

# Factors Influencing the Perception of Relevant Competencies in the Digitalized Working World

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Women Resource 4.0

## Relevance

Digital change and Industry 4.0 are increasing the demand for specialists in STEM professions, which is becoming more intense due to the growing shortage of skilled workers. Under these conditions, young women who opt for technical professions and migrant women with STEM qualifications represent valuable potential that needs to be tapped. A sustainable design of digitization and Industry 4.0 requires the participation of various actors as well as specific skills of women and migrants that contribute to the success of the digital transformation.

## Objective

The overall goal of the project Women Resource 4.0 is to better unlock the potential of qualified migrant and non-migrant MINT women for shaping digitization and Industry 4.0 in organizations. With this goal, the project sets an example for equal opportunities for young people, independent of their gender and origin, an adequate employment of qualified migrant women, a better compatibility of family and work as well as a cultural change in organisations.

## & Method

Based on this, the following **research question** arises:

**Are there any differences in the perception of relevant competencies for the digitalized working world according to gender, age, employment status and migration background?**

Following preliminary literature research and qualitative expert interviews [n=6], a quantitative study was conducted from Nov. – Dec. 2018.

Participants [n=515] were recruited among students and companies using faculty email lists, paper form and social media. Participants were asked to assess a total of 14 competencies, knowledge resources and behaviours in their relevance for the digitalized working world on a 6-tier scale. Correlations were determined by calculating Chi-square according to Person and Cramer's V. Means were compared using T-Test and Levene.

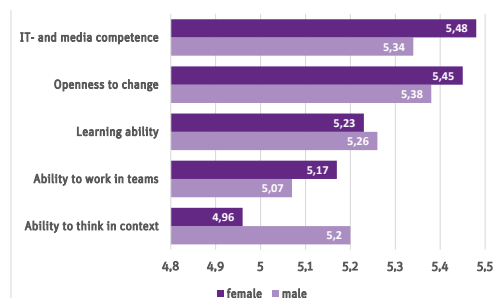
<https://women-ressource4-0.de>

## Results

### Demographic Data

Age categories	Sex		Mig. backgr. with w/o.	Prof. position		
	male	fem.		Corp.	Stud.	Oth.
No information	4		9	3	1	
Generation Z	50	21	15 56	2	70	0
Generation Y	138	128	77 185	97	162	7
Generation X	79	31	17 93	93	4	12
Baby Boomer	39	25	3 60	58	0	6
<b>Overall (515)</b>	<b>306</b>	<b>205</b>	<b>112 394</b>	<b>253</b>	<b>237</b>	<b>25</b>

### Competence Rating Among Students



### Additional Results and Conclusion

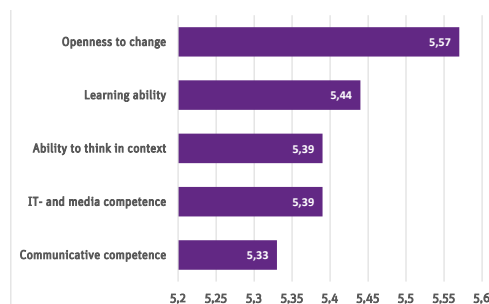
**Older participants** (generation X, born 1964-1979) consider all competencies to be more important than younger ones (generation Z, 1996-2009), apart from IT and media competence. The items openness to change (T-Test p=.004, Levene p=.004), self-organisation (T-Test p<.001, Levene p=.020) and problem-solving competence (T-Test p=.011, Levene p=.019) show significant correlation between age and assessment.

**No correlation can be found regarding respondents' migration background.**

### Highest Rated Competencies



### Competence Rating Among Company Representatives



The female students surveyed rate the skills required for the **digitized world of work** particularly high.

Due to their skills and understanding of the concerns of the world of work 4.0, **women can act as capable leaders** for the digitalised world of work, placing particular emphasis on **innovation, agility and interdisciplinarity**.

Yet, it is crucial to make the world of work 4.0 participatory in the interest of the people, **involving all groups of employees - men and women, migrant and non-migrant**.

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