presentation of the background of the policy transfer project to Egypt WEB-TT
- Results of the project to generalise with high potential to transfer to the Egyptian industries and crafts

Core information of WEB-TT

- Funder
Federal Ministry of Education and Research
 - Consortium with 8 German partners from university, crafts and business companies
 - Starting point was April 2011
 - Funding for three years (til springtime 2014)
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- **Developing of modularised vocational trainings** with a clear link to innovative technologies in resource efficient building and supply techniques (Water and Energy) to facilitate its high quality realisation, use and maintenance
 - Conceptual design of appropriate training modules fitting to Egyptian conditions to offer to customers in trade and industry

Integration of training centres of German crafts and some of its chambers members of the KOMZET-Network Construction and Energy



Adaptation methodology

- **Need oriented approach means:**
- **(1)** Adaptation to the contexts on location in Egypt,
- **(2)** Adaptation to the existing conditions of the participants and
- **(3)** Adaptation to the demands of the companies

High potential of the R&D project *WEB-TT* to transfer

Based on the procedure of the need approach we develop:

- I Train-the-Trainer (T-t-T) Seminars to improve the quality of on the job trainings following German standards (Ausbildung der Ausbilder)
- II Adapted short term training modules to the need of in-company training following German Standards (German legal regulation of every trade, Ausbildungsbausteine)
- III → Certification of the trainings by German legal regulations **Training made in Germany**

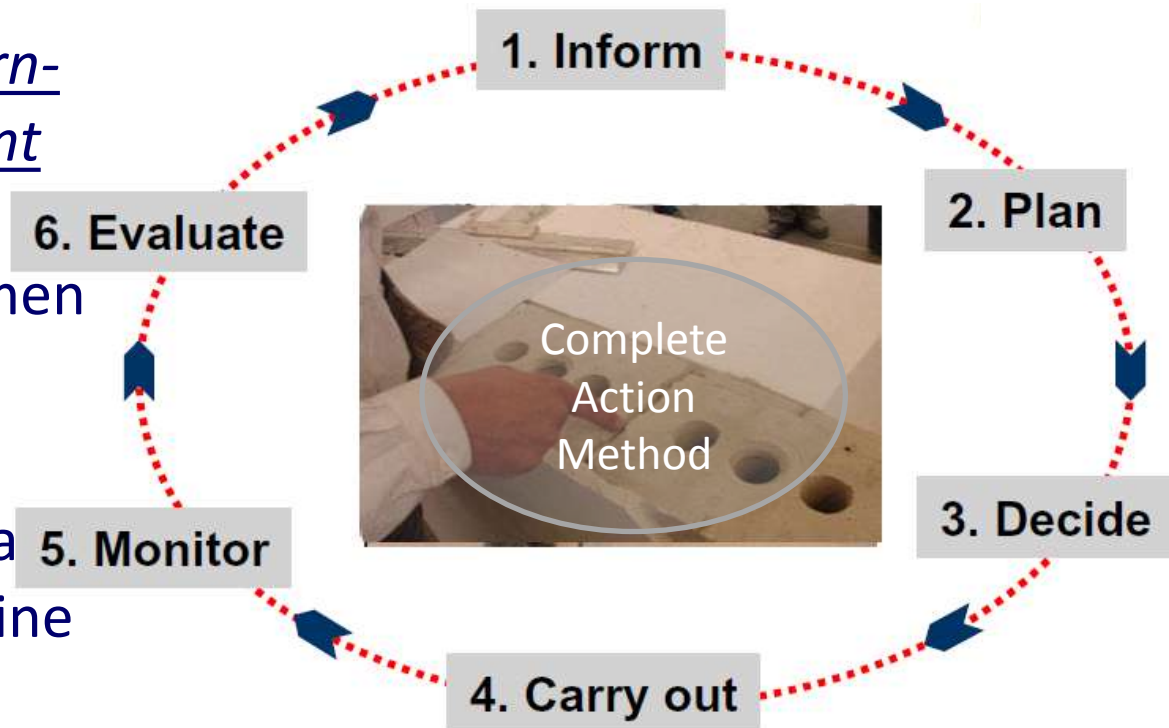
Results

- T-t-T-Seminars for the highest level of the workmanship of the on-site work (Foremen or Supervisors), not the engineers
- Two weeks training course to learn how to conduct a proper training
- Similar to part 3 of the German legal regulation of Train the trainer

The TN in the role of trainees (Instructed and supervised by the Trainers of the centers)			
Inform	1 st Basic Unit	Briefing by the instructor to complete a specific work assignment	Course-papers, drawings, slides, models, rules, possible Multimedia
Excursus: Presenting methods.			
Plan	1 st Basic Unit	Teamwork: Recall the assignment by the TN: - Work process - Needed materials - Needed tools	Flipchart, interactive discussion, presentation, checklist
Optional excursus: Correct choice of materials and processing			
Decide	1 st Basic Unit	The TN explains to the instructor in form of a professional discussion, how he begins his work and continues, how he develops a specific working plan.	Professional discussion
Excursus: Safety instructions.			

