

The Relevance of IT-Competencies in a Digitalized Work Environment

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Digitalization and new technologies have entirely changed job design and workforce tasks. Several studies reveal that the competency requirements have risen in general and especially within digital and media skills. Yet, our overall understanding of competencies and specific changes in certain sub-areas of digital skills, both today and in the future, remains unclear. Based on this gap in research, the following study has been conducted.

Research Questions

- What is the general understanding of the term "competency"?
- How relevant is digital and media competency in departments outside of IT?
- Which technologies and drivers of digitalization are most relevant employee tasks today and in the future (i.e. 10 years)?

Method

A quantitative web survey was implemented. The target group are employees of any age, industry, and function within the company, but work mainly on business activities.

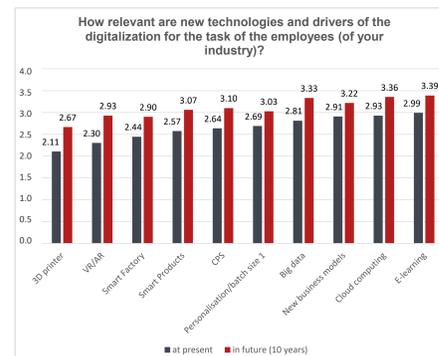
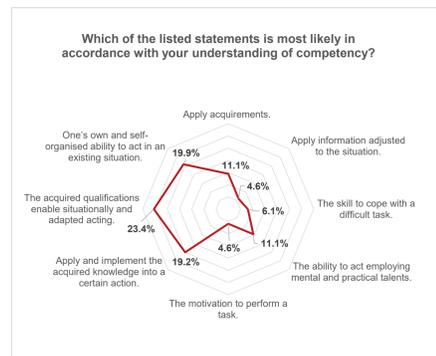
Participants were addressed by social media, personal approach and faculty email lists. They were asked to answer technology related questions on a 4-point rating scale [1=unimportant, 4=very important]. Afterwards, results were descriptively analysed.

Data

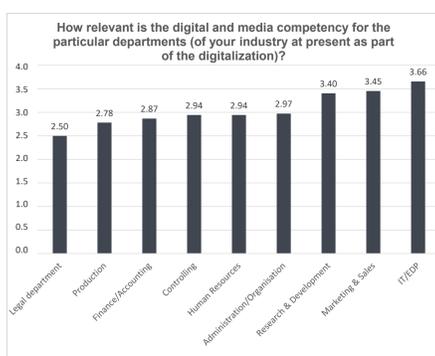
Number of participants:	261
Number of questions:	12
Average age:	29
Gender distribution:	m.= 44% f.= 56%
Regional focus:	Germany
Time frame:	Nov. – Dec. 2017

Results of the Survey

Concerning the general understanding of the term "competency" most respondents (23.4%) understood competencies as "The situation-related adapted acting through acquired qualifications." Other understandings followed: "One's self-organised ability to act in an existing situation" (19.9%) and "Application and implementation of the acquired knowledge into a certain action" (19.2%). The "Skill to deal with difficult tasks" (6.1%), however, ranked among the lowest of responses.

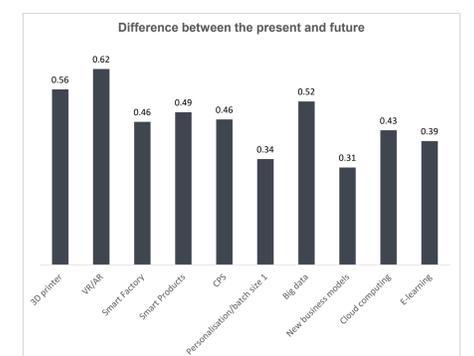


Respondents considered e-learning (2.99 today/3.39 in future), cloud computing (2.93/3.36), new business models (2.91/3.22) and big data (2.81/3.33) to be the most important technologies and drivers of digitalization. Although 3D printing (2.11/2.67) and VR/AR (2.30/2.93) ranked last, they had the widest distance regarding the future and thus untapped potential.



Concerning the relevance of digital competencies in certain departments, respondents believed that marketing & sales (3.45 points on average) and research & development (3.40) are most important. Least critical are the legal department (2.50) and production (2.78).

The smallest difference between the present and future relevance can be observed for new business models (0.31), personalisation/batch size 1 (0.34), and e-learning (0.39). These kind of technologies as well as new business models are already well-implemented by most companies, and employees are aware of their current importance regarding the results.



Conclusion

The research revealed the significance and comprehension of the concept of **competency** itself together with a digitalized work environment. As a result, it is **the ability to act independently in a situation involving digital technology**.

On the one hand, the better employees know how to handle ICT in the context of its task, the better the chance for them to achieve a higher function in their company.

On the other hand, a qualification of a person does not necessarily reveal the ability to perform in specific circumstances.

In summary, the following conclusion and suggestions can be thematised:

- Since employees are asked for digital and media competency due to the digital transformation, they should be aware of arising circumstances involving technologies and therewith provide **the ability of self-organised** and constructive acting.
- The **use of new technologies** and drivers of digitalization **change the work structure** and **allocation of tasks** especially in respect to the resulting man-machine interaction. Some technologies are more important for one department or function than other.
- In the context of digital and media literacy vague statements are revealed. Therefore, more investigation and analysis in this field is recommended as required employee competencies are increasing.

References

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