

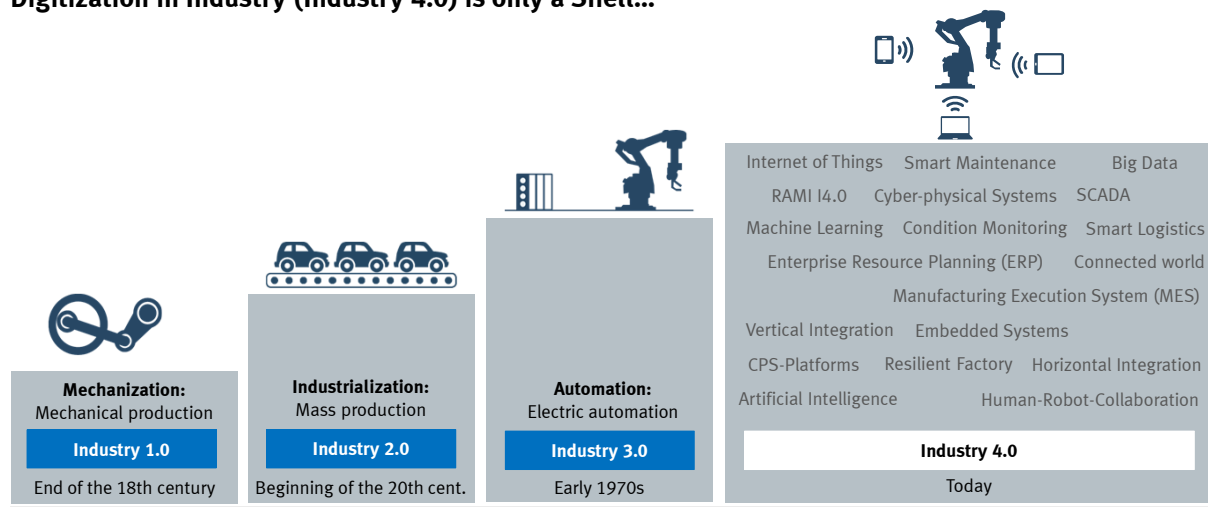
Designing of Blended Learning Concepts...

...by combination of virtual knowledge transfer and practical skills development

Holger Regber
Senior Project Manager
Festo Didactic SE



Digitization in Industry (Industry 4.0) is only a Shell...



Related to Digitization in Industry, new jobs are being created all the time.

- Smart Maintenance Technician
- Machine Supervisor
- Technician for Battery Production
- Smart Industry Engineer
- Data Scientist
- ...

(Future) duties and tasks of a Smart Maintenance Technician:

- Failure analysis and troubleshooting
- Performing of planned services
- Design and implementation of condition monitoring solutions
- Documentation and report of the machine life-cycle
- Data analytics to improve reliability, availability and safety
- Design and implementation of predictive maintenance solutions
- Support of machine optimization especially for their horizontal integration
- Apply remote services
- Ensure high energy efficiency

Target-current competence profile

3

FESTO

TVET: What is to be done?

Digitization in Industry (Industry 4.0) is only a shell...

New jobs are being developed all the time.

The dilemma of technical qualification:

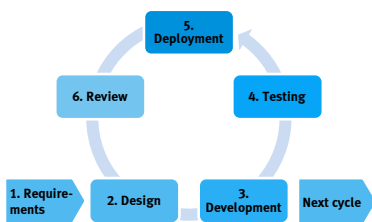
Often, the technological developments are faster, then the TVET system can react.

- What are the relevant technologies of Industry 4.0?
- Which professions will be needed in the future of work?
- Which developments affect the work duties and its requirements?
- How can new products and technologies be integrated?
- Which qualifications are needed?
- How long are they relevant?
- ...

4

A Change of Thinking about Teaching is needed

As answer of massive volatile impacts, the management theory recommends the development to an **Agile Organization**.