Results

- The complete action method as the general didactic-methodical concept
- Problem solving learn- and work-assignment due to the high capabilities of Foremen to solve problem
- Additional support through multi-media parts for on- or off-line learning



Results

- Training modules to the need of Egyptian companies
- In R&D project *WEB-TT* six different trades from the construction field (plumbing, tiling, masonry, plastering, dry walling and roofing)
- The content structure follows a differentiate concept of further training



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Example from plastering

for content structure of a training modules

Basic training

Basics plaster



Advanced training

Machine-applied plaster



Professional further education

Plaster with special properties



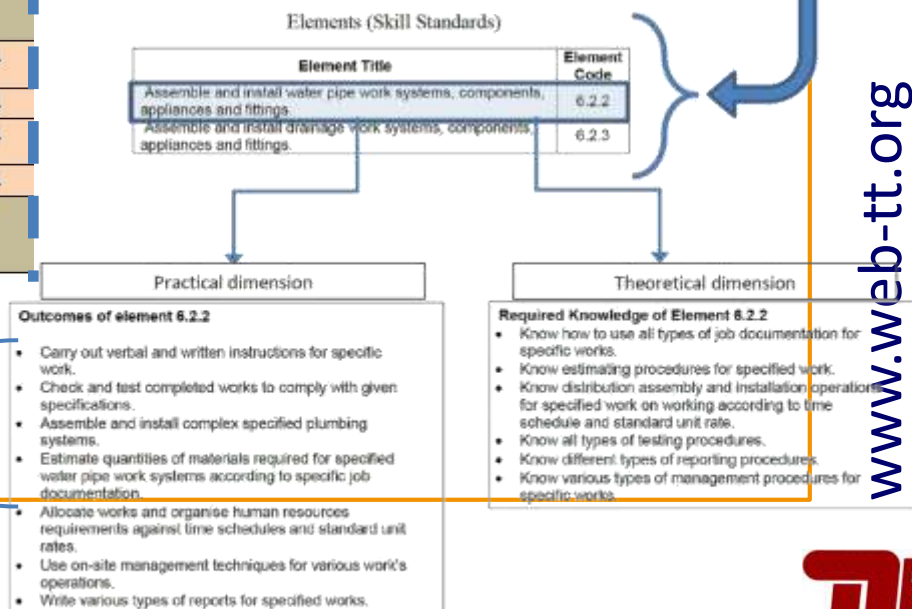
Coherence between German and Egyptian legal regulation

Excerpt from **German** regulation of plant mechanics

Check suitability of the support surface for attachment	2
Select and store pipes and pipe fittings from different materials and fittings and other installed components according to their intended use	2
Mount and remove brackets and fastenings	2
Select and apply seal materials based on the media to be transported and the transport conditions	2
Prepare and lay pipelines, taking the construction factors and the media to be transported into account by separating and shaping	2
Select, test, prepare components and assemblies, in particular fittings for installation, and install them taking the installation regulations into consideration	2
Install pipes and ducts made of various materials, apply connection methods based on the various requirements and with reference to the plant components and systems	2
Fasten pipelines taking the slope, the distances for thermal and noise insulation, fire protection and thermal expansion into account, and incorporating hygiene, environmental protection and health and safety in the installation process	2
Erect, secure and dismantle support structures, working and protective scaffolding, observing the accident prevention regulations	3/4
Test the location of building connections for supply engineering and disposal media	3/4
Install and connect gas supply lines and flue gas pipes, taking the regulations and rules for the media to be transported into account	3/4
Thermally isolate sheet metal and pipes	3/4
Select mounting types based on the requirements and loads	2

Excerpt from **Egyptian** VQ-Framework level 3: Plumbing

1.1	Plan and organise the construction and assembly of buildings and structures
2.3	Carryout specific checks and tests on products and components of buildings and structures.
6.2	Install plumbing and drainage systems to buildings and structures.
9.1	Inspect on-going and finished work to buildings and structures to ensure compliance with regulations and specifications.
ME 7.2	Apply health, safety and environmental measures in the workplace.
11.1	Maintain effective working relationships.
ME 8.2	Carryout calculations to solve engineering problems.
ME 8.3	Apply information technology.



Results, but under Development

- → *Train the Trainer made in Germany* for standards of in-company trainer qualification follow German quality standards but fit to the national specifications
- Develop a German international certificate for in company trainers
- Follows the regulation of German law of further training of trainers (Ausbildereignungsverordnung – AdA), but need to internationalise it to AdA-international
- Currently the successful participants of *WEB-TT* trainer qualification will get a German certificate part of AdA-international

Results, but under Development

- → *Training made in Germany* for tailor made training measurements to the German quality standards of Vocational and Professional Education and Training
- Develop a German international certificate for further Training and/or basic training with a the full journeyman exam at the end (based on German *Ausbildungsbausteine*)
- Follows the regulation of German law of Vocational Education in Germany

Thank you for your attention

Dr. Stefan Wolf,
Technische Universität Berlin,
Campus El Gouna /
Institut für Berufliche Bildung und Arbeitslehre
Sekt. Mar 1-4
Marchstraße 23
10587 Berlin

www.web-tt.org