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Aligning industrial, trade and VET policies to ensure the right skills in the digital economy

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ABSTRACT

Aligning industrial, trade and VET policies (Vocational education and Training) to ensure the right skills in the digital economy

Digitalisation and technological change also present new challenges for German vocational education and training. Experiences and initiatives from the perspective of the German dual system are summarised into four core messages, explained using examples and presented for discussion as transfer opportunities for international VET cooperation:

1. **The aim of vocational education and training should be to ensure the occupational competence of the skilled workers of the future.** This means that basic professionalisation/vocational education and training

- forms the basis of employability and professional careers,
- strengthens personal responsibility and
- the participation of skilled workers in society.

2. **Regular updating of training regulations ensures quality** refers to the fact that

- Training regulations are formulated to be technology neutral and provide companies with creative freedom.
- Training regulations are updated on average every 15 years.
- Regular reviewing and updating of training regulations ensures the currency and attractiveness of the vocational education and training system.

3. **Digitalisation and technological change are additional drivers of the transformation required.** In other words...

- Digitalisation and the technological transformation are changing the work tasks of skilled workers with increasing rapidity.
- Digital learning materials open up new opportunities for the acquisition of competencies.
- Virtually all trainee occupations are affected by this development.
- Digitalisation demands changed core qualifications in each occupation, these include comprehensive IT and media competency including IT security and data protection, process and system understanding, problem-solving ability and the ability to learn independently.
- The vocational education training system must continue to develop in line with the changed general conditions.

4. The updating of vocational education and training contributes to ensuring society is fit for the future

- Training potential is part of the economic power of a country.
- The personal and social competencies of the individual strengthen society.
- Attractive vocational education and training motivates and enables young people to set out on the path to a secure future.

BACKGROUND

Federal Institute for Vocational Education and Training (BIBB)

The Federal Institute for Vocational Education and Training (BIBB) is recognized as a center of excellence for vocational research and for the progressive development of vocational education and training (VET) in Germany.
BIBB works to identify future challenges in VET, stimulate innovation in national and international vocational systems, and develop new, practice-oriented solutions for both initial and continuing vocational education and training.

More about…

German Dual VET-System

More information

Data and facts (Datenreport 2018)

The German concept of training occupations

- The 327 training occupations currently in existence are each socially negotiated constructs and serve as minimum standards for the training.
- Each occupation is defined by a legally binding training regulation.
- These consist of an occupational profile, a company-based general training plan, a school-based curriculum, and nationally standardized examination regulations and requirements.
- The training generally lasts for three years.

Political initiatives by German Federal Government

Plattform Industrie 4.0

How can Germany become the leading factory equipment supplier for Industrie 4.0? How can Germany further improve its competitiveness as a production location through Industrie 4.0? What role can Germany play in setting standards and how can Industrie 4.0 benefit people in the world of work? Plattform Industrie 4.0 aims to find answers to these questions through dialogue. Together, companies and their employees, trade unions, associations, science and politics want to make a big impact.

The platform is steered and led by the federal minister for economic affairs and energy, Peter Altmaier, the federal minister of education and research, Anja Karliczek, and high-ranking representatives from industry, science and the trade unions.

More about…

Working group on work, education and training

The transition to a networked industry will only succeed in Germany if the relevant actors are involved in the process of change from the outset. Plattform Industrie 4.0 follows this principle and brings together a circle of people who will take up these issues in a dedicated working group.

Publication: Shaping the Digital Transformation within Companies

PLATTFORM PUBLICATION- With the guideline the working group on work, education and training aims at enabling companies and employees to cope with the requirements of digitalisation. These recommendations are meant for them, as well as the politically responsible stakeholders in the national government …

Working Environment and Training

The German Federal Ministry of Labour and social affairs started a White-Paper dialog in 2015 and presented results in 2016…

To the publication

FURTHER READING

Spöttl, Georg (2016): Industrie 4.0 – Auswirkungen auf Aus- und Weiterbildung in der M+E Industrie. – Hrsg. von: Die bayerischen Metall- und Elektroarbeitgeber bayme vbm, download unter https://www.baymevbm.de/Redaktion/Frei-zugaengliche-Medien/Abteilungen-GS/Bildung/2016/Downloads/baymevbm_Studie_Industrie-4-0.pdf

Pfeiffer, Sabine u.a. (2016): Industrie 4.0 – Qualifizierung 2025: - Hrsg.: Verband Deutscher Maschinen- und Anlagenbau (VDMA), 148 S. download unter https://www.vdma.org/documents/105628/13417295/VDMA%20Studie%20Industrie%204.0%20-%20Qualifizierung%202025.pdf/bbfe37d6-f738-4558-b2b7-1b01a04d166c

Zinke, Gert u.a. (2017): Berufsausbildung und Digitalisierung – ein Beispiel aus der Automobilindustrie, Hg. Bundesinstitut für Berufsbildung, der Präsident. - Reihe: Wissenschaftliche Diskussionspapiere, Heft-Nr.: 186; download unter https://www.bibb.de/veroeffentlichungen/de/publication/show/8329

Examples for Renewed Training Occupations by Additional Qualification Units:

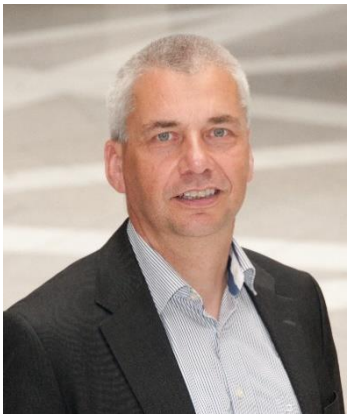
Industrielle Elektroberufe (2018): Zweite Verordnung zur Änderung der Verordnung über die Berufsausbildung in den industriellen Elektroberufen vom 07.6.2018; veröffentlicht im Bundesgesetzblatt Jahrgang 2018 Teil I Nr. 20, ausgegeben zu Bonn am 13. Juni 2018, S. 678 ff

Industrielle Metallberufe (2018): Zweite Verordnung zur Änderung der Verordnung über die Berufsausbildung in den industriellen Metallberufen vom 07.6.2018; veröffentlicht im Bundesgesetzblatt Jahrgang 2018 Teil I Nr. 20, ausgegeben zu Bonn am 13. Juni 2018, S. 746 ff

Mechatroniker/in (2018): Erste Verordnung zur Änderung der Mechatroniker-Ausbildungsverordnung vom 07.6.2018; veröffentlicht im Bundesgesetzblatt Jahrgang 2018 Teil I Nr. 20, ausgegeben zu Bonn am 13. Juni 2018, S.818 ff

VITA

Dr. Gert Zinke



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Division: Electro-, IT- and nature-science Occupations

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Main topics

- Regulation work in electronic, IT, mechatronic and traffic occupation profiles
- “Industrie 4.0“ and Digitalisation in life of work – impact for VET
- International VET-Consulting

Career

- Since 1991 employed by BIBB
- 1998-2000 Senior Expert for Gesellschaft für internationale Zusammenarbeit (GIZ) in Shanghai, China
- since 1996 Short-time Expert in different international Projects, for example Western Balkan, China, Luxembourg
- VET-Teacher for Mechanics, PD, TU Dresden
- Initial Training for Mechanic