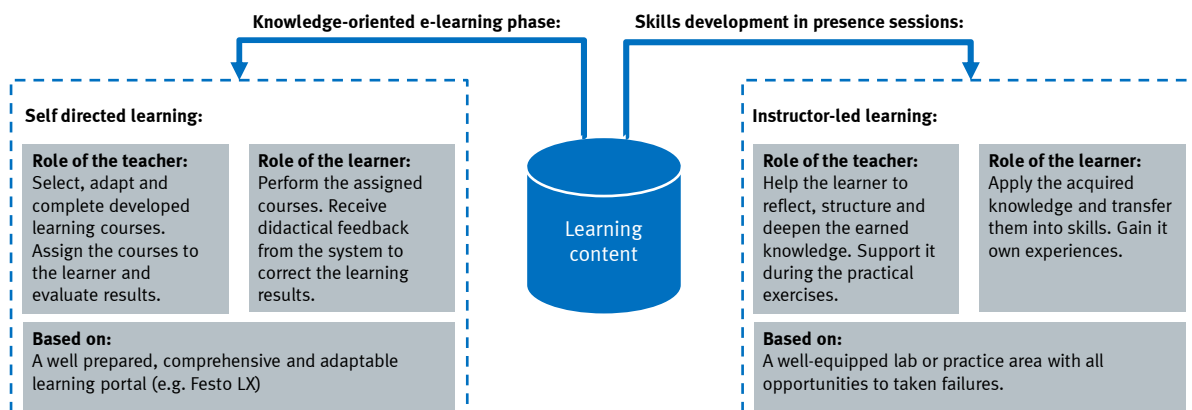
What does it mean?: **Agile Teaching**

Classical teaching	Agil Teaching
At the start, all requirements are known.	At the start, some requirements are fuzzy.
Based on rigid curricula.	Based on framework curricula and collaboration with the companies
Sequential teaching process	Iterative teaching process
Rigid process	Continues improvements are possible
Clear hierarchy	Self-organization and self-responsibility
Lesson-oriented teaching	Task-oriented teaching
...	...

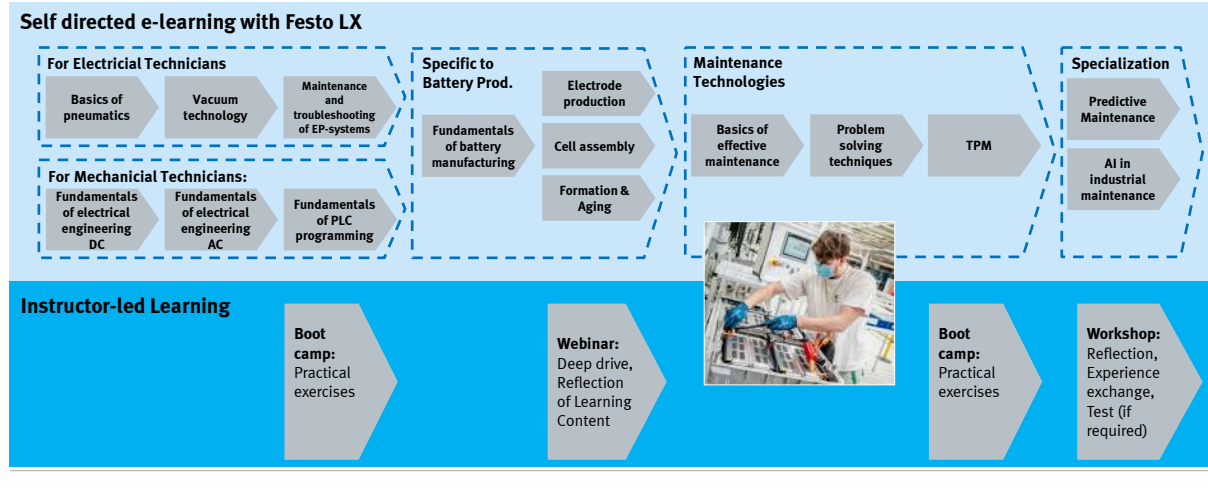
Some consequences for the learning

- Role change:** from teacher/instructor to a coach
- Demand-oriented:** the learning contents focus more the needed topics
- Self-responsibility:** the learners are responsible for the learning success, not the teacher
- Competence-based:** the main focus is on the development of action competence
- Simplified transfer:** the knowledge can be applied immediately

Blended Learning: one Agile Teaching Method



Example: Blended Learning Path for Maintenance Technician in the Industrial Battery Production



7

Thank you for your attention! Time for discussion ...

Contact: Holger.Regber@festo.com



